

# American Medical Association

Physicians dedicated to the health of America



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October 24, 2003

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Eric J. Hentges, Executive Director  
Center for Nutrition Policy and Promotion  
Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive Room 1034  
Alexandria, VA 22302

Dear Mr. Hentges:

On behalf of the American Medical Association (AMA) and its Minority Affairs Consortium (MAC), we are pleased to provide comments on revisions to the food guide pyramid. We commend the USDA for taking the initiative to reassess the food guide pyramid in light of the obesity epidemic in our country. The AMA MAC is a special interest group of physicians and medical students who advocate for the improvement of minority health.

The AMA is committed to addressing the obesity epidemic as a public health crisis, in particular, because obesity disproportionately affects minorities in our country (JAMA, 2002.) Additional efforts by the USDA to address the obesity issue are needed. The food pyramid guidelines impact the public's dietary knowledge and decision-making and are critical to improving the health of our nation. We offer suggestions below that will make the food guide pyramid more multicultural. As physicians, everyday we witness the adverse health outcomes that result from conditions of overweight and obesity in our patients. Heart disease, stroke, and diabetes are just a few of the conditions that are linked to obesity. Weight and nutrition management can serve as means by which our patients can prevent certain disease states as well as improve their health and well-being.

The following are our suggestions to the Food Guide Pyramid Reassessment Team.

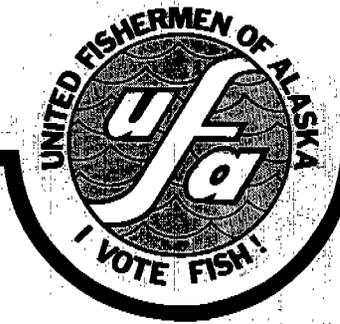
### **Appropriateness of the selection of nutritional goals**

#### **Include ethnic food ingredients in the food guide pyramid**

Recent census projections estimate that by 2050, 50% of the US population will be racial or ethnic minority. With an ever-increasing diverse population, nutritional information should reflect, as much as possible, the myriad of ethnic food ingredients that exist in our nation. Including some ethnic food ingredients in the food pyramid such as ghee, bok choy, tofu, lentils, plantains, corn and flour tortillas would reflect foods that are consumed by many Americans but are not reflected in the current food guide pyramid. Additionally, we suggest including more racial and ethnic minorities to participate in your food surveys to reflect the types of foods that are consumed by a variety of Americans to make the food guide pyramid more applicable.

#### **Include alternative dairy product options**

According to the American Gastroenterological Association, nearly 50 million American adults are lactose intolerant. Certain ethnic and racial populations are more widely affected than others. As many as 75 percent of all African-American, Jewish, Native American, and Mexican-American adults, and 90 percent of Asian-American adults are lactose intolerant. The condition is least common among people of northern European descent. Lactose intolerance is the inability to digest significant amounts of lactose, which is the predominant sugar of



# UNITED FISHERMEN OF ALASKA

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October 27, 2003

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Comments on USDA Proposed Food Guide Pyramid

Dear Food Guide Pyramid Reassessment Team members,

United Fishermen of Alaska offers the following comments on the USDA's proposed updated food guide pyramid:

1. We request that you specifically mention FISH in Table 1. The category heading should read "Meat, Fish, and Beans" instead of the current "Meat and Beans".
2. In the *Notes for Table 1*, page 2, we request that you mention fish as a healthy source of protein. According to Walter C. Willet, M.D. of Harvard Medical School in *Eat, Drink, and Be Healthy* (p.23), "...the best sources of protein are beans and nuts, along with fish, poultry, and eggs." Language to this effect would be beneficial to the health of those using the new pyramid for dietary guidelines.
3. In the *Notes for Table 1*, page 4, item 5, *Explanation of "additional fats"*, we suggest that you include mention of the health benefits of fish oils as a primary source of essential n-3 fatty acids. According to Walter C. Willet, M.D. of Harvard Medical School in *Eat, Drink, and Be Healthy* (p.75):  
"One class of polyunsaturated fatty acid deserves individual attention even though it makes up only a minority of the fats in our diet. These are the n-3 fatty acids (also called the omega-3 fatty acids). They are *essential* fats, meaning ones that your body can't make from scratch or from rearranging other fats, and they are needed for normal functions. You have to get n-3 fatty acids from food, mainly fish...  
...(n-3 fats) have been shown to have benefits in the prevention or treatment of heart disease and stroke and possibly autoimmune problems such as lupus, eczema, and rheumatoid arthritis; and a variety of other conditions"

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We appreciate your undertaking this work for the health benefit of all Americans, and hope you find our suggestions helpful.

United Fishermen of Alaska represents 34 Alaska commercial fishing organizations and hundreds of independent individual fishermen, altogether representing over 10,000 Alaska commercial fishermen.

Sincerely,



Mark D. Vinsel  
Executive Director

106 Snyder Fu Buraker

**DATE:**

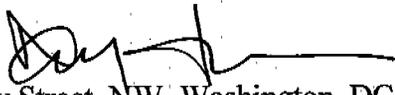
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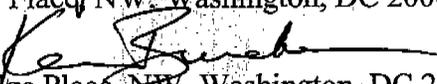
**TO:**

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexander, VA 22302

**FROM:**

Dan Snyder   
3411 Ordway Street, NW, Washington, DC 20016

Stephenie Fu   
2228 Decatur Place, NW, Washington, DC 20008

Ken Buraker   
3235 Walbridge Place, NW, Washington, DC 20010

**RE:**

Revisions to the Food Guide Pyramid

The following comments and the accompanying pyramid graphic represent our personal opinions and not those of our employer or our clients.

We are writing not as scientists, but as communicators who specialize in nutrition and reaching health professionals and the public. Our combined experiences include the Hassle-Free Guide to a Better Diet (1979), Dietary Guidelines (1980), the Food Wheel (photographic version), Project Lean, The Food Guide Pyramid (1991), the National 5 A Day for Better Health Program (1991 to present), nutrition and physical activity-oriented web sites for the National Cancer Institute's 5 A Day program ([www.9aday.cancer.gov](http://www.9aday.cancer.gov)), the National Bone Health Campaign web site for the *Powerful Bones. Powerful Girls.* program ([www.powerfulbones.com](http://www.powerfulbones.com)), and the Centers for Disease Control and Prevention kids health web site ([www.bam.gov](http://www.bam.gov)).

We appreciate the opportunity to respond, and congratulate the Center on a process that is transparent, as well as a web site that is a thorough and valuable reference tool for communicators, researchers and the interested public.

## Updating the Food Guide Pyramid: Key Proposals

### Build on the Pyramid's brand equity

- Make changes evolutionary rather than revolutionary. *Most Americans recognize the pyramid "brand" as a healthful guide. Introducing a new symbol would add to their confusion and their ongoing frustrations with changes in dietary recommendations.*
- An updated pyramid will send the consumer a message of refinement and growth... *rather than a confusing message of discard and abandonment that a new symbol will create*
- A new symbol is not needed to generate publicity and awareness. *The pyramid was built on controversy and it will continue to generate heated discussions and the media attention that will be required to efficiently convey the recommendation to the public*

### Focus the Pyramid on obesity

- Help consumers make healthful food choices by emphasizing and promoting the nutrient-dense foods in all food groups... *perhaps create a new term for these nutrient-rich sources, like "power calories"*
- Identify foods that should be consumed less frequently (i.e., less nutrient dense), but can still fit in a healthful diet. *Even the most health-conscious consumer places a high value on taste...the recommendations should include "enjoy..."*
- Emphasize the positive attributes of foods in addition to their negative ones. *While consumers frequently makes food choices based on what is **not** in food...low calorie, fat-free, low-sodium, no cholesterol... they are increasingly interested in what **is** in food...give them the perspective of the positive attributes of the food, or an understanding of the value of some fats.*

### ...And focus on food

- Include physical activity with caution. *The pyramid is a guide to help consumers make healthy food choices, an increasingly complicated challenge. The addition of physical activity would add further challenges, take the emphasis away from food and, ultimately, weaken the symbol's impact. Supporting text should talk about the importance of physical activity and the amount required to burn meaningful quantities of calories. Physical activity is obviously important to overall health and it should have it own exclusive, focused national program.*

396 Fu Snyder Buraker

### **Create customized pyramids**

- Replace a “one size fits all” approach with “my” pyramid... *use an interactive web site to help users create personal pyramids based on their ideal weight, age, sex, health status including BMI, health-related habits, family health histories, culture and food preferences ...the more data and preferences the user enters the more specific and relevant their personal pyramid would become*
- Demonstrate how users can incorporate food they love or “cannot live without” into a healthful diet. *An interactive site would involve the user and would illustrate how to balance daily intake*

### **Revise serving sizes**

- Create new serving sizes for the Bread, Cereal, Rice and Pasta Group. *The serving sizes of the revised recommendations must be consistent with the Nutrition Fact labels. Nutrition Insights #22, December 2000 carefully outlines the reasons for the differences between the Pyramid's and Nutrition Fact's definitions of serving sizes. However, the explanation completely ignores the communication-related confusion that has resulted from the conflicting definitions. The Insight explanation, two pages in length, is MUCH too complicated for consumers (and probably most health professionals). Most importantly, the conflicting definitions create user frustration and “tune-out” — which defeats the whole purpose at a time when portion size is an issue of growing prominence in the battle against obesity.*
- Serving sizes must pass the “laugh test.” *A serving of a ½ cup of pasta or ½ cup of cereal, regardless of sound science reasoning, does not pass the test. The pyramid should be a simple, impactful and memorable communication device, not an article one would expect to see in a scientific journal.*

### **Let history be our guide**

- Listen to the target audiences. *The participants of the initial focus groups (conducted in 1998 as part of the formative evaluation process of the food guide) were frequently surprised at the large number of recommended servings in the Bread and Cereal Group...6 to 11 serving per day. The surprise was probably due not to the aggregate quantity of the 6 to 11 servings, but rather to the unrealistically small serving size definition that had the effect of overstating the recommendations for this group. By “simply” changing the definition of a serving to one cup of pasta or cereal and two slices of bread...the recommendation would have changed to 3 to 6 servings ...and would now be more consistent with the Nutrition Fact labels.*

4/29/06 Fu Buraker Snyder

## Pyramid hindsight

In the design process, the pyramid graphic stacked the food groups relative to their number of recommended serving...the Bread and Cereal Group, with the largest number of servings consequently became the pyramid base.

IF the serving sizes had been realistic ...1 cup of pasta or cereal, two slices of bread...The Fruit and Vegetable Groups would have become the base of the pyramid since it would then have the largest number of recommended servings (5 to 9), and the Bread/Cereal Group (revised to 3 to 6 servings) or the combination of The Milk Group (2 to 3 servings) and the Meat Group (2 to 3 servings) would have been placed on top of the base group.

The resulting pyramid graphic would have communicated a very different message to the consumer...that our diet should be build on a foundation of fruits and vegetables...rather than breads, cereals and pastas. Research continues to support the value of fruits and vegetables, including a most recent Penn State study showing that people who simply started their meal with the addition of a salad consumed fewer calories over the course of the day.

## Refining the Food Guide Pyramid

The following graphic is an illustration of how the pyramid might be revised to help consumers make more healthful food choices from all food groups. The horizontal food group bands are rotated to become bands that radiate from the top of the pyramid to the base, communicating:

- **There are healthful choices in all food groups.** *All food groups are now part of the pyramid base, indicating that consumers can enjoy choices from all food groups. The widths of the food groups' bands reflect the recommended proportion of that group in the total diet.*
- **Eat more foods with "power calories."** *The food group bands become narrower as they move to the apex, indicating that one should eat less of these "less nutrient-dense" foods, and more of the "nutrient-dense" foods at or near the base.*
- **Not all fats are created equal.** *A new band has been added for fats and oils to provide assistance in selecting healthy fat and oil choices.*

696 Snyder Fu Buraker

For example, using the existing food groups (food placement within the bands would be determined by a nutrient density scale that would be “invisible” to the consumer) and adding a new band for fats and oils, the visuals might look like this:

- **Vegetable Group**/at the base of the band would be foods like broccoli and greens; at the top of the band would be French fries
- **Fruit Group**/at the base foods would be foods like strawberries and kiwis; at the apex, fruit jams and pies
- **Milk Group**/non-fat milk and yogurts would be at the base; cream and ice cream at the apex
- **Meat & Poultry Group**/nuts, beans, skinless chicken breasts, lean cuts of meat and eggs at or near the base; fried foods like corn dogs at the top
- **Grain and Group**/whole grain products at the base; cakes and doughnuts at the top.
- **Fat and Oil Band**/oils like olive and canola at the base; lard at the top

The new pyramid’s overall graphic message is to build a healthful diet from the nutrient-dense food choices at or near the base of the pyramid...the home of the “power calories”...and to enjoy the foods at or near the top pyramid occasionally

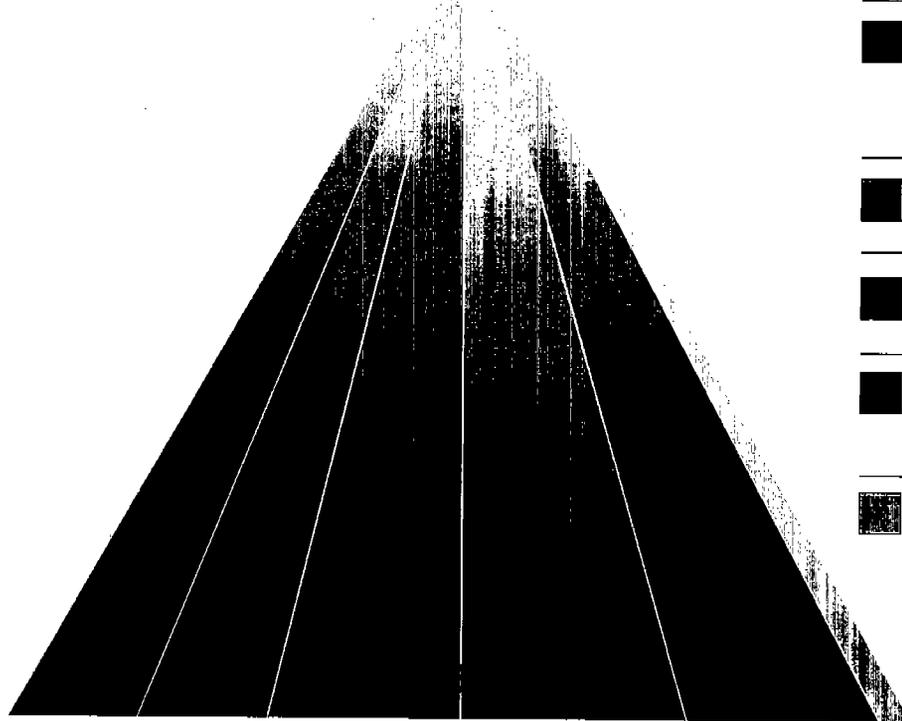
When the pyramid is illustrated in large sizes, food visuals would be added to vertical bands. When the size of the pyramid is reduced, the Food Group bands would be defined by color only, with the colors becoming lighter (less dense) as they move upward to the apex.

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## CONCEPT FOR PYRAMID REVISION

# The Radiant Pyramid

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### KEY

- Milk, Yogurt & Cheese Group  
2-3 Servings

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- Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group  
2-3 Servings

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- Fruit Group  
2-4 Servings

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- Vegetable Group  
3-5 Servings

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- Bread, Cereal, Rice & Pasta Group  
3-5 Servings

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- Fats & Oils

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STATE OF NEW YORK  
DEPARTMENT OF HEALTH  
Riverview Center

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10/27/03

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October 22, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Sir or Madam:

Thank you for the opportunity to provide comments on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. As Director of the Division of Nutrition, New York State Department of Health, I would like to submit the following comments:

- The nutritional goals for the proposed daily food intake patterns are appropriate for professional use. The important issue is that these goals be communicated in language that people will understand. If foods that are high in desired nutrients are given the most emphasis, the message that they are contributors to a more healthful diet will come across.
- The proposed daily food intake patterns are appropriate for educating Americans about a healthful diet. The increased amounts of whole grains, dark-green leafy vegetables, legumes and fruits are consistent with chronic disease prevention. The translation of these food intake patterns to Americans is critical. Emphasis should be on low-fat choices in each food group.
- The labeling of each food group should be considered part of the education on healthful eating. With that in mind, we would recommend that the names of the food groups be more nutrient-based (e.g. Protein-Rich Foods Group, Calcium-Rich Foods Group, etc.). The labels "additional fats" and "added sugars" may be misleading in that consumers may feel they should be added to achieve a healthful diet.
- We recommend the use of cups and ounces, rather than "servings" to suggest daily amounts from each food group. There is tremendous confusion between "serving" and "portion." When cups or ounces are not appropriate, portion sizes should be related to common object sizes, such as the palm of a hand or deck of cards.

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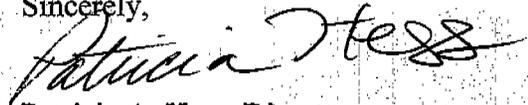
Consumer materials should be focused on balance and variety with special focus to the extreme demands on the best food choices in times of growth (childhood and pregnancy.). Specific recommendations for consumer materials include:

- A separate Food Guide Pyramid for children.
  - Pictures of foods used in consumer materials should represent recommended portion sizes.
  - Fats and oils, and sweets should be separated into two groups.
  - Include some reference to trans fats in the fats and oils groups to reflect new labeling requirements.
  - There should be clear communication that the range of number of servings is based on age, gender, and physical activity level.
- When looking at Table 2 and Table 3 there are three distinct calorie levels that become apparent within a 600 calorie range determination:
    - Level 1 – Children 2-8 = 1000-1600 calories
    - Level 2 – All females and older Americans (>50) = 1600 – 2200 calories
    - Level 3 – Males 14-50 = 2200 – 2800 calories

These three levels could be subsets of the food patterns for developing consumer materials.

Meeting the dietary needs of Americans is clearly a challenge. With the rise in obesity in all age groups we must strive to shift the current eating and physical activity patterns contributing to this rise. We appreciate the opportunity to contribute to this process and anxiously await the final product.

Sincerely,



Patricia A. Hess, Director  
Division of Nutrition

Marianne Izuka

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10/27/03

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October 26, 2003

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

To Concerned Nutrition Team;

Thank for the opportunity to give public opinion on the Food Pyramid. I am a Nutrition Education Student at Eastern University. I will be a Health Educator in Pennsylvania upon graduation from my master's program in School Health Services.

As you are aware, children and adolescence are moving away from the Healthy People 2010 goals to decrease health disparities and reduce the number of over weight children to actually have an increase in the number of children and adolescence that are overweight. In the inner city school where I am doing a nutrition project, at least 25% of the girls are overweight.

This indicates the need for your updating. Thank for your concern. Here are some of my comments based on what I have been learning:

The recommended daily in take of water is not listed in any table. Water is one of the most important substance our body needs and is often overlooked. Water should be included in the pyramid and in value tables. Also active men and women need more water. Other pyramids incorporate water, will it be a component worked into the tables and pyramid?

Table three is clearly well researched and thorough. It is good to see fiber worked in. Food patterns are expanded for active men, but what about active women? This is not clear if it is in the table.

America is a melting pot of cultures, in the theoretical construct of food categories traditional diets from cultures including vegetarian, are not well represented. Although there is an improved break down of the vegetable group, the milk group should be expanded with soy and other alternatives as there are many lactose intolerant Americans. Perhaps several pyramids of different standard diets should be considered to help the mixed culture of Americans pick the diet closest to their preferences. The meat and bean group is not broken up well either. Several source recommend red meat only occasionally. The title of this group is misleading American to daily consumption of red meat. The American Dietetic Association (ADA) would seem by its position that appropriately planned vegetarian diets are healthful, are nutritionally adequate, and provide health benefits in the prevention and treatment of certain diseases, not to encourage red meat. perhaps food groups should be expanded. A separate legumes, beans and nuts may encourage Americans to eat more of a variety as recommended.

Sincerely, <

Marianne Izuka  
Marianne Izuka

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10/27/03

October 20, 2003

To: The Food Guide Pyramid Reassessment Team

From: Nutrition Assessment Graduate Class (NTR 523), Fall 2003

State University of New York at Buffalo

Buffalo, New York

Class Assignment:

Review of Food Guide Pyramid Revision Plan for 2005; Tables 1-5

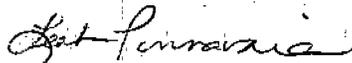
The Nutrition Assessment Graduate Class at the University of Buffalo consists of Dietetic Interns, Nutrition Graduate Students, and PhD candidates who are incorporating nutrition into their research. Overall, the class was very pleased that the Food Guide Pyramid is being revised. The addition of subgroups and different energy levels based on gender, age and activity are changes that seem long overdue. Here is a list of additional ideas and concerns that the class hopes will also be taken into consideration:

1. Standardizing all serving sizes into cups may be helpful for some of the groups; however, it may be confusing in the grain group. Also, should Fats be listed as grams? It seems more realistic to specify servings of fats as teaspoons so that the general public can visualize what a serving should be.
2. Distinguishing the difference between solid fats and then soft margarines and oils seems like a step in the right direction. However, shouldn't we include further subgroups to distinguish between saturated, monounsaturated, polyunsaturated fats since we should have a balance of all types?
3. There should be a way to distinguish low fat from high fat dairy somehow in the pyramid. Should we assume that people would know to only consume low-fat or non-fat dairy especially in terms of the different Calorie levels and how many servings are recommended for each level? Could high fat dairy be included at the top of the pyramid to be used sparingly or could guidelines be given on how much high fat dairy should be consumed per day/week?
4. Should red meat be separated from other meats such as poultry and fish? Maybe it could be placed in its own category at the top of the pyramid to be used on rare occasions, similar to what the Mediterranean Food Guide Pyramid recommends.
5. Table 3 includes activity levels and energy requirements. There are no Calorie levels for women athletes who may need 2600-3200 Calories a day.
6. Needs for Pregnancy and Lactation should be considered. Will there be a separate table considering the needs for this group?
7. Could there be a way to distinguish cooking methods for specific food groups or in general could fried foods be listed at the top of the pyramid (use rarely)?
8. Should legumes be listed under vegetables, or should they be categorized separately? Some think they should have their own group and be consumed daily. If they are put into their own group, more people may choose them on a daily or weekly basis.

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9. Age grouping of nutrient requirements seems too wide. For example, would a 55 year old have the same nutrient needs as a 70 year old?
  10. Activity level determination seems too vague. Perhaps a clearer instruction of how to determine your energy level should be included.
  11. How about including recommendations for water intake?
  12. Table 5 -- overall everyone felt that this table seemed redundant and a source of confusion.
  13. How about considering wine or alcohol in a separate group such as in the Mediterranean Food Guide Pyramid. This could help Americans choose between different types of alcoholic beverages and the amount that should be consumed in a day. Too many Americans are under the impression that binge drinking sporadically is acceptable if only done once in a while. If wine and other alcoholic beverages were included, people may realize the importance of moderate, consistent intake.
  14. Since many adults have some form of lactose intolerance, could dairy alternatives be listed as a subgroup for dairy?
  15. Table 4 does not seem to consider fortified foods. Also, what about use of supplements? Could guidelines be given for supplementation so Americans can choose more wisely?
  16. How is all of this information going to be presented in a way that the majority of Americans can understand it and follow it? This will certainly be a challenge. Many people will need education. Any thought for education programs for lay people?
  17. Other ideas instead of using a pyramid: Shopping cart with foods that should be consumed in larger amounts at the bottom and foods that should be eaten rarely on the top. Pie chart. Plate chart, what our plates should look like at meals and snacks.

We are pleased that the USDA is planning to revise the Food Guide Pyramid. It would be naïve to think that such a complex issue could be presented in a one-page simplified way. It certainly will be a challenge for all of the members of The Reassessment Team to present this information to Americans so that all can understand. Thank you for your hard work that lies ahead and for considering our ideas about The Food Guide Pyramid revisions.

Sincerely,



Leah Pinnavaia, MS, RD, CDN  
Adjunct Nutrition Instructor  
NTR 523, Nutrition Assessment, Fall 2003 Class  
State University of New York at Buffalo  
Department of Exercise and Nutrition Science

10/27/03 Rosenbaum

20 Peterson Road  
Hillsborough, NJ 08844

received  
10/27/03

October 27, 2003

KT

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Public Comments on the Food Pyramid Guide

Thank you for seeking public opinion on the Food Pyramid. As the dietary model behind federal food programs, including the National School Lunch Program, the Pyramid needs to evolve with nutrition science. My son will be seven in January and has been a vegan all his life.

When the Dietary Guidelines Advisory Committee convenes to review current policy, I hope they will emphasize the Vegetarian/Vegan Six Food Groups: Whole Grains and Starches, Legumes, Green and Yellow Vegetables, Nuts and Seeds, Fruits, Vitamin and Mineral Foods.

Present guidelines advise two to three daily servings of dairy products along with meat as a main protein source. While this plan successfully promotes the meat and dairy industries, it ignores numerous studies linking saturated fat and cholesterol in meat, eggs, and dairy products with heart disease, cancer and stroke--the top three killers in the U.S.

Dairy products alone are associated with obesity, high blood pressure, juvenile onset diabetes, prostate and breast cancers, allergies, nasal congestion and ear infections, according to the American Heart Association.

One of two Americans will die from heart disease. The excess saturated fat (mostly from animals) and cholesterol (entirely from animals) will be the cause in most cases. The American Dietetic Association claims that vegetarian diets reduce the risk for coronary artery disease, hypertension, diabetes mellitus, colorectal cancer, lung cancer, kidney disease, and obesity.

Children, in particular, deserve alternatives to the fatty fare on school lunch lines. In a 1999 American Heart Association Scientific Sessions report, one in six teenagers' hearts showed significant blockage and the arteries of five-year-olds were clogged with fatty patches. Veggie burgers, soy cold cuts and soymilks are great substitutes for corn dogs, pizzas and milkshakes.

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The FDA links contaminated meat goods with six and a half million cases of food poisoning and six thousand deaths every year. Animal-based meals contain residues of growth-inducing hormones and antibiotics. In fact, antibiotic abuse on factory farms has led to what the scientific community labels Super-Bugs-Bacteria. SBB are resistant to current antibiotic therapies.

The Vegetarian/Vegan Six include all the essential carbohydrates, fats, protein, vitamins, minerals and water necessary for a balanced and healthy diet. They also prevent disease and obesity. Please revise the Food Guide Pyramid to reflect vegetarian sources of protein, calcium and other vital nutrients.

The Vegan Food Guide is as follows; at the top of the pyramid gives sources of Omega-3 Fatty Acids, Vitamin B12 and Vitamin D. The next level addresses the fortified soymilk and alternates (6-8 servings) and beans and bean alternates (2-3 servings), the next level includes; vegetables and Fruit. The bottom of the pyramid includes grains (6-11 servings).

Thank you for your consideration.

Sincerely,



Rose Reina-Rosenbaum

P. S. In addition to the Vegan Food Guide, eat a variety of foods from each of the food groups. Drink 6-8 glasses of water each day and limit intake of concentrated fats, oils and added sugars, if used.

1991 Fletcher

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October 10, 2003

Eric J. Hentges, Executive Director  
Center for Nutrition Policy and Promotion  
Food Guide Pyramid Reassessment Team  
USDA CNPP  
3101 Park Center Drive, Room 1034  
Alexandria VA 22302

Dear Mr. Hentges:

RE: Proposed Daily Food Intake Patterns for Food Guide Pyramid

I am writing to express concern in regard to the Proposed Daily Food Intake Patterns for Food Guide Pyramid. As the government modifies the food guide pyramid, we are pleased that the revision suggests daily intake amounts of essential alpha-linolenic acid (ALA), however food sources noted of this essential fatty acid are misleading and incomplete. I realize that the main food sources of ALA in the American diet based on national surveys are canola oils and soft margarines, but as American consumers begin to think about changing their personal dietary choices, they may want to know more about walnuts. Walnuts are unique as one of the only whole food sources of ALA – often thought, as mentioned, to be only in canola oil and canola based soft margarines. In addition, walnuts are also lower in calories and saturated fat than canola oil plus offer protein, fiber and other nutrients. In fact as you know, the Food and Drug Administration (FDA) affirmed the health claim, "Supportive but not conclusive research shows that eating 1.5 ounces per day of walnuts as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. See nutrition information for fat content." This FDA decision comes in response to a petition filed by the California Walnut Commission, which highlights a body of international scientific research substantiating the specific benefit of consuming walnuts as part of a heart healthy diet in reducing the risk of heart disease. The body of evidence suggests that the nutritional composition of walnuts contribute to these heart health benefits.

Clearly, further steps need to be taken to place greater emphasis on utilizing walnuts as a rich source of ALA. I hope the USDA will join the U.S. Food and Drug Administration, the Food Nutrition Board of the National Academy of Sciences and other recognized agencies such as the American Heart Association in acknowledging the health benefits derived from the ALA in walnuts as they make their revisions to the Food Guide Pyramid.

I urge you to please consider this recommendation.

Thank you for your efforts!

Sincerely,

Marjorie A. Fletcher S. Overton  
W. H. Haynes  
Ann Wanner  
Dandra Overton

1981  
Joy Jordan

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Public Comments on the Food Pyramid Guide

Thank you for seeking public opinion on the Food Pyramid. As the dietary model behind federal food programs, including the National School Lunch Program, the Pyramid needs to evolve with nutrition science.

When the Dietary Guidelines Advisory Committee convenes to review current policy, I hope they will emphasize the Vegetarian/Vegan Six Food Groups: Whole Grains and Starches, Legumes, Green and Yellow Vegetables, Nuts and Seeds, Fruits, Vitamin and Mineral Foods.

Present guidelines advise two to three daily servings of dairy products along with meat as a main protein source. While this plan successfully promotes the meat and dairy industries, it ignores numerous studies linking saturated fat and cholesterol in meat, eggs, and dairy products with heart disease, cancer and stroke—the top three killers in the U.S.

Dairy products alone are associated with obesity, high blood pressure, juvenile onset diabetes, prostate and breast cancers, allergies, nasal congestion and ear infections, according to the American Heart Association.

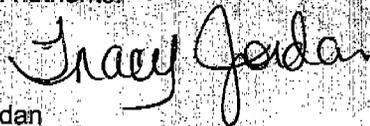
One of two Americans will die from heart disease. The excess saturated fat (mostly from animals) and cholesterol (entirely from animals) will be the cause in most cases. The American Dietetic Association claims that vegetarian diets reduce the risk for coronary artery disease, hypertension, diabetes mellitus, colorectal cancer, lung cancer, kidney disease, and obesity.

Children, in particular, deserve alternatives to the fatty fare on school lunch lines. In a 1999 American Heart Association Scientific Sessions report, one in six teenagers' hearts showed significant blockage and the arteries of five-year-olds were clogged with fatty patches. Veggie burgers, soy cold cuts and soy milks are great substitutes for corn dogs, pizzas and milkshakes.

The FDA links contaminated meat goods with six and a half million cases of food poisoning and six thousand deaths every year. Animal-based meals contain residues of growth-inducing hormones and antibiotics. In fact, antibiotic abuse on factory farms has led to what the scientific community labels Super Bugs: Bacteria (SBB) are resistant to current antibiotic therapies.

The Vegetarian/Vegan Six include all the essential carbohydrates, fats, protein, vitamins, minerals and water necessary for a balanced and healthy diet. They also prevent disease and obesity. Please revise the Food Guide Pyramid to reflect vegetarian sources of protein, calcium and other vital nutrients.

Thank you,



Ms. Tracy Jordan

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Dymsza

October 25, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

### Revision of USDA Food Guide Pyramid

I would like to suggest the need for Food Guide Pyramids for different age groups. With this in mind, I have developed a Food Guide Pyramid I use in my nutrition workshops with RI Aging 2000, an organization devoted to educating seniors.

A copy of my pyramid is enclosed. It is not perfect, but may give you some useful ideas for your pyramid revisions.

Sincerely,



Henry A. Dymsha  
Professor Emeritus, University of Rhode Island

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# FOOD GUIDE PYRAMID FOR OLDER AMERICANS

FATS, AND SWEETS — use sparingly

## LOW FAT

MILK, YOGURT, AND CHEESE GROUP  
2-3 servings daily



FATS: fish for omega-3 (EPA and DHA) and plants for mono. and poly unsat. fatty acids.

BREAD, CEREAL, RICE, AND PASTA GROUP.

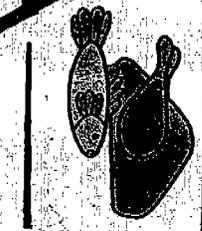
salt  
sugar, sweets  
butter, margarine  
fried food  
animal and trans fat

Moderation  
milk—1 cup  
yogurt—1 cup  
milkshake—1 cup  
pudding—1 cup  
Swiss cheese—1 1/2 oz  
cottage cheese—1 1/2 oz  
healthy fats  
fish, olive, nut  
canola, sunflower  
corn, plant oils

\*Count as 1 ounce of meat  
tuna—2 oz  
meatloaf—2 oz  
chicken—2 oz  
fish sticks—2 oz  
eggs—1\*  
baked beans—1/2 cups\*  
peanut butter—2 tbsps\*

## LEAN

MEAT, POULTRY, FISH, DRY BEANS, EGGS AND NUTS GROUP — 2-3 servings daily

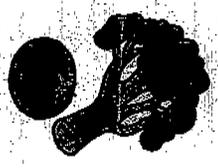


white carbo as bread, rice, pasta, potato  
whole grain bread—1-2 sl  
whole grain cold cereal—1 oz  
cooked oatmeal cereal—1/2 cup  
whole wheat pasta—1/2-1 cup  
bran muffin—1-2



BREAD, CEREAL, RICE, AND PASTA GROUP — 6-11 servings daily

Vegetable Group



Choose 3 to 5 servings each day

physical activity

weight control

Moderation

corn—1/2 cup  
carrots—1/2 cup  
broccoli—1/2 cup  
salad greens—1 cup  
green beans—1/2 cup  
vegetable juice—1/4 cup  
cooked or chopped raw vegetables—1/2 cup  
raw leafy vegetables—1 cup

2/3 of your plate\*

fruit juice—1/4 cup  
dried prunes—5  
applesauce—1/2 cup  
strawberries—1/2 cup  
fruit cocktail—1/2 cup  
dried fruit—1/4 cup  
chopped, raw fruit—1/2 cup

FRUIT GROUP

2-4 servings daily



\*Vegetables and fruits are low in calories and rich in vitamins and health protective phytochemicals as antioxidants and flavonoids.

Based on American Dietetic Assoc.

Food Guide Pyramid for Older Americans, 1998

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October 27, 2003

Food Guide Pyramid Reassessment Team  
ATTN: Eric Hentges  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

**Reference:** 68Federal Register 53536, dated September 11, 2003

**Subject:** Center for Nutrition Policy and Promotion, Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period

Dear Mr. Hentges,

CHS Inc welcomes this opportunity to make comments concerning the USDA food pyramid.

CHS Inc -- an agricultural cooperative -- is a diversified agricultural foods company committed to providing the essential resources that enrich the lives of those whose lives it touches. A Fortune 500 company, CHS is owned by over 350,000 farmers and ranchers and 1,100 cooperatives in 28 states from the Great Lakes to the Pacific Northwest and from the Canadian border to Texas. CHS provides products and services ranging from grain marketing to food processing to meet the needs of customers around the world. It also operates petroleum refineries/pipelines and, through a broad range of working partnerships, markets and distributes Cenex ® brand energy products, along with agronomic inputs and feed to rural America.

**Page**

**Comments**

**53536 Summary Section.**

The stated purpose of the proposal is to create a framework that can help consumers assess and improve their diets. The assumption is that the proposal can have value to the consumer if his health and resulting quality of life can be improved.

If the assumption is correct, the content of the current proposal fails to address the equal importance of physical activity with diet in the pursuit better health and quality of life. If the intent of the proposal is about improving health, consumer understanding of what and how much they put into their bodies as it relates to types and amounts of physical output is essential.

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Lodney

**53538 Section V.1. Comments on appropriateness of using sedentary, reference-sized individuals in Table 2.**

Tables are found at [www.cnpp.usda.gov/pyramid-update](http://www.cnpp.usda.gov/pyramid-update).

Assigning target caloric intakes based on sedentary individuals is appropriate, as a high percentage of Americans are unfortunately not very active. If the target were to be based on low-active individuals, for example, the caloric intake would be too high for much of the population. However, it is important to recommend an increase in physical activity for improved health. We therefore welcome the regulatory comment, "CNPP does plan to encourage physical activity in Food Guide Pyramid materials designed for consumers."

Table 2 comments: Definition of energy levels is difficult to equate to forms of exercise other than walking.

The proposal as written, includes a very brief, topical reference to patterns of physical activity. Sedentary, Low Active and Active are broad categories defined by gender and age with suggested caloric intake in Table 2.

Table 2 gives a broad set of references to physical activity as it might relate to the 3 patterns of physical activity. The content of the notes fall short of developing the importance of physical activity as it relates to dietary improvement and its intended positive impact on health and improvement in quality of life.

The body is a physical plant that the owner has to manage more effectively to stay healthy longer. Understanding the content and amount of fuel needed to run the plant efficiently without costly repairs is an inseparable part of having a well-balanced throughput whose net result is good physical and mental health.

This proposal needs to embrace both of the key aspects to better health... the dual roles of diet and physical activity. People feeling good and feeling good about them selves, their relations with those around them and their contributions to the community in which they live should be the focal point of this proposal, not just dietary guidelines.

We are missing the boat unless this proposal is expanded to address resolution of the entire need of the consumer in his pursuit of a better life through the self managed balance of diet and physical lifestyle.

**53538 Section V.2. Appropriateness of the selection of nutritional goals**

CNPP addresses the "Nutritional goal for vitamin E." It notes that the consumption of vitamin E is currently far less than the new RDA [Recommended Dietary Allowance]. Under current typical food intake types, the RDA is unachievable, but to meet it would require substantial changes in typical intakes - which CNPP does not want to make.

3037 Looney

We would hope that CNPP would find other means to communicate and recommend supplementary vitamin E intake in an advocacy program for more oil consumption—soybean, sunflower and safflower.

**53539 Section V.3. Comments on appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

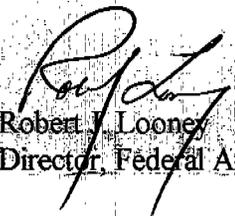
1. Proposed intakes of less solid fats could force consumers to make different choices, taking more notice of ingredient statements, etc as it relates to sources of fats. This will force food companies into potentially reformulating many of their current products, to lessen or eliminate the use of hydrogenated oils and solid shortenings.

2. The absence of data on trans fats was noted. And although CNPP does plan to “provide information about limiting consumption of trans fats in materials designed for consumers,” we hope the rulemaking process allows for draft comments before material publication.

**53539 Section V.4. Comments on appropriateness of using “cups” and “ounces” versus “servings” in consumer materials.**

The use of cups and ounces would be better understood by consumers than the use of servings. What the average consumer might consider to be one “serving” is more likely closer to two or 3 servings. This confusion on serving sizes can easily lead to over consumption of the food groups.

Thank you for your consideration.

  
Robert J. Looney  
Director, Federal Affairs

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October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
Room 1034  
3101 Park Center Drive  
Alexandria, VA 22302

**RE: Propose Food Guide Pyramid**

On behalf of the Humane Society of the U.S. (HSUS), the country's largest animal protection organization with more than 7.8 million supporters nationwide, I would like to submit comments on the proposed Food Guide Pyramid as found in the Federal Register

**Animal Welfare**

In light of the animal welfare problems associated with large scale industrial agriculture, which provides us with most of our food, the HSUS is dedicated to promoting the idea of eating with conscience. This dietary guide promotes the 3 Rs which are as follows:

- **Refine** your diet by purchasing only organic, sustainable, and humanely raised meat, eggs, and dairy products.
- **Reduce** your consumption of meat, eggs, and dairy products.
- **Replace** the meat, eggs, and dairy products in your diet with nonanimal foods.

The latter two goals are within the scope of the food guide pyramid. We would therefore urge that changes be made to the Food Guide Pyramid in order to promote a more plant based diet.

**Human Health**

It is increasingly evident that diets with little or no animal products can be beneficial for human health. The American Dietetic Association and Dietitians of Canada found in their review of vegetarian diets that appropriately planned vegetarian diets are healthful and nutritionally adequate. They also found that a vegetarian diet can provide health benefits in the prevention and treatment of certain diseases. Compared to nonvegetarians, vegetarians have been reported to have lower body mass indices, lower blood pressure, lower rates of death from ischemic heart disease, and lower rates of hypertension, type 2 diabetes, prostate and colon cancer.<sup>1</sup> These diseases are of major concern because they cost billions in health care costs and untold numbers of deaths. However, despite the increasing knowledge of the potential dangers of high animal product consumption, people are eating more meat than at any time in history. Citizens of the USA consumed

<sup>1</sup> Position of the American Dietetic Association and Dietitians of Canada: Vegetarian diets. American Dietetic Association Reports. June, 2003(103)6:748-765

2002 Thomas

around 219 pounds of meat per capita in 2002, versus 166 pounds in 1960.<sup>2</sup> Since the Food Guide Pyramid can have a profound effect on the eating patterns of Americans it is incumbent on its creators to ensure that it deals with these issues by promoting a reduction in animal product consumption.

### Recommended Changes

We would therefore recommend changes based on the findings of the Harvard School of Public Health which we feel accurately portray what is scientifically known about good eating habits.<sup>3</sup> According to their research the current food guide pyramid sections that deal with animal products should be changed as follows:

- Take Red Meat and Butter from their respective sections, label "Use Sparingly" and place at the top of the pyramid
- Rename the Milk, Yogurt, and Cheese Group the "Dairy or Calcium Supplement", label "1 to 2 times" and place under red meat. We would further suggest that other sources such as enriched soy milk should be added.
- Rename and separate the Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group into:
  - "Fish, Poultry, and Eggs" label "0 to 2 times" and place under "Dairy or Calcium Supplement";
  - "Nuts and Legumes" label "1 to 3 times" and place under "Fish, Poultry, and Eggs".

These changes would help to lower animal product consumption by legitimizing the use of nonanimal food products in their place and it would provide a plan that could be followed by vegetarians and others who don't consume animal products.

In conclusion we would urge that the food guide pyramid is altered to promote a more plant based diet for animal welfare and human health reasons. Thank you for your time and consideration.

Sincerely,

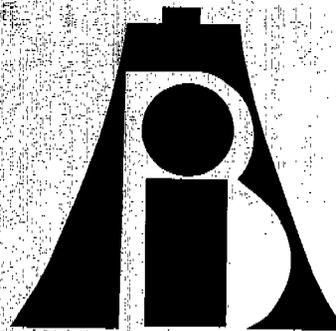


Tamiko Thomas, M.Sc.  
Animal Scientist-Program Manager  
Farm Animals and Sustainable Agriculture  
The Humane Society of the United States

<sup>2</sup> U.S. Eating More Meat. WATT PoultryUSA January, 2003:10

<sup>3</sup> Harvard School of Public Health website: [www.hsph.harvard.edu/nutritionsource/pyramids.html](http://www.hsph.harvard.edu/nutritionsource/pyramids.html)

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10/21/03

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## INDEPENDENT BAKERS ASSOCIATION

P.O. Box 3731 • Washington, DC 20027 • (202) 333-8190 • Fax (202) 337-3809

[www.independentbaker.org](http://www.independentbaker.org)

October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

Re: Center for Nutrition Policy and Promotion; Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period  
Federal Register Notice September 11, 2003

To Food Guide Reassessment Team:

The September 11, 2003 Federal Register proposed to review the Food Guide Pyramid, updating food intake pattern and identifying amounts to consume from each food group. One of the major issues debated is whether the bottom pier of the Pyramid, consisting of bread, cereal, and pasta, should be modified, such as being replaced by the fruit and vegetable group, or if there should be a decrease in servings. As of now, the number of suggested daily servings for grain-based foods is 6 to 11. There are plans to alter the suggested amounts of breads, making them more "nutritionally appropriate." The Independent Bakers Association (IBA), is a trade association consisting of small to medium-sized, family-owned wholesale bakeries and allied partners of the baking industry, want the benefits of grains to be properly diagrammed on the food Guide Pyramid. **Grain foods have been shown to decrease your risk of cancer, heart disease, birth defects, and type 2 diabetes. They also provide assistance in maintaining a healthful weight.**

### "Grains of Truth"

Consumers' perceptions of grain products in the United States are worsening, as stated in a recent study entitled "Grains of Truth," commissioned by the Wheat Foods Council. Consumers are confused by the plethora of nutrition information in the news and on bookstands. Most alarming is that many dieters are likely to eliminate grain foods, the

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foundation of the Food Guide Pyramid. In fact, grain foods, such as bread and pasta were eliminated almost as often (28%) from the diet as fats (24%), and more often than salty snacks (15%) and meats (15%).

### Benefits of Grains in Diets

Numerous documented studies show the health benefits of complex carbohydrates and grain-based foods. Consider these facts:

A released US Department of Agriculture (USDA) study, "A Comparison of Low-Carbohydrate vs. High-Carbohydrate Diets: Energy Restriction, Nutrient Quality, and Correlation to Body Mass Index," showed **participants on high-carbohydrate diets consumed 300 fewer calories per day than those on very low-carbohydrate diets.**

The study based, based on food intake data from 10,014 adults across the United States, also showed adults who ate high-carbohydrate diets were more likely to be in the normal weight range, with the lowest average body mass index. Additionally, **high-carbohydrate diets were indicated to be more nutritious than low-carbohydrate diets, providing greater intake of vitamins A, C, carotene, and folate, and the minerals calcium, magnesium, and iron.** (Source: *USDA Agricultural Research Service. Journal of the American College of Nutrition. June 2002. Wheat Foods Council online.*)

Many European countries, such as Italy and France, whose citizens consume more bread and pasta than Americans, have a much lower incidence of obesity than the United States. Italy's incidence of overweight and obesity is only 37 percent compared to the US's 61 percent. France is only 31 percent. (Source: *Institute of European Food Studies. Trinity College. Dublin. 1999. Wheat Foods Council online.*)

The American Kidney Fund (AKF) issued a warning stating the organization has long suspected high-protein diets negatively impact health, but they now have research to support their claims. **According to AKF Chairman Paul Crawford, M.D., "Increased protein intake leads to a buildup of nitrogen in the blood. The nitrogen ends up at the kidney in form of urea, where it needs to be cleaned from the body and gotten rid of in the urine. The resulting increase in urination can cause dehydration, further straining the kidneys."** Taking care of the kidneys is important, due to the fact there is no cure for kidney failure. (Source: *American Kidney Fund. April 25, 2002. Wheat Foods Council online.*)

A study published in the *Journal of the American Dietetic Association* (1980) looked at the consequences of a high-protein, low-carbohydrate diet. The authors concluded that **"diets, such as this [Dr. Atkins' Diet Revolution], may increase the long-term risk of arteriosclerosis" – a disease characterized by sudden spurts in the growth of fat and cholesterol-loaded deposits that clog arteries, which may lead to heart disease.** (Source: *Journal of the American Dietetic Association. 1980. Wheat Foods Council online.*)

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The American Heart Association (AHA) Nutrition Committee released a scientific advisory warning against the use of high-protein diets for weight loss. According to the AHA, these popular diets may cause short-term weight reduction due to fluid loss from eliminating carbohydrates, but the increased consumption of animal protein, which is high in saturated fat, and the decrease in consumption of vegetables and fiber, which contain essential nutrients and help reduce cholesterol, can contribute to coronary heart disease, diabetes, and stroke. **The AHA recommends a daily dietary balance of about 15 percent of calories from protein, 30 percent from fat, and 55 percent from carbohydrates – combined with regular exercise.** (*American Heart Association, October 2001. Wheat Foods Council online.*)

### Low-carbohydrate Diet: Cons

Many of the first pounds lost on a low-carbohydrate diet come from water, not fat. It is believed that when you are not eating enough carbohydrates, your body begins to burn your stored carbohydrates for energy, which releases a lot of water weight. The body then breaks down lean body tissues in an effort to provide glucose for energy and brain function.

Research has not yet determined the long-term effectiveness or risks of the low-carb diet. According to the recent October issue of "Mayo Clinic Women's HealthSource" there is concern in the medical community about the long-term effects of the low-carb diet in America's health. There is plenty of evidence that a diet rich in grain, reduces your risk of numerous health concerns.

### Goodness of Grains

Numerous studies have shown that grain foods, particularly breads and pastas, are protective against some cancers, including those affecting the colon, stomach, breast, liver, pancreas, gall bladder, prostate, ovary, bladder, and kidney. Grains can help maintain a healthful weight because they satisfy the appetite, delay hunger, and provide half the calories of fat. Numerous studies show grain foods, especially whole grains, are protective against type 2 diabetes. The Iowa Women's Health Study and the Harvard study showed an inverse relationship between whole grain consumption and type 2 diabetes. In these two studies, neither found an adverse effect from enriched grain consumption. Enriched grain foods contain folic acid, which reduces the risk of neural tube defects, such as spina bifida and anencephaly.

Grains also are easily burned by the body for energy. Unlike protein and fat, carbohydrates are readily stored in muscles to be used during exercise. Carbohydrates give endurance and energy during physical activity. Carbs help replace muscle fuel (glycogen) when it becomes depleted during physical activity. By consuming larger portions of carbohydrate-rich foods, like grains, and moderate amounts of protein and fat, glycogen stores are better replenished, providing fuel to the body.

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## Importance of Maintaining Current Food Guide Pyramid

A new study done on women indicates that following the Department of Agriculture's Food Guide Pyramid, eating grains can reduce the risk of death by about 30 percent. The study surveyed 42,000 women about their normal diets, then tracked them for six years. Those who followed the USDA Food Pyramid most closely were, on average, 30 percent less likely to die from any cause than women who did not follow the guidelines, according to findings published this week in the Journal of the American Medical Association. Moreover, women with most healthful diets were 40 percent less likely to die of cancer and 33 percent less likely to die of heart disease than women with the worst diets.

## Obesity in America

The bottom line is that obesity has become an American epidemic, and one that needs careful evaluation and a solution. No one can blame obesity on grains being at the base of the Food Guide Pyramid. In fact, when Dr. Atkins first published his low-carb diet in 1972, it sold millions of copies and millions of Americans are on his high-protein/high-fat-diet. During that time, obesity has increased exponentially.

Consider Asia and their extremely high-carbohydrate diets. The obesity rates in China (less than 15 percent), Republic of Korea (22 percent), Thailand (20 percent), and Japan (less than 3 percent) are far lower than in the United States (61 percent). (*Source: Obesity Task Force, 2000.*)

## Conclusion

The Food Guide Pyramid is a tool for Americans to make daily food choices that meet nutritional standards. The Food Guide Pyramid is one of the most widely recognized icons in America, with a 80-plus rate of recognition, and if the servings of grains are changed it could be a major problem facing grain producers.

Grains provide Americans with needed vitamins, minerals, fiber and complex carbohydrates. Grain-based foods have nothing to do with the rising obesity epidemic in this country. The benefits of grains have been shown in the above pages. Americans need to stop blaming carbohydrates for weight problems. Simply put, Americans need to cut down on caloric intake and increase their physical activity.

5/95 pyle

*Independent Bakers Association has demonstrated its concerns over the need to maintain grains at the base of the Food Guide Pyramid. Furthermore the group is actively working to have the Food Guide Pyramid take a more active role in nutrition education.*

Sincerely,



Nicholas A. Pyle

CC: IBA Board of Directors



# Council for Responsible Nutrition

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Dickinson

October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

## **RE: Comments on The Food Guide Pyramid**

The Council for Responsible Nutrition (CRN) appreciates the opportunity to comment on USDA's review of The Food Guide Pyramid. CRN shares the agency's commitment to providing consumers with the most current nutritional standards to help them assess and improve their diets.

The Council for Responsible Nutrition is one of the industry's leading trade associations. CRN represents a wide range of manufacturers of dietary supplement ingredients and of finished products, including national brands and store brands available in the mass market and products distributed through natural food channels, as well as dietary supplements marketed through direct sales and by mail order.

USDA Center for Nutrition Policy and Promotion (CNPP) has solicited written comments on revisions to The Food Guide Pyramid. CRN respectfully submits the following suggestions for consideration by the Center.

### **Scientific Evidence**

There is a growing body of scientific research that indicates the important role that dietary supplements, particularly the multivitamin, play in a good nutrition program and overall healthy lifestyle.<sup>1</sup> In addition, this evidence combined with economic studies suggests the appropriate use of some dietary supplements can promote good health as well as help reduce the risk of certain diseases, thereby potentially reducing health care costs.<sup>2</sup> Consequently, we urge the USDA as it evaluates The Food Guide Pyramid and the important health advice it offers consumers, to consider incorporating the consistent and appropriate use of dietary supplements, and specifically the multivitamin, as part of advice to consumers on good dietary habits.

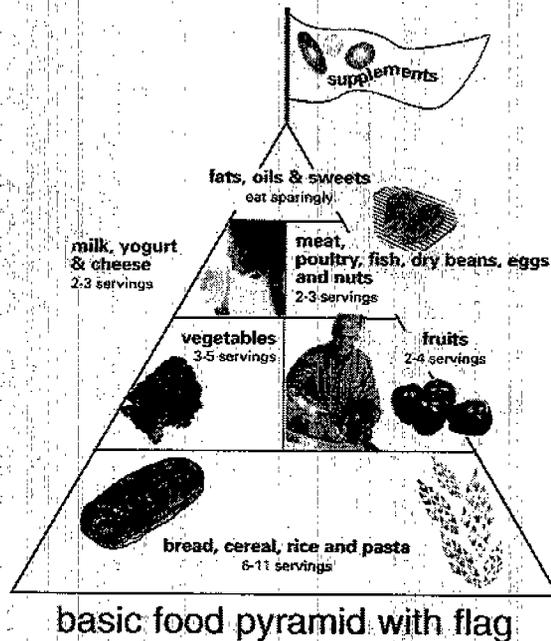
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For example:

### 1) Adding a "supplement flag" to The Food Guide Pyramid

Scientists at the USDA Human Nutrition Research Center on Aging at Tufts University have given careful thought to the nutritional needs of the elderly. Older people have lower energy needs and tend to eat less. A national survey showed that about 40 percent of people over 70 consumed less than 2/3 of the recommended energy intake, making it difficult to get recommended amounts of nutrients. Calcium, vitamin D, and vitamin B-12 are of particular concern in the elderly. The researchers emphasize the importance of educating older Americans to select nutrient-dense foods within all the food groups. To assist in nutrition education, the scientists have developed a modified Food Guide Pyramid for the elderly. It sits on a base of water, emphasizing the need for at least 8 glasses of water daily. Symbols are added to encourage the consumption of more fiber-rich grains, fruits, vegetables, and legumes. "Finally, a flag should be placed on the top of the 70+ Food Pyramid indicating that supplements of calcium, vitamin D and vitamin B-12 are frequently appropriate to promote optimal health."<sup>3</sup>

Building on the model developed by researchers at the USDA Human Nutrition Research Center on Aging at Tufts University, the Council for Responsible Nutrition has developed a food guide pyramid with a flag on top as a reminder that most people should add one or more nutritional supplements as components of their daily dietary regimen.



### 2) Adding a sidebar recommending multiple vitamins

In the June 19, 2002 issue of *JAMA* (Journal of the American Medical Association), two Harvard researchers reviewed more than 30 years of articles about vitamins in relation to

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chronic diseases and published their findings in two companion articles,<sup>4</sup> stating their recommendation that "...all adults take one multivitamin daily."<sup>4,5</sup>

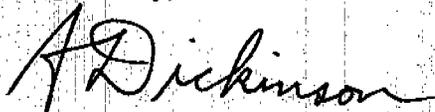
Also, in a book about diet and health, Dr. Walter Willett offers a "Healthy Eating Pyramid" that places more emphasis on whole grains, decreases the emphasis on dairy products, and relegates refined grain products as well as red meats and butter to the tip of the pyramid, along with sweets and fats—to be consumed "sparingly." A sidebar accompanies the pyramid, recommending "**multiple vitamins for most.**"<sup>6</sup> (emphasis added)

### Conclusion

There is no question that the amount of scientific evidence in favor of consistent use of vitamins, particularly multivitamins, is formidable and must be taken seriously, both by the medical community and by those who create public policy. Research suggests that regular use of some dietary supplements is a sensible choice for most people. Key nutrition researchers, government nutrition policies, and health professional groups increasingly recognize the fact that despite best efforts, most people do not get an optimal amount of nutrients by diet alone. As we continue to educate and improve consumer behavior in that area, we need to also recognize that supplements, while never serving to replace healthful eating, are a convenient and affordable way to bridge the nutrition gap.

We appreciate this opportunity to provide comments on some aspects for the revision of The Food Guide Pyramid.

Respectfully,



Annette Dickinson, Ph.D.  
President

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<sup>1</sup> Dickinson A. *The Benefits of Nutritional Supplements*. Council for Responsible Nutrition, Washington, DC, 2002.

<sup>2</sup> DaVanzo J, et al. "A Study of the Cost Effects of Daily Multivitamins for Older Adults." The Lewin Group, October 2, 2003 [press release].

<sup>3</sup> Russell RM, Rasmussen H, Lichtenstein AH. Modified food guide pyramid for people over seventy years of age. *J Nutr* 1999; 129:751-753.

<sup>4</sup> Fairfield KM, Fletcher RH. Vitamins for chronic disease prevention in adults: scientific review. *JAMA* 2002; 287:3116-3126.

<sup>5</sup> Fletcher RH, Fairfield KM. Vitamins for chronic disease prevention in adults: clinical applications. *JAMA* 2002; 287:3127-3129.

<sup>6</sup> Willett WC. *Eat, Drink and Be Healthy*. Simon & Schuster Source, New York, 2001.

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10/27/03  
Fabian

received  
10/27/03

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Rm. 1034  
Alexandria, Virginia 22302

Dear USDA Center for Nutrition Policy and Promotion,

I support the revised food pyramid. When the old food pyramid was released a typical American got approximately 40% of their calories from fat, about 15% from protein, and about 45% from carbohydrates. Since most red meats are high in saturated fat nutritionists did not want to recommend an increased intake in red meats. Based on this reasoning, fats were considered bad and carbohydrates were considered good. The old food pyramid suggested that no more than 30% of daily calories should come from fat. However, no research was done to prove that low-fat diets have long term health benefits. With further research it has been found that not all food containing fat is bad for your health. Some studies have found certain types of fats to be beneficial. The new pyramid is more of a guideline for healthy eating. Instead of stating that all carbohydrates are good they specify that whole wheat products should be consumed more regularly than white breads and pasta. In the same respect it specifies that all fat is not necessarily bad. Oils such as peanut and fish oils are now proven to actually have health benefits. The more specific nature of the revised pyramid is what makes it much more beneficial and informative than the older outdated pyramid.

The rebuilt food pyramid also weaves in some other important methods in maintaining good health. The base of the pyramid includes exercise and daily weight control. It also includes vitamin supplements and alcohol within moderation. These new revisions take into account research studies that suggest them as being beneficial in a healthy life style and also help in making the new food pyramid more helpful in planning a healthy lifestyle.

Even though the new pyramid is definitely an improvement from the old, revisions would make it even more beneficial. For example, including how much time should be spent on exercise. Also it would be helpful to know the kinds of food that are included in some of the categories and what vitamins are most important in maintaining health.

In conclusion, the food pyramid is ongoing and changing. The more information we acquire about the foods we eat the better we can make the food pyramid convey the most healthy food choices. Overall the new pyramid is more helpful than any others previous to it.

Sincerely,

Jessica Fabian

Jessica Fabian



.....

received  
10/21/03  
KT

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

Dear USDA Center for Nutrition Policy and Promotion:

I support the revision of the Food Pyramid that was released in 1992. When the 1992 pyramid was being developed, the average American consumed 40% of calories from fat, 15% from protein and 45% from carbohydrates. The idea of "Carbohydrates are good for you and fats are bad," was taught by the old (1992 version) food pyramid.

Today, with research studies, we know that not all fats are bad for you, and that eventually carbohydrates that are not used, will be turned into fat. Along with that, we should replace saturated fat with polyunsaturated fat and not with carbohydrates.

The problem with carbohydrates is that the complex carbohydrates contain sugars such as glucose and fructose. Sugar contains no minerals or vitamins, which primarily serves as no nutritional value. Certain carbohydrates are a good source of energy such as white bread and white rice which can be broken down into sugar glucose. This type is the main fuel for the body. The re-movement of starch from these types of carbohydrates removes many vitamins and minerals and fiber. These carbohydrates increase glucose levels in the blood more than whole grains do. A good example would be eating a boiled potato. A boiled potato raises blood sugar levels higher than eating the same amount of calories from table sugar. Potatoes are mostly starch, and they can be quickly metabolized to glucose.

The new version of the food pyramid will contain an equal amount of intake from all of the food groups. This will decrease the amount of carbohydrates and increase the intake of protein and other nutrients. I would recommend that along with the food group pyramid revision, that a schedule of when you should eat certain foods. For example, have your most carbohydrate intake in the morning along with high fats. It provides a good source of energy for the day, and the whole day to burn off the carbohydrates and fats. Meat and poultry should be eaten before and after harsh workouts. And fruits and vegetables used throughout the day as snacks. Also, the old food pyramid only says how frequently you should eat foods from the different food groups. It fails to mention how you should eat those foods. For example, canned vegetables contain high amounts of salt and mostly recommend adding butter for taste.

Sincerely,

Kristen Burns  
Nursing Student  
Curry College

10/21/03 Mary

received  
10/21/03  
KT

October 26, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA. 22302

To Whom It May Concern:

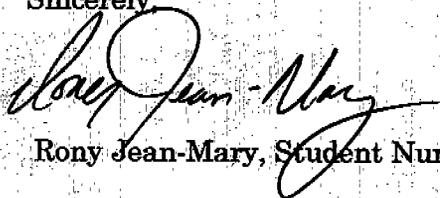
I recently had the opportunity to review the revised food pyramid. Although it may take some time to incorporate it into my life, I am looking forward to doing so. I was particularly impressed with how the base of the new pyramid was now daily exercise and weight control. Being an African American male, I am quite aware of the risk factors that accompany my race. I am pleased to know that efforts are being made to address these risks.

I strongly encourage you to implement the revised food pyramid for use with the American public. Although it is not perfect, this pyramid is a step up from the USDA's previous one. Its content is based on scientific strategies for reducing risk of coronary artery disease (CAD) and diabetes. First, it differentiates between the fats, clearly educating others about "good fats/cholesterols" and "bad" ones. Second, it encouraged the use of multivitamins. Third, red meat, butter, potatoes, and white rice, bread, and pasta were equated with sweets. The revised pyramid encourages people to consume whole grains at most meals. The original pyramid did not differentiate between whole and processed grains. Forth, the revised pyramid introduces the idea that more than one to two daily servings of dairy increase the risk of cancer. Finally, as mentioned above, the importance of exercise is stressed in the revised pyramid.

There are two improvements that I would encourage you to consider. First, the importance of drinking adequate amounts of water daily should be mentioned. It is dangerous to encourage people to consume an addictive substance (alcohol) "in moderation" and then fail to mention water. Second, I strongly encourage you to make the revised pyramid simpler to interpret. It should be tested for readability with a population that does not have a high school diploma. This is a segment in our society known to be at high risk for many diet-related illnesses. It is a disservice to alienate them from such important information.

In closing, I would like to thank you for taking these necessary steps towards achieving a healthier population.

Sincerely,



Rony Jean-Mary, Student Nurse

October 25, 2003

1001 Schneider

received  
10/27/03  
KG

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

To whom it may concern,

I am writing in response to the Center for Nutrition Policy and Promotion's request for comments on the proposed Daily Food Intake Pattern's and the accompanying technical support data tables. I feel that the "new pyramid" is a better reflection of our current knowledge of nutrition. It better differentiates between foods that were before grouped together into the same more general categories.

Because it is so difficult to narrow all of the information into a "user friendly" guide, I would hesitate to include exercise in the pyramid. I agree that exercise should be an integral part of the fight to decrease obesity and preventable disease, but I feel that the new pyramid should be a guide dealing only with nutritional issues.

I also feel that a multivitamin recommendation should not be part of this tool. The goal of the food pyramid should be to help American's with their food choices and caloric intake. Because it already involves so many different considerations I do not think it should begin giving recommendations on supplements and ways to burn calories that are consumed.

I appreciate the efforts of all involved in the making of the new guidelines. Nutrition and the health of our country truly go hand in hand.

Sincerely,

Patricia Schneider  
Patricia Schneider

October 24, 2003

received  
10/21/03

KJ

10/21/03  
Stoebel

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

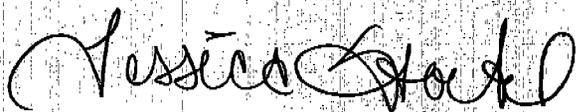
To whom it may concern;

I am writing to you to commend your company on the "New food pyramid".

After reading the article dated December 17, 2002 on Scientific American.com I felt compelled to write to your company. I feel that the new food pyramid is an excellent guideline for our ever "expanding" country. I particularly wanted to highlight on a couple of points that were made in the article. EXERCISE, EXERCISE, EXERCISE; exhibited in the base of the pyramid as a base to build upon. This in itself I think is one of the most important things you can do for your body, when so many people think diet alone will keep them healthy. I also wanted to highlight vegetable fats (polyunsaturated, monounsaturated) displayed as a "good fat" instead of the old theory that all fat is bad; thereby moving saturated fat to the top of the pyramid. I also support the separation of the white carbohydrates from the whole grains; placing the white carbohydrates at the top of the pyramid with the saturated fats and the whole grains at the base with plant and vegetable oils. I am feeling the underlying message is to get away from all animal products; this will certainly get a lot of support from vegetarians. These new changes to the food pyramid will hopefully begin minimizing diabetes, heart disease and high cholesterol. I think it wouldn't hurt to add in a plug for the elimination of tobacco.

I do hope that your company has been receiving a lot of support for all of your insightful efforts.

Sincerely,



Jessica Stoebel

October 19, 2003

10/19  
Trilligan

received  
10/21/03  
KT

USDA Center for Nutrition Policy & Promotion  
3101 Park Center Drive – Room 1034  
Alexandria, VA 22302

**RE: The "New" Food Pyramid**

To Whom It May Concern:

I am writing in response to the proposed revised food pyramid structure by the United States Department of Agriculture.

It is great to hear that the USDA is incorporating current research and nutritional knowledge to develop the "new" food pyramid guidelines. The old food pyramid leaves one believing that they are making good choices when in fact they are not. Being overweight is one area where one can benefit from the new pyramid because it will show better groupings of food choices.

Eating white bread, white rice and pasta aid to the problems of obesity due to the fact that these types of carbohydrates are refined and break down into glucose. This refining process also removes many vitamins, minerals and fiber that our bodies need in order to be healthy and develop. Everyone should consider eating dark & whole grain breads and brown rice. Also, it would be beneficial eating various nuts and seeds as they are an excellent source of fiber and should be listed as such on the "new" food pyramid. Your activity level needs to be a part of your daily routine to work in conjunction with what one eats to stay healthy.

As a college student I find it to be very hard in the cafeteria to make good choices as the food is prepared "to taste good" and NOT for the better of the student's health. Using the new pyramid in college cafeterias would give a better understanding of the types of food that should be offered to help with staying healthy and learning to make good choices. Having chicken fried, prepared with sauces and breadcrumbs only goes back to filling your body with "bad fats". Offering students more fresh vegetables, without sauces, nuts and legumes would help in lowering ones intake of bad fats and at the same time improve cholesterol levels. A meatless chili is an excellent way of getting in ones vegetable & protein.

The "old" food pyramid does nothing for the many people having problems with heart disease, cancer, strokes and high blood pressure. It suggests 2-3 daily servings of dairy products and having meat as the main protein. These items are now known through various studies as having saturated fat and being high in cholesterol. Use of the "new" food pyramid would be more beneficial in aiding one to eat more "fresh" fruit & vegetables along with learning more about what a serving size is to help with portion control.

I hope that as a college student and young adult my thoughts and comments will be considered in making the necessary changes in the food groups. This will enable our society to better themselves healthwise and learn the correct choices one should make to improve their overall well being.

With Best Regards,

Heather Trilligan

received  
10/27/03

October 22, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive Room 1034  
Alexandria, Virginia 22302

To Whom It May Concern:

Reviewing the old and the new food pyramid guidelines I definitely support the new revised one more over the older one. I noticed how the fruits and vegetables didn't really change much, which I believe to be a good thing and always a necessity. I like basically everything that has been revised, for example I believe that carbohydrates in abundance are really bad for you along with any type of fatty foods.

Being an Italian, eating carbohydrates is basically a huge part of my diet, but with the fact that it can cause heart disease keeps me aware that they are not as good for you as they might taste. I always thought that even white rice was good for you, but reading the new pyramid I realized it was up at the top with all the carbohydrates. I also learned the importance of eating high iron foods, especially for women and people with anemia. So knowing this it made me lean more towards the revision because it's in a category by itself, in the older pyramid it was included with all the meats and the eggs. It was very interesting to see how far up on the pyramid both the meats and the carbohydrates jumped. They were both considerably low and are now at the very peak of it all.

Living with the mother that I have I learned a lot about nutrition, even before I started nursing school. She takes many multiple vitamins, and has always warned me about the unhealthiness of red meats. These are just some of the factors that she has expressed to me that are also conveyed in the pyramid. I agree with the fact that exercise should be a factor these days, and in order to stay health and keep your heart healthy any type of physical exercise is a necessary.

There is one thing about the revised food pyramid that I didn't like though; it seemed to be too vague. It says that you should use alcohol in moderation; just about how many drinks a week is that? And with the whole grain foods and the plant oils, I think this may be too confusing for people if they are not very well educated about nutrition. Is there a limit to how many meals a week you eat these certain things? But over all I believe that the new food pyramid is a great revision and I believe that it will help people become healthier and be warned about the fatty foods and the carbohydrates.

There has always been one thing about the pyramid that has baffled me, why isn't there any consideration about drinking numerous glasses of water a day. I know that staying hydrating and constantly drinking water flushes out your system faster. So wouldn't that be a huge factor to indicate?

Thank you for allowing me to give my opinion, and taking the time to read my letter.

Sincerely,

Tracy Zangarino

1091  
Gonzalez

October 19, 2003

received  
10/27/03

KT

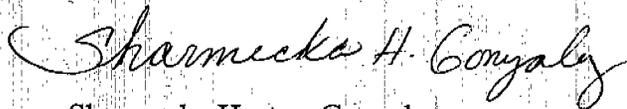
USDA Center for Nutrition Policy and Promotion  
3101 Park Circle Drive  
Alexandria, VA 22302

To Whom It May Concern:

I am writing this letter in support of the revision of the food pyramid. The old food pyramid was vague and didn't include the importance of exercise. Healthy lifestyle changes start with good education and if the information is clearer it's for the better. With the new guidelines for hypertension, the type of food being eaten is key and with this new food pyramid there is definition of good and bad fats and carbohydrates and I think that's great.

I hope this revised pyramid will be available soon. A lot of people don't like change but I think it is for the best.

Sincerely,



Sharmecka Horton-Gonzalez  
Curry College nursing student

10/27/03  
DeAngelis

received  
10/27/03

October 22, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

To Whom It May Concern:

I am writing in regards to the new food pyramid. I agree with and favor the new changes made in the food pyramid. The old pyramid was too broad and misleading. It was made in order for the general public to understand it however, the information was inaccurate and the pyramid was poorly designed. I feel as though the new food pyramid does a much better job of breaking down the categories unlike the old food pyramid that just clumped foods together. For example, they separated the white flour from the other breads and cereals where as the old pyramid had them all in the same category.

The old pyramid had fats as all being bad and should be use sparingly which in reality not all fats are bad for you and we need them which is why the new pyramid puts them on the bottom along with whole grain foods. The new pyramid limits the servings of diary from 2- 3 to 1-2. I also like how red meat is separated from fish and poultry because too much red meat can lead to heart disease. Also, I like how on the very base of the pyramid it mentions daily exercise and weight control which is important and most people tend to forget that it is. Another thing that the new pyramid includes that I think is also important is the use of alcohol and vitamins.

In closing, I would just like to say that I think that this food pyramid is much more accurate and it should have been designed this way in the first place instead of simplify things. I think that the general public will learn a lot about the foods they eat by putting this food pyramid out and as a result will greatly benefit from it.

Sincerely,

*Jennifer De Angelis*

Jennifer De Angelis

received  
10/27/03  
KT

October 22, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria VA 22302

Dear Sir or Madam:

I am very pleased to see a new Food Guide Pyramid. I found the old one to have a significant impact on consumers, at the same time, I found it too general. The American public has become increasingly diet conscious and increasingly overweight. Consumers are being bombarded with conflicting information regarding what is good and bad for them, a new pyramid is more important than ever.

My favorite thing about the new pyramid is the 12 subgroups describing food intake patterns based on energy levels. It appears that it will work in harmony with diabetic plans and I believe that will be a real asset in the future. I felt that it would be very useful to professionals in education because it stresses that caloric intake is based on things like age, energy level and gender. No one plan could encompass all demographics and this plan can be adapted to fit any of them.

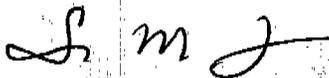
I also liked division of food groups into more specific subgroups such as starchy vegetables and whole grains. The use of the word additional regarding fats will also be helpful in reminding people that many foods already contain the fats we require in our diets. I agree with the use of sedentary reference sized individuals as long as it is made clear in consumer literature that different energy levels require different eating patterns.

The previous pyramid did work in one way. It was simple. I strongly feel for that reason that "serving" should remain as the descriptive for amounts. I would like to see serving size conversions as a separate educational tool. I agreed with the idea that conversions within a particular food group would be confusing. If this was treated as supplemental to the pyramid I believe it would have more impact.

I strongly feel that it would be important to develop specific target audience material. I was taught the pyramid as a child and my diet choices were impacted by it. Children are the most important target group, as they are the most impressionable group. This demographic is in need of education and prevention rather than maintenance or improvement.

I think the new pyramid is more complex than its predecessor, but necessarily so. I am eager to see it "boiled down" and brought to the consumer.

Sincerely,



Suzanne M. Furgal  
Nursing Student, Curry College

**USDA**  
**Center for Nutrition**  
**Policy and Promotion**

received  
10/21/03

KT

October 17, 2003

3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

To Whom It May Concern,

I support the new food pyramid because it seems to be a healthier way of eating and is based on years of research. I think that daily exercise and weight control should be on the bottom of the pyramid because it is a big factor in being healthy. The second level of the new pyramid includes grains but also plant oils which is a newly found nutritional food and also peanuts which are found with a different nutritional value than other nuts. Meats are also in this category which were considered bad before but now have been shown to be good in moderation. Vegetables can be eaten in abundance and fruits have been proven to be better for us than we thought, but in moderation. Dairy is lowered to 1-2 servings, showing it is better to have in moderation as well. Alcohol was added to the new pyramid as a healthy source but only in moderation. Red meat and butter should be used sparingly which is good because they both are proven to cause a build up in cholesterol. Also at the top of the new pyramid are all white flours and rice, etc. These are all processed foods and have been stripped of their nutritional values. Many are unaware of the foods they eat that may seem good for you but are really just processed food. So it is good that we are aware of them. Pasta was put at the top of the pyramid as well because of the high carbohydrates. Sweets remain at the top, as they should be. Vitamins were added at the top as well, which is a good point because many people do not follow the food pyramid as they should and they do not get the nutrients they need each day. So vitamins can help increase our nutritional diet, but they do not come close to replacing the real nutritional foods we should be having every day.

I think it was definitely time for a new pyramid to be made. Today, people do not have the time to think about what foods they should or should not eat. It is hard to know what is good out there and this new pyramid has the ability to show us and keep us on track. I think it is good because there was a lot of time and research put into it and it is something everyone can believe to be the best information about nutrition. The old food pyramid was not really based on research nor did it explain the reasoning and facts about the information. This new pyramid gives everyone information on what we should be eating and more importantly why we should be eating it.

Sincerely,

Marilyn Conlon  
Student at Curry College

10/27/03  
Galvin

received  
10/27/03  
KT

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

Dear USDA,

I just looked over the revised and the old food pyramids. The idea that I was mostly interested in was on the revised food pyramid. The daily exercise and weight control, I think, is the most important part of anyone's daily routine. Obesity is one of the major problems in today's society. Good nutrition habits should start as young children. Every person has a diverse cultural heritage that could have an effect on their nutrition. I think every person should know their limits when it comes to food so they don't become too overweight because it is not healthy. People that do have best possible nutritional status are usually livelier, have fewer illnesses, and live longer than those who are malnourished. Under nutrition is also another big issue because those that are have delayed wound healing, longer hospital stays and higher health care costs. Over nutrition can cause obesity and other diseases such as diabetes and heart disease. Daily exercise should be done everyday whether it's running or walking. It rejuvenates you and increases your self-esteem.

The revised food pyramid suggests that avoiding fats and eating plenty of carbohydrates is the way to go. Bread, cereal, rice and pasta all fit into this group. The positive part is that they give you energy. Carbohydrates are absorbed as sugars: monosaccharides, disaccharides and polysaccharides. Some carbohydrates can be digested and those that are not form bulk in the diet. Too much bulk can also be harmful. For instance, too many lipids aren't the best. Whole grains, vegetables, potatoes, fruits and honey are first-rate sources of carbohydrates. Too much of anything isn't good, there needs to be some variety because no one food has all essential nutrients. In the old pyramid there was one main group for carbohydrates and in the new one they are split up so each group has a taste of every other group. It's a good way to get nutrients in every meal. The number of servings is also taken into consideration especially on a diet. It is important to get plenty of nutrients because they provide energy, provide structural material for body tissues, and regulate body processes. If you're not able to get all the necessary nutrients then vitamins can be assistance; they can prevent metabolic deficits which don't help the body grow or maintain itself.

In conclusion, I agree with the revised food pyramid. It has more choices and a wide variety of foods to choose from to get all the essential nutrients one needs to eat a healthy meal. Not eating healthy is acceptable but as long as you know your limits and continue with a healthy lifestyle.

Sincerely,

Denise Galvin

received  
10/21/03  
kt

October 22, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

To whom it may concern:

I am writing in regards to your new proposal of the nutrition pyramid. I feel that the change will be successful. The one main goal I find to be the most important is the carbohydrates. Yes they are good for us, but the wrong kinds of carbohydrates are bad for the body. By changing the white carbohydrates portions from 6 to 11 servings a day to *use sparingly* will not only decrease the bodies metabolism but will help to regulate the bodies sugar levels. It is known that white breads, rice, and potatoes can elevate the blood sugar levels quickly, but the down fall is that the levels will also decrease dramatically causing complications such as diabetes, heart disease, and rapid weight gain. The whole grain carbohydrates take longer for the body to digest therefore we would not need to eat as much and or as often. Our bodies would have proper time to digest and metabolize the food we give to it.

Cholesterol also produces a problem in the health field. The pyramid now states that red meat should be consumed along with poultry, fish, and beans. However red meat is an eminent factor in the cholesterol scales. If we were to replace the red meat with the poultry and fish instead of eating it alongside, cholesterol levels will diminish. Also, changing from butter to olive oil will help to decrease the chance of high cholesterol.

These are only a few of the factors which I strongly agree with. To me the whole change in servings makes sense. Having too many carbohydrates and not enough activity will only give you body fat, eating too many saturated fats are no good for the cardiac system, having enough vegetables and fruit can decrease the chance of heart attacks and strokes, eating nuts and beans provide the body with adequate protein, fiber, minerals, and vitamins. Milk from a cow or a sheep is also high in saturated fats. If you were to reduce the amount of fat to low fat milk or yogurt products you will still produce enough calcium, but not as much fats. Also, it is important to understand that we live very busy lives; we do not always have the time to sit down and eat the proper and the right amount of food or nutrients. So if we were to take daily supplements (like the Flintstone vitamin for children) we would yield the appropriate quantities of vitamins, minerals, and nutrients. I agree that the largest factor of this food pyramid should be highly emphasized; exercise and weight control must be understood world wide that with out this there would be no base to a proper diet and nutritional balance.

In closing, I would like to state that this new change of the food pyramid will benefit the lives of all people. It has been thought of and developed suitably to all who should use it. I also feel that the food pyramid should be revised and recalculated as the human needs mature and develop.

Sincerely,

Tanya Ellis

Tanya Ellis

October 20, 2003

received  
10/27/03

K

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

To Whom It May Concern:

I am writing in regards to rebuilding the new pyramid. I am in favor of remodeling the food pyramid so people have a better guideline to portion their intake of foods, and also live longer, healthier lives. The old food pyramid was vague, and really not informative. Researchers have new evidence supporting which foods are good and help fight cancer whereas which foods are not good and can attribute to chronic diseases.

Nutritionists have known for years that there were mistakes in the food pyramid. For instance, the old pyramid recommends people to use fats, oils, and sweets sparingly, but intake 6-11 servings of carbohydrates founded in bread, cereal, rice, and pasta. Researchers knew for a long time that saturated fats founded in red meat, and dairy products increase cholesterol. Cholesterol can lead to bigger problems such as coronary artery disease. Poultry, and fish contains less saturated fat and fish is a good source of the essential omega-3 fatty acids. People who eat poultry, and fish instead of red meat have a lower chance of coronary artery disease.

The newer model should include the use of red meat, and butter sparingly, whereas the vegetables should be absorbed in large quantities. Most recent studies have shown that fruits and vegetables have lowered the risk of cancer, especially green leafy vegetables which have folic acid and may reduce the risk of colon cancer.

In the old model, it does not mention anything pertaining to vitamins. I think that in the new model, everyone should take a multi-vitamin once a day to supplement vitamins that people do not receive from food.

If the main goal for the food pyramid is to maintain good health, then exercise also needs to be added to the food pyramid. Exercise along with eating healthy can help a person live longer, and maintain weight control. Overall, I think that the food pyramid needs to be more detailed, because certain foods contribute to better health. More research is needed to explain the health effects of specific fruits and vegetables. Also the benefits of vitamins and risk of vitamins needs to be clarified, because people who are taking vitamins should know how much of a vitamin they should intake.

Sincerely,

*Nadine D'Amelio*

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\_\_\_\_\_  
\_\_\_\_\_

October 23, 2003

USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

received  
10/27/03

1 09 1  
Conkey

KT

Dear Sir or Madam:

Much research has been done regarding the eating habits of Americans. There are reports that as much as 35-45% of Americans are overweight today, including children. This contributes to the increase in a variety of illnesses, from diabetes to cardiovascular disease as well as a variety of cancers.

The new pyramid promotes exercise and a lifestyle that limits excessive calorie intake. Fats such as olive oil, canola, soy, corn, peanut and sunflower provide a major portion of the daily caloric intake, combined with whole grain foods. Vegetable and fruit portions should be eaten substantially. Protein should be eaten no more than 2 servings per day, including nuts, fish, eggs and poultry. Limited amounts of red meat, white bread, white rice, white pasta and butter are to be eaten.

A multiple vitamin is recommended daily.

Alcohol, consumed in moderation, has proven to have benefits to the cardiovascular system. In using this outline as a guide to healthy eating, women have a thirty percent lower risk of cardiovascular disease and forty percent for men. Combined with evidence of a lower risk for major chronic diseases, and there is an overall improvement of the health and welfare of the population.

It has not been proven that these dietary changes have any positive effect on cancer. Rather, the monitoring of weight, combined with physical activity are larger factors related to cancer.

A diet high in fiber offers a lower risk of type 2 diabetes and cardiovascular disease. It does not reduce the risk of colon cancer as previously thought.

Red meat, including beef, pork and lamb, raises the risk of type 2 diabetes and colon cancer. Yet poultry, fish, legumes, nuts and eggs contain more of the healthier fats, thereby lowering the risk of heart disease and colon cancer. Eggs, which can increase cholesterol levels, offer other nutritional benefits. Nuts contain omega-3 fatty acids, which lower cardiovascular and diabetes risks. Ironically, people who eat nuts are less likely to be overweight, maybe because they are found to satisfy appetites.

Dairy products have been associated with daily calcium intake. Here again, reports document that the highest fractures of bones are found where there is a high dairy diet. A high dairy diet has shown to increase men's risk of prostate cancer.

This information leads me to believe that the public needs to be better informed. The old food pyramid that has been the standard, is no longer a healthy guide for the American public. Today, it is such a huge challenge for individuals to lead a healthy lifestyle because of time constraints, stress, commitments, etc. Health insurance, medications, government assistance, Medicare and Medicaid, disability, social security, and employment have the potential to be positively affected. There are always issues about where money is being spent, and this might be one way that can prove to save money, as the general health and welfare of the public is improved.

I urge you to consider making the health of the public a priority and educate them to develop better eating habits.

Sincerely,

*Debra Conkey*

Debra Conkey



NORTH DAKOTA  
DEPARTMENT OF HEALTH

received  
10/24/03

COMMUNITY HEALTH SECTION *KJ*

October 23, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive Room 1034  
Alexandria VA 22302

RE: Comments of proposed daily food intake patterns

The North Dakota Healthy Weight Council is a statewide coalition of over twenty-five public and private organizations and agencies committed to promoting healthy eating and increased physical activity in North Dakota. We are pleased with the opportunity to submit on comments the Reassessment of the Food Guide Pyramid.

We recommend that the guidance surrounding fruits and vegetables should clarify that consuming more than the minimum recommended number of servings of fruits and vegetables, is better option for supporting weight maintenance than consuming more of the other food groups. Consuming more fruits and vegetable will help control "hunger" for the vast numbers of people assigned to the 1600-calorie plan.

We strongly support your inclusion of a "Milk" group in the Food Guide Pyramid. The promotion of low-fat dairy products for weight management, obesity prevention, reducing blood pressure and osteoporosis prevention has a strong scientific base. We suggest that the new Food Guide Pyramid recommend three to four servings of dairy a day. Science shows that 3-4 servings of milk, cheese and yogurt a day will not only help you meet your calcium intake, but may play an important role in weight reduction and lowering blood pressure.

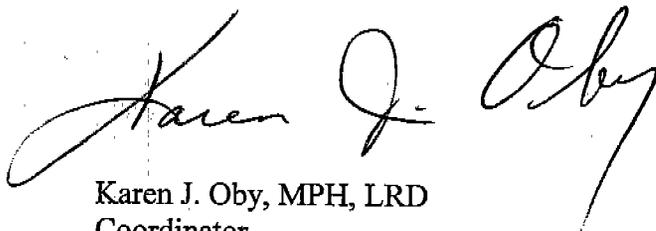
We feel that the Food Guide Pyramid should be a guide for all Americans, including those that do not use dairy products. Guidance should provide information on use of dairy foods by lactose-intolerant populations. The guidance also should provide information for those that choose not to eat dairy and other animal products. It should clearly advise appropriate choices for achieving a diet adequate in calcium and other nutrients provided by the dairy group – it is not enough just to mention that fortified soy beverages are an option.

Karen J. Oby

We commend the increased emphasis on whole grains. This is an area that needs more emphasis. By increasing emphasis in the Food Guide Pyramid, more whole-grain options will be offered in supermarkets and restaurants. Think of how fast-food chains could help increase the fiber intake of this country, if they just offered a bun that was one-third whole-wheat.

CNPP mentioned in the notice that physical activity will be encouraged in the Food Guide Pyramid consumer materials. We recommend that the CNPP consider including guidance on other positive behaviors that provide for better nutrition and social interaction in our society, such as promoting family meals; eating regular meals and snacks throughout the day and turning off the TV at mealtimes. There should be a section on infant/toddler feeding that promotes breastfeeding and offers other feeding suggestions such as attention to hunger/fullness cues when feeding young infant and toddlers and the inappropriateness of using food as a reward for good behavior.

Sincerely,



Karen J. Oby, MPH, LRD  
Coordinator  
North Dakota Healthy Weight Council



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**GROCERY MANUFACTURERS OF AMERICA**  
MAKERS OF THE WORLD'S FAVORITE BRANDS OF  
FOOD, BEVERAGES, AND CONSUMER PRODUCTS



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October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

FR Doc. 03-22763 Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period. 68 Federal Register 53536, September 11, 2003

### FOOD GUIDE PYRAMID REASSESSMENT COMMENTS

The Grocery Manufacturers of America (GMA) appreciates this opportunity to offer comments concerning the Department of Agriculture (USDA), Center for Nutrition Policy and Promotion's (CNPP) proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support data. GMA and its members applaud the leadership of the Department of Agriculture in this critical effort of reassessing the Food Guide Pyramid to provide up-to-date, science-based information to help Americans live more healthful lives and reduce risk of chronic disease.

GMA recognizes that nutrition standards have evolved since the Food Guide Pyramid (FGP) was introduced in 1992, in large part because of more recent data, such as the Institute of Medicine's Dietary Reference Intakes of 1997 and 2002, the 2000 Dietary Guidelines for Americans, and Health People 2010. In addition, GMA acknowledges that food supply and food consumption patterns have changed since 1992, as evidenced by the USDA's 1994-96 Continuing Survey of Food Intakes by Individuals and the 1999-2000 National Health and Nutritional Examination Survey. For these reasons, a revision of the FGP is a timely public health declaration.

GMA and its members believe it is important for Americans to understand that to be healthy they must eat a nutritionally-balanced diet, and they must be physically active and moderate their food intake to match level of physical activity. GMA recognizes the important role of America's food and beverage producers in helping consumers reach this goal, and intends to play an active and positive part in this process. The food guide must be based on sound nutritional, health and behavioral science. Additionally the food guide needs to be supported by nutrition and physical education programs that work and that will help Americans put the Dietary Guidelines into practice. The CNPP must seize the opportunity to learn from experience with the current FGP and develop a workable, common sense approach that fits how consumers live, work and play today and help all Americans lead healthy and active lives by giving them information about nutrition and physical activity that is understandable and relevant to their daily lives.

GMA provided the Dietary Guidelines Advisory Committee 10 Guiding Principles for addressing the issues and successfully updating the dietary guidelines. We encourage the CNPP to incorporate them into their discussions about the FGP:

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1. They must be relevant to how consumers live today and their evolving complex lifestyles.
2. They must recognize the important and positive role that the enjoyment of food plays in our family, cultural and social lives.
3. They should help Americans lead healthy, active lives by providing consumers with guidance on nutrition AND physical activity and balancing their caloric intake and their energy expenditure.
4. They must recognize the different nutritional and activity needs of children, adults and senior citizens.
5. They must recognize the different circumstances of and communicate effectively to diverse populations such as Hispanics and African Americans.
6. They must be based on peer-reviewed science.
7. They should provide parents and educators with the tools they need to be effective role models and to teach children health habits early.
8. They must be supported by nutrition and physical education programs that have been demonstrated to be effective.
9. They must include clear measurement and evaluation so that we will know if they are making a meaningful difference for public health.
10. The Dietary and Physical Activity Guidelines<sup>1</sup> and the Food Guide Pyramid. development processes should be effectively aligned, so that the guidance and education we provide consumers are consistent.

These principles provide an architecture to the reassessment process to ensure the resulting food guide will help *all* Americans lead healthy and active lives by giving them information about nutrition and physical activity that is understandable, relevant, and can be reasonably implemented into their daily lives.

CNPP has solicited comments on all aspects of the proposed revisions to the Daily Food Intake Patterns that serve as the technical basis for the Food Guide Pyramid and on several specific issues and questions. GMA offers the following responses to CNPP's request for comments.

**1. Appropriateness of using *sedentary, reference-sized individuals* in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.**

CNPP points out that the calorie levels for food patterns used in comparing intakes for nutritional goals are those that are appropriate for sedentary individuals. The apparent rationale for basing the target caloric pattern on a sedentary approach was that assuming a higher level of activity as the target pattern (e.g., 'low active') may have risks associated with higher suggested energy intake levels that may promote weight gain in some individuals. CNPP also states that use of sedentary levels does not require the assumption that a person needs to be active in order to meet nutrient needs, stating that 'given the sedentary lifestyles of many Americans, it was considered better not to assume any specific level of physical activity.'

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<sup>1</sup> Please see the statement submitted to the US Dietary Guidelines Advisory Committee by GMA on September 15, 2003 requesting a change in the name of the guidelines from "Dietary Guidelines" to "Dietary and Physical Activity Guidelines".

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GMA recognizes that CNPP based the proposed sedentary energy levels on current evidence that a majority of U.S. adults are not physically active on a regular basis (MMWR 2003). However, *using sedentary reference-sized individuals in assigning target calorie levels is not in the public health interest.* The word *target* implies something Americans should aspire to. Targeting sedentary calorie levels is exactly the opposite of what we want Americans to do. It would seem more appropriate for CNPP to focus their recommendations toward a more positive outcome, such as the approach reflected in the 2000 *Dietary Guidelines for Americans* to “Be physically active each day” or “Aim for a healthy weight”. GMA strongly encourages the CNPP to put its considerable influence behind efforts to urge Americans to increase their daily levels of exercise. Scientific and medical literature demonstrates the need to increase physical activity patterns in the United States to incur health benefits, especially maintenance of weight through physical activity. Healthy People 2010 and a 1996 Surgeon General’s report on physical activity and health state that moderate physical activity can reduce substantially the risk of developing or dying from certain chronic diseases, such as heart disease, diabetes, colon cancer, and high blood pressure. The CNPP should use its revision of the Food Guide Pyramid as an opportunity to promote positive behavioral change.

The Institute of Medicine (IOM) Macronutrient Report 2002 says that one of the most important steps to a healthy diet and lifestyle is to start by “adopting an active lifestyle.” The recommended physical activity level (PAL) suggested by IOM is  $\geq 1.6 < 1.9$  (active) to decrease risk of chronic disease, maintain ideal body weight, and for lower weight people to be able to meet their Dietary Reference Intakes (DRI) for micronutrients and fiber. Despite that, the physical activity coefficients used to determine energy levels for proposed intake patterns in the Food Guide Pyramid reassessment are below that recommended in the IOM report necessary for reaping healthy lifestyles, at 1.00 (sedentary), range of 1.11 – 1.16 (low active), and 1.25 – 1.31 (active).

We know from research that exercise induces an additional small increase in energy expenditure for some time after the exercise itself has been completed. This excess post-exercise oxygen consumption (EPOC) is dependent on exercise intensity and duration, and has been estimated at some 15 percent of the increment in expenditure that occurs during physical exertion. This means the increase in daily energy expenditure extends beyond the exercise activity itself. In addition, regular physical activity induces chronic changes in energy expenditure as a result of changes in body composition and alterations in the metabolic rate of muscle tissue, neuroendocrine status, and changes in spontaneous physical activity associated with altered levels of fitness. In other words, there are exponential health benefits related to regular physical activity.

Different population groups have different levels of physical activity, according to Healthy People 2010. Children are far more active than older Americans. Government data show that 69 percent of young people aged 12-13 years participate in vigorous physical activity. Moreover, 73 percent of high school aged boys and 57 percent of girls participate in vigorous physical activity (MMWR 2002). Unfortunately, participation in all types of physical activity declines markedly as age or grade in school increases. In general, persons with lower levels of education and income are the least active in their leisure time. Data show that major *decreases* in physical

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activity occur during grades 9 through 12. The President's Council on Physical Fitness and Sports concluded that because of the physical health, growth, development, and emotional benefits of physical activity, it should have an increasingly important role in the lives of children and adolescents. Because the scientific literature confirms that most children are in fact physically active, it would be inappropriate to set food intake patterns based on sedentary activity levels as it could potentially lead to undernutrition in children and adolescents.

Moreover, physical inactivity in itself is an important risk factor for serious chronic illnesses, such as coronary heart disease (CHD). In particularly susceptible populations, such as the poor and minorities, which already have a higher prevalence of hypertension, hypercholesterolemia, and smoking, a sedentary lifestyle may further compromise their health status. Indeed, the proportion of the population reporting no leisure-time physical activity is higher among women than men, higher among African Americans and Hispanics than whites, higher among older adults than younger adults, and higher among the less affluent than the more affluent (Healthy People 2010). For these groups, even small increases in physical activity are associated with measurable health benefits.

GMA acknowledges that CNPP proposed sedentary intake patterns out of concern for the increasing incidence of overweight and obesity among Americans. Because of that concern, question of whether obese individuals may have decreased energy requirements after weight loss, a factor that would help explain the common phenomenon of weight fluctuations associated with weight loss, has been investigated. Resting metabolic rate (RMR) is consistently depressed during active weight loss out of proportion to the loss of fat free mass (FFM), but there is controversy over whether RMR remains depressed after weight has stabilized at a lower level. To offset this phenomenon, physical activity should be encouraged (IOM Macro).

This substantial body of evidence underscores the urgency of this need: the CNPP must assert that physical activity is a key contributor to a healthful lifestyle and should be recognized as a fundamental component of the final FGP. As a public health priority, the government ought to promote physical activity rather than simply set a low bar that sedentary Americans are likely to clear. This observation raises another question. Does USDA have efficacy data that indicates that sedentary individuals will reduce their caloric consumption to comply with the guide? It is far better for individuals to learn how to balance their energy needs and intake requirements than to passively adopt energy levels that encourage inactivity. Using sedentary energy levels as a standard does not promote increased physical activity nor does it help consumers learn how to achieve personal energy balance. Emphasizing sedentary energy levels addresses only one side of the energy balance equation. Therefore, GMA again strongly encourages the CNPP to put its considerable influence behind efforts to urge Americans to increase their daily levels of exercise. Promoting increased physical activity and teaching individuals how to moderate their calorie intake to meet their energy expenditure would be a more responsible and, based on the evidence cited above, a more effective public health approach.

To the extent that USDA used nutritional standards and nutritional goals to derive nutrient profiles for food groups, the same logic should be applied to develop physical activity standards and goals by authoritative bodies such as the IOM. This would ensure that physical activity goals

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are not only incorporated into the *total* energy balance equation, but that they are on par with nutritional goals.

One immediate step the Department should consider is to recognize the mission of promoting energy balance by urging that the Food Guide Pyramid evolve to become the 'Diet & Physical Activity Guide' showing Americans how to *live* the Dietary Guidelines.

*GMA urges CNPP to change the Food Guide Pyramid to the "Diet & Physical Activity Guide"*

The American public needs a guide that addresses the *total* healthy lifestyle equation. Healthful eating and physical activity need to be in balance to truly be a science-based approach to guiding Americans on a healthful lifestyle. For more than a century, USDA food guides have served as pictorial, science-based guidance on diet and health. From the *basic seven* (used during war time to address economic restraints and alternative food choices due to limited rations); to the *basic four* (emphasis on getting *enough* nutrients); the *Hassle-Free Guide to Better Diet* (which added a fifth group to the *basic four* and paid special attention to calories and fiber); and finally, the food guides evolved into the joint USDA/Department of Health and Human Services *Dietary Guidelines for Americans*, (greater specificity on body weight and an attempt to provide more practical guidance on implementation *vis-à-vis* USDA's food guide pyramid), food guidance has evolved to reflect the latest scientific wisdom and public health approaches to healthful eating and more recently, lifestyle. Today, balancing energy intake with physical activity is the top public health priority.

In keeping with the historic spirit of addressing the most up-to-date, science-based information *and* the philosophical goals that the *food guide be evolutionary* to accommodate the anticipated direction of recommendations and promote *overall health* and well-being, the Food Guide Pyramid must evolve to help Americans actually *live* the Dietary Guidelines for Americans. Current research shows us that physical activity is a key factor in a healthy lifestyle. Therefore, the American public needs a guide that addresses the *total* healthy lifestyle equation. This can be done only by expanding the approach from dietary information alone to also include lifestyle guidance. A thorough science-based approach must include both healthful eating as well as physical activity in order to truly guide Americans to a healthy lifestyle.

The Food Guide Pyramid, as originally conceived, is intended for individuals. Hence, a new 'Diet & Physical Activity Guide' should continue in that tradition – to become in essence, a personal energy balance plan. An approach that would aid Americans to *live* the Dietary Guidelines would be to develop a sound educational tool that illustrates how to adopt a healthful lifestyle. For instance, the Diet & Physical Activity Guide could guide individuals to determine their own personal health goals in a step-wise process (1. Assess activity level/Adopt an active lifestyle, 2. Calculate your energy intake; 3. Determine your nutrient needs, etc). USDA would need the necessary consumer research to develop a sound educational tool to accomplish this concept.

*The "Diet & Physical Activity Guide" should be aimed at healthy, not obese, Americans*

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GMA supports CNPP's efforts to base the reassessment on the same philosophical goals as established in the development of the Food Guide Pyramid release in 1992, specifically the philosophy that *the new food guide should promote overall health and well-being. Food selection guidance should not be directed to the prevention or treatment of any single disease.* The new food guidance should maintain this philosophical standard to be consistent with the Dietary Guidelines for Americans, which is to establish the principles of a diet that would help people maintain and even improve their overall health and reduce the risk of major diet-related diseases. The Diet & Physical Activity Guide should be directed to the same audience as the Dietary Guidelines – healthy Americans, 2 years of age and older.

## 2. Appropriateness of the selection of nutritional goals for the daily food intake patterns

The recommendation for daily consumption of 40 grams of added sugar (8% of calories) for someone consuming 2000 calories per day is neither realistic nor reasonable. The recommendation for 40 grams (for a 2000 calorie a day diet) of added additional fats is also problematic. These recommendations are not consistent with the way American consumers eat and live today, and they would be extremely difficult to follow, particularly for children or adolescents.

The recommended goal for sugar is also inconsistent with allowances by other agencies. Although limiting consumption of added sugars is desirable, a realistic goal is more likely to be followed than an unrealistic one. Consistent with the Dietary Reference Intakes macronutrient report, added sugars should not exceed 25 percent of calories to prevent displacement of micronutrients. Additionally, in "Nutrients In Proposed Food Intake Patterns" [Table 5, page 4] it is not obvious how the caloric intakes were calculated, and it appears that the ratio of percent calories from added sugar is not consistent across the listed caloric patterns. Regarding the added fat recommendation, it is very difficult for consumers to quantify how much fat is contained in the unlabeled foods they eat. And, for consumers to be expected to add up the total amount of added fat at the end of the day *and* be able to distinguish from fat intrinsic to many foods is unrealistic. Moreover, any distinction between added and intrinsic fat, or added and intrinsic sugar, makes no physiological difference.

Rather than applying the 'use sparingly' qualifier to 'additional fat' and 'added sugar', it is important to recognize that many people are more likely to choose to eat some foods that are made more palatable with the addition of nominal amounts of fat or sugar. Therefore, instead of suggesting intake patterns that are unreasonable for many consumers, it would be more sensible to recognize that foods with 'additional fat' and 'added sugar' may be necessary to deliver essential nutrients – without exceeding total daily recommendations for sugar and fat – and adjust intake patterns accordingly. This is a much more realistic and likely more effective recommendation.

The assessment of caloric targets and dietary intake patterns will also be incomplete without considering hydration and fluids. It would be short sighted for CNPP to move forward with the food guide revisions without considering the pending electrolyte report from the Institute of Medicine.

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In any event, CNPP needs to conduct consumer research to demonstrate that these proposals will actually work for consumers.

**3. Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

USDA's move from three caloric patterns to the proposed 12 different caloric patterns/levels would make the Food Guide Pyramid extremely complex and difficult for consumers to understand and follow. The goal of the Food Guide Pyramid should be to help consumers understand how they can eat a nutritionally balanced diet for optimum health. If the number and complexity of the different caloric patterns are so complex that the average consumer can't understand or interpret them, their use will be very limited.

Additionally, GMA believes that the proposed reassessment of the Food Guide Pyramid is incomplete because it does not show relevance to how consumers actually live their lives today. The appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns cannot be determined without understanding the true education needs of consumers as well as the feasibility of any proposed food intake patterns in the context of consumer's day to day lives. USDA needs to apply a commonsense standard to the principles of diet, nutrition and health in order to develop an effective lifestyle guide.

A number of studies have shown that consumers do not follow the Food Guide Pyramid. According to NHANES 3, NHANES 4, and the Healthy Eating Index (HEI) shows that only 1 percent of children between 2 and 19 years old met all the Food Pyramid recommendations for grains, vegetables, fruits, meats, and dairy foods. Sixteen percent of children met none of the recommendations. Additionally, less than 1 percent of the total population meets *all* Food Guide Pyramid food group recommendations.

Recognizing that the Food Guide Pyramid has not increased consumer understanding nor improved dietary behavior to the degree expected, GMA believes it would be better for CNPP to test the feasibility of the proposed food patterns with consumers to show that consumers do in fact understand the information and can effectively apply the food patterns in their daily lives. What is needed are real-world, practical approaches based on consumer research in a variety of populations of differing demographic status, such as low income, low literacy, Hispanic and African American populations, and at different life stages

USDA states that the proposed revision to the daily food intake patterns on the same philosophical goals that were used to develop the original Pyramid in 1992. The 1992 Philosophical Goals for A New Food Guide state that *the new food guide must be useful to the target audience with food groups used as a conceptual framework and that the groups are recognizable to consumers*. GMA strongly believes that the proposed reassessment is incomplete in that it does not show relevance to consumers today. In fact, USDA's own qualitative consumer research to assess consumer understanding and application of the Food Guide Pyramid revealed that some consumers believe the Pyramid does not accommodate their food preferences

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or dietary restrictions. This is similar to results of consumer research conducted by the International Food Information Council (IFIC) on perceptions of the Food Guide Pyramid.

One of the main disappointments of the Food Guide Pyramid has been the lack of consumer implementation. If the USDA only tests possible communication messages, if the USDA only assesses proposed target calorie patterns against data tables, then we are all likely to continue to be disappointed. It is impossible to determine the general utility of these patterns without understanding how they are understood by individuals in various demographic and age subgroups. There is also a need to understand whether consumers can put the food patterns into practice in real-life situations, for example confirming that consumers can select foods at the grocery store and prepare and eat meals at home, and select foods and meals when they dine out, that, over several days, are consistent with the proposed daily food intake patterns. Therefore it is imperative for USDA to dedicate time and resources to determine whether individuals of diverse socioeconomic and cultural backgrounds can in fact put the proposed food patterns into practice.

#### **4. Appropriateness of using 'cups' and 'ounces' vs. 'servings' in consumer materials to suggest daily amounts to choose from each food group and subgroup.**

Research with consumers is needed to determine appropriateness of using 'cups' and 'ounces' versus 'servings' in consumer materials. Consistent with the philosophical goals as established with the original Food Guide Pyramid, GMA agrees that using standard household measures is an appropriate approach that would help to make the guide more relevant and potentially improve implementation of food guidance. USDA's own consumer research on the current Food Guide Pyramid revealed that despite apparent familiarity with the Pyramid, this awareness does not translate into understanding of specific Pyramid recommendations and messages.

Additionally, consumers in general criticized the Pyramid because they did not agree with the range of servings in certain food groups or found it difficult to follow. Most consumers don't know the standard serving sizes for foods. The USDA consumer research showed confusion among consumers when asked to explain the difference between servings and portion sizes. When asked how to improve understanding of 'servings' on the Pyramid, consumers agreed that using household measures would help. While GMA agrees that using standard household measures is an appropriate approach to take when conveying food group servings, it is imperative that CNPP conduct consumer testing to determine whether these proposed changes will make implementation of the new food intake patterns easier.

#### **5. Selection of appropriate illustrative food patterns for various consumer materials.**

The ultimate objective of the food guide is to ensure that more consumers eat more consistently with the final food patterns chosen to illustrate healthful eating guidance. What the twelve food patterns that CNPP proposes indicates is that one size does *not* fit all when it comes to dietary intake recommendations. Therefore, more research is needed to establish what will resonate with consumers, and which educational tools are needed in order to synthesize food patterns into population guidance.

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Additionally, the underlying concept of GMA's above mentioned 10<sup>th</sup> Guiding Principle is to improve education efforts related to healthful lifestyles for Americans. As the voice of branded foods – the foods that consumers purchase at the supermarket everyday – GMA sees the need for consistency in all educational materials related to healthful eating and active living. In essence, GMA is in support of harmonizing educational information for healthful lifestyles at all touch points for consumers – including the Dietary Guidelines, Food Guide Pyramid, and the Nutrition Facts Label.

The development processes for these important educational tools should be effectively aligned, so that the guidance and education we provide consumers is consistent. This must be accomplished in a step-wise manner to achieve harmony in collaboration with the Food and Drug Administration, backed up with sufficient consumer research to ensure relevance and understanding of proposed concepts and educational tools. At their October 23<sup>rd</sup> public hearing on obesity, the Food and Drug Administration announced their intent to hold a workshop on November 20, 2003 to discuss changes to the food label as it relates to educating consumers on healthful eating. For this reason, all the Departments need to work together to ensure consistency rather than continue down a path with inconsistent messages related to food intake recommendations.

GMA urges CNPP to foster alignment in the development of these educational tools. CNPP can begin by using the same Daily Values of 2,000 and 2,500 calories used as the basis of the Nutrition Facts Label as appropriate illustrative food patterns. This would elevate the Food Guide Pyramid to be the educational tool it is intended to be by giving consumers a direct link between the food guide and the labels on the foods they are buying. Integrating the Food Guide Pyramid more fully with the Dietary Guidelines for Americans, and harmonizing both with the Nutrition Facts Label, should reduce consumer confusion and improve implementation of the Dietary Guidelines.

The most important goal we all share is to get consumers to live a healthier lifestyle. For that reason, we believe that the USDA should pilot test the Diet & Physical Activity Guide before releasing it nationally.

Sincerely,



Alison Kretser  
Director, Scientific & Nutrition Policy

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October 24, 2003

Dr. Eric J. Hentges  
Executive Director  
Center for Nutrition Policy and Promotion (CNPP)  
USDA  
Attn: Food Guide Pyramid Reassessment Team  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Subject: Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period.

Dear Dr. Hentges,

The CNPP presents an extensive list of inquiries for which they seek comment. Each inquiry deserves input, and I wish that I had the expertise and time to comment on all the issues. I'll elect to provide some general comments initially, which I hope pertain to the issues and are not too pedantic. In rereading this letter, I realize I may be rambling at times with my comments. As requested, more specific comments or suggestions are provided on the topics of sedentary individuals, total fiber, added sugars, whole grains, additional fats, and serving size.

The Dietary Guidelines, periodically reviewed and updated are good, simple and achievable recommendations on nutrition and better health for the consumer. Change is good, but not too fast. Yes, the guidelines should be and are based on "current nutritional standards", but these standards, and the new scientific information supporting these changes are a slow evolutionary process. This comment

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is based on reviewing some of the responses to inquiries requested and posted on the CNPP Web page to date. Although you have stated that the possible redesign of the food pyramid will be at a latter date, there seems to be serious interest in placing "oils" at the bottom or foundation of the food pyramid. Respondents want major change now. I am also familiar with the scientific campaign and media blitz of a handful of scientists to change the food pyramid to accommodate their suggestions based solely on epidemiological evidence. This is not a good idea. There is insufficient evidence that we should be giving the impression to people that they should be consuming more "oils".

The food pyramid or any similar pictorial representation designed to assist consumers with the selection of foods for healthy diets should be based on a rich consumption of all plant foods, both natural (apple, carrot, barley) and processed (apple sauce, carrot cake, and barely soup). Also the consumer should receive the recommendation to eat meats, sea foods, milks, legumes, and nuts, but as with all foods, in moderation. Meats, milks, and nuts are excellent sources of nutrients, but can provide too much fat and too many calories if eaten in excess. Savory snacks and soft drink beverages can be a part of our diets, but there must be a strong recommendation to limit consumption of these foods because of their high fat-oil and sugar content, respectively, and more importantly, their high caloric content. Food companies should be encouraged to find ways to reduce the amount of fats-oils and sugar(s) in these foods. I would like to think that the availability of sugar substitutes is a tremendous food science innovation for weight management. Is it time to reevaluate fat substitutes in our diet, and possibly develop second generation products?

While it is reasonable for food companies to produce savory snacks and soft drinks, it is the obligation of U.S. public health policy makers (Dietary Guidelines and Food Pyramid) to inform people about the high energy density of these foods. Consumers must be more explicitly informed that savory snacks and sugar-based soft drinks-beverages are high calorie/energy-dense foods that must be eaten in moderation.

Since we face epidemic weight mismanagement, which in many cases leads to obesity, special efforts are needed to

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review recommendations about excessive fats and oils, sugar and calories. It is my strong professional and personal thinking that the nation's weight problem is caused by the combination of too many calories and too little exercise. Every plant and animal commodity, including sea foods, provides nutrition. Every processed food made from raw commodities provides nutritious foods. However, not every food commodity and processed food can be mentioned in the Dietary Guidelines or Food Pyramid, but consumers can be told to eat a larger variety of all food commodities and processed foods in moderation. We must do more to help people learn more about portion size, eating less food at each meal or snack, and most importantly, consuming fewer calories.

I realize the difficulties, but political and economic pressures can not come to bear on decisions about nutrition and public health recommendations. Furthermore, the recommendations made here are used as a model and as recommendations have an international impact.

I frequently cite the book by Heasman and Mellentin entitled *Functional Foods Revolution, Healthy People, Health Profits* (2001, Earthscan Publ., Ltd., London). This book reviews some the changes in the last quarter century regarding how we look at foods and the chemicals in these foods and their contributions to nutrition and health. The last quarter century has been a scientific awaking in nutrition and health. We have begun to realize that there are naturally occurring chemicals in foods that have beneficial and health giving properties, in addition to the 41 plus essential nutrients. Although I realize that the Food Pyramid and the Dietary Guidelines not primers on the topic of functional foods, both these tools for consumer nutrition should stress the current knowledge about functional foods and the ingredients (nutraceuticals) they contain. This can be done by recommending that people eat a large variety of foods, which include both unprocessed and processed foods.

Exercise is important and necessary. As American lifestyles are changing, perhaps it is the sedentary individual that will evolve and predominate. Possibly the word exercise is too intimating. Persons who lead a more sedentary life style might think of recommendations for exercise as running, going to the gym, bicycling, or swimming. While these are excellent forms of exercise, they

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are sometimes time consuming, require expensive equipment, or expensive facilities. However, walking, dancing, and or stretching at home are good forms of exercise and cover a wide range of abilities, activities, and interests. There could be recommendations to simply find an "activity" to move the muscles and burn calories. I recommend the idea that "walking" should be promoted as the key form of "activity" and "exercise" associated with the Dietary Guidelines and the Food Pyramid - persuade Americans to eat a greater variety of foods, in moderation, and walk.

I would take great exception to a recommendation for the Dietary Guidelines and Food Pyramid to use "oil" as the building block for better health and nutrition. A future pyramid or recommendations that suggest starchy foods, such as white bread, foods made with flour, rice, potatoes and pasta, be avoided would be deplorable. There is no evidence that these foods are bad or lead to diseases. These foods, like any food, can be deleterious to health if eaten continually, without the benefit of other foods and in excess. Too much food leads to too many calories, and the result is now readily apparent; too much weight gain. With all the interest in syndrome x, the glycemic index, and glycemic load, these are creative, interesting, experimental and clinical ideas that might possibly help formulate nutrition and health policy in the future. However, these theories are still in the experimental stages and, as such, require tremendous refinement to find either results or application, much less be utilized for major recommendations for dietary habits. The bottom line is that these theories and experiments, coupled only with epidemiological-based studies, should not be the basis for changing our Dietary Guidelines and the Food Pyramid.

The Nutrition Labeling and Education Act provided the tremendous initiative to better educate the consumer. However, I think there is almost unanimous consensus that the "education" competent of this act has never been fully started, and there is little implementation of the "education" part of this act.

I am not sure how to suggest avoiding the term sedentary. Use of the tem appears to be giving license to an individual to be sedentary and we will make recommendations to promote this life style? The value, or more appropriately, the necessity to have all people exercise through one or more activities now must be a

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mandatory part of any dietary guidelines. I realize use of the word "mandatory" and attempt to make exercise mandatory, is futile and inappropriate. However, some type or types of physical activity should become a part of every individual's life style, and a strong component of any nutrition and health guidelines and recommendations. Again, I would recommend that we start by recommend that Americans walk more.

Somewhere reference must be made for all individuals to become better acquainted with their height and weight. As every individual should be helped to better identify the volume and weight of the food that eat, and the caloric density of their foods, every person should be encouraged to use a scale as a simple index of for their personal well being and long-term health. The Dietary Guidelines and Food Pyramid should help a person use and understand the importance of the Body Mass Index (BMI). I realize having a person equate the food they eat to their BMI may be a formidable educational task, but again, this may be accomplished through the "education" component of the NLEA.

As a frequent attendee at professional meetings on foods, nutrition and health, I find that I'm frequently listening or talking to peers who might know even more about my topic. But, it is often stated that lower income individuals, families and specific ethnic groups suffer more from poor nutrition, disease, and the likelihood of being overweight or obese. However, because it is stated so frequently, it could be that a different approach might be necessary to help these groups not simply receive the Dietary Guidelines and Food Pyramid information, but understand the information and how to use it. This is another example of how "education" can be implemented through the NLEA.

In summary, my suggestion is that the Dietary Guidelines and Food Pyramid recommendations should guide consumers to eat a greater variety of all foods (unprocessed and processed) in moderation. Additional measures are necessary to help consumers grasp an understanding of portions, portion size and the true amount of food consumed daily. Too much of any food, or macronutrient, or micronutrient, is not good. I am not against fat, but excess fat provides excess calories. I am not against sugar(s), but excess sugar provides excess calories. A simplified method to help consumers recognize

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excess oils and fats, and sugar(s) in their diets, and better ways to avoid excesses in these energy rich dietary components is necessary. Some form of physical activity should be recommended as part of our Dietary Guidelines and Food Pyramid. I now offer comments of particular interest to CNPP.

**1. Appropriations of using sedentary reference-sized individuals in assigning target calorie levels (Table 2)**

Although I am not excited about using or condoning the term sedentary, I realize it is and is becoming a more common lifestyle for many people. So we must find ways to help inform this group to seriously consider controlling their caloric intake, while still given them the recommendation to find some type of activity.

**2. Appropriateness of the selection of nutritional goals for the healthy food intake patterns.**

***Nutritional goal for total fiber***

The topic of dietary fiber (DF) has been advanced with the National Academy Science (NAS, 2002) report on macronutrients and setting Adequate Intake (AI) value for this nutrient. The AI for this micronutrient, which is one component value of the Dietary Reference Intakes (RDI), was set at 38 and 25 g/day for men and women, respectively. I understand that work is in progress to review the current Daily Value (DV) for dietary fiber, which currently is 25 grams per day. There are other important set of figures in the NAS report on DF. The median intakes of DF for women range from 12.1 to 13.8 g/day and 16.5 to 17.9 g/day for men. Therefore, our intake of DF is approximately one-half of the recommended intakes. We can set a higher DV for DF, greater than 25, but will this help or encourage people to eat more DF? There must be ways to encourage and help people eat more plant foods, and offer them different opportunities through other foods to consume more DF.

I could easily recommend a DV for DF of 35 g/d or even 45 g/day, but again, what can be done to have people eat more DF and come close to achieving a daily intake of 35 or 45 g per day? The frequently mentioned nutritional problem with DF is that it binds and interferes with mineral

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bioavailability. Since the DF hypothesis was developed based on populations who eat foods and diets providing approximately 90 g of DF per day, and modern day vegetarians suffer no impaired mineral nutrition, the topic of DF interfering with minerals should be considered mute. Review of the scientific literature and experimental studies support this contention. (Gordon, D. T., Stoops, D. and Ratliff, V. 1993. Dietary fiber and mineral nutrition. *In: Dietary Fiber*. Eds. D. Kritchevsky and C. Bonfield. Plenum Press, N.Y. pp. 280-302.)

The on-going question about DF is, do plant foods, which happen to contain DF provide for better health (oats), or is DF alone, as a measurable single entity ( $\beta$ -glucan) the special macronutrient that provides protection against diseases? I feel both plant foods, and processed foods with isolated or functional fibers (nondigestible fiber or added fiber) help provide for better health and help provide foods of lower caloric density. Our consumption of DF, from all sources, plant foods and as functional fiber, as defined by the NAS (2002), provides benefits for laxation, energy for intestinal bacteria (as a prebiotic), and as a caloric diluent in foods.

Although the NAS (2002) set three definitions for DF, there appears to be a stalemate as to how the FDA and Health Canada can use these and how these definitions can be applied to measuring DF in Foods to have total fiber. For the NAS definition of a functional fiber, there is no way that the beneficial physiological effects can be measured to report the amount on a food label.

The NAS (2002) suggestion that actual dietary fiber intakes are higher than reported is true. However, the level suggested by the NAS of 5.1 g/day, 2.6 g/day inulin and 2.5 g/day oligofructose, does not include many other DF (functional fiber) in foods such as resistant starch(s), resistant maltodextrin (Fiberol-2) Poloydextrose, galactooligosacchridess, and the oligosaccharides in soy to name a few. More emphasis must be placed on modifying the existing AOAC Method for Total Dietary Fiber to recover and include all forms of nondigestible carbohydrates (whether called dietary fiber, functional fiber, or total fiber) in foods. There are approved AOAC methods to measure soluble oligosaccharides in foods and these methods should be given recognition by the FDA as methods to measure DF in foods. It is interesting to note that if in fact we are consuming

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5.1 g of inulin and oligofructose per day, these fructose rich saccharides would represent approximately 20% of our current DF intakes. These figures for suggested intakes of fructose oligosaccharides, and not reported in food composition tables, may need to be reevaluated.

***Nutritional goal for added sugar.***

On first impression, the NAS (2202) suggestion or recommendation "to limit added sugars to less than 25% of calories as a maximal level" would appear to be a mistake. I concur with the CPNN work that sugar(s) intakes should range from 6% to 13% of total calories. Sugar is not the culprit or cause of poor health and disease, or obesity. Excess sugar(s) provide excess calories. Sugar is a convenient and easily available source of excess energy. Efforts must be made to advice people to restrict or limit their calorie intake from sugar and setting more realistic goals as to their sugar(s) intake is necessary. If an upper limit of 25% of calories were to be set, what specific foods must be eaten to supply the wide range of nutrients and other macronutrients to meet our nutritional goals with the other 75% calories? Conversely, what foods will be eliminated from an individual's diet to allow 25% of calories from sugar? Sugar is not bad, but too much sugar in not good for us. Having the suggestion that 25% of our calories provided from sugar is not a good suggestion.

***3. Appropriateness of the proposed food intake patterns for educating Americans about healthful eating habits.***

There should be more allowances made as to what constitutes a whole grain(s) and cereal(s) to allow for their greater incorporation into foods and their consumption. More effort and allowance should be made to allow for greater consumer awareness as to the availability of whole grain(s) and cereal(s) foods. Since there seem to be almost total consensus that whole grains and cereals are good for us, and can be a rich source of DF, more effort must be made to identify and make these whole commodities available to the consumer. One possible way to address these problems has been suggested by altering the whole grain foods health claim (Gordon, D.T. 2003. Strengths and Limitations of the U.S. Whole Grain Foods Health Claim. Cereal Foods World. 48:210-214). The topic of better educating the consumer about whole grains and whole cereals, and counter the negative nutrition and health

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publicity given starchy foods such as white bread, and foods made with flour, and rice, potatoes, and pasta is another example of implanting the "education" component of the NLEA.

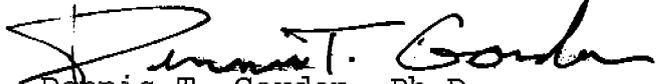
**Appropriateness of using "cups" and "ounces" vs "servings"**

I favor using cups and ounces, and not servings to help consumers become more familiar with the volume and weight of foods they eat. Continued efforts must be made to standardize a serving or unit of food based on its volume and or weight. There is just too much variation in the term serving. For bread, ounces may help overcome the problem of a different number of slices of bread being a serving.

I have one last related comment to what I think pertains to amounts of food consumed. How can we better educate the consumer as to how to limit their fat intake to 30% of calories? I would contend that trying to educate the consumer to eat 10% of their calories from saturated fat, 10% from monounsaturated fat, and 10% of their fat calories from polyunsaturated fat is too complex and rarely if ever achieved. I would ask any of the CNPP staff reading this letter if and how they follow these guidelines on fat-oil intakes.

I hope by comments are of some value to CNPP and will be happy to provide any additional information.

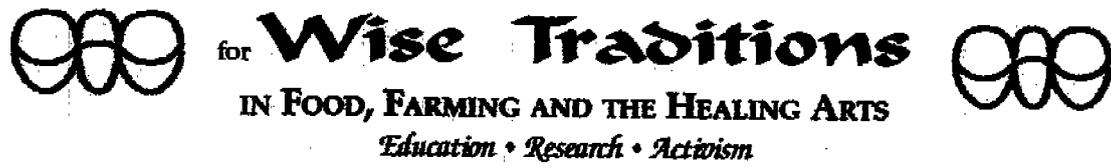
Respectively submitted,

  
Dennis T. Gordon, Ph.D.  
Professor

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# THE WESTON A. PRICE FOUNDATION<sup>SM</sup>



October 27, 2003

**Comments on the Food Guide Pyramid Daily Food Intake Patterns NPRM published in the Federal Register, vol. 68, No. 176, Thursday, September 11, 2003, pp. 53536-53539.**

**Statement from Mary G. Enig, Ph.D., F.A.C.N, L.N., C.N.S., Consulting Nutritionist, Enig Associates, Inc., Silver Spring, MD 20904; (301) 680-8600; Vice President of the Weston A. Price Foundation and Science Advisor, Washington DC; (202) 333-HEAL.**

The current Food Guide Pyramid is not appropriate for anyone to use as a guide to select foods for a balanced diet. It promotes an excessive intake of carbohydrates for most people and discourages the intake of the natural important animal fats. A better approach is the four food groups and the eating practices recommended 60-70 years ago in books on nutrition and dietetics written before the introduction of imitation foods in the 1950s.

***Recommended Food Pyramid guidelines: Everyday, eat high quality, unprocessed foods from each of the following four groups:***

- 1. Animal foods: meat, poultry, fish, eggs and whole milk products***
- 2. Grains and legumes: whole grain baked goods, breakfast porridges, beans***
- 3. Fruits and Vegetables: preferably fresh or frozen***
- 4. Fats and Oils: unprocessed saturated and monounsaturated fats including butter and other animal fats, palm oil and coconut oil, olive oil and peanut oil - an average of 35-40 percent of energy from food intake should come from beneficial fats and oils.***

***Eat sparingly: sweets, white flour products, soft drinks, processed foods, polyunsaturated and partially hydrogenated vegetable oils and fried foods.***

I am aware of the fact that this statement contradicts the information given to both the health profession and the public since the development of the U.S. Dietary Goals/Guidelines in the 1970s. These guidelines were originally developed with the help of the food industry to sell processed foods and the widespread usage of

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processed foods is the reason so many individuals, including children, are sick, obese, allergic, etc.

My experience as a nutrition educator and nutrition consultant is that the pyramid does not give anyone trying to use it any clear idea of the amounts of natural food products that would be appropriate versus the processed food products that would be selected. My own prejudice is that all of the food products used for forming meals and snacks should be natural and not the highly processed products that are so readily available in the supermarket. That would mean that there should be no products being promoted that are made or prepared with trans fatty acid-containing partially hydrogenated vegetable fats or with excessive amounts of omega-6 oils. Natural, more saturated fat and oils such as butter, tallow, lard, coconut, palm and palm kernel oils should be encouraged rather than discouraged because of their health promoting components. These include the saturated fatty acids such as palmitic acid and lauric acid, both of which are needed in the diet; palmitic acid keeps lungs healthy and lauric acid helps the body fight many pathogenic bacteria and viruses.

Butter should be used instead of margarine. Milk and cheese products should preferably be full-fat. Nut milks should be used judiciously knowing that they are not an appropriate replacement for cow or goat milk, and imitation cheese should be avoided. Eggs should be farm raised as opposed to factory raised.

Meat, poultry, fish broths, stews, or roasts should be prepared with the fat that comes with the original meat. If there is more fat than would be normally found in the cooked foods, as they would be prepared by a quality chef, it should be refrigerated and saved for use as added fat in cooking vegetables, etc.

Grain products should be made with natural fats, not partially hydrogenated vegetable fats and oils. Amounts of grain products should be individualized with the realization that many individuals are carbohydrate sensitive. Grain products made with sugar and normally served as desserts should be recognized as foods for occasional consumption that may have excessive calories for some individuals. Fruits and vegetables should be encouraged to be grown organically.

There are many recommendations about the amounts of fat and the different types of fatty acids we should put into our diets. Who needs which fat(s) and how much? Are men different than women in their requirements? Are children different than adults in their requirements? What about the tolerances for fat as opposed to the absolute requirements for fat? What about the requirements for different fatty acids or different fatty acid categories? How much fat do children need for growth and development? How much of each of the different fatty acid classes do children need?

### **What Do the U. S. Food Pyramid Promote for Children?**

Proponents of the U.S. Food Pyramid have been promoting the lower fat intake for children just as they have been promoting it for adults. The USDA has even gone so far

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as to proudly acclaim that it has successfully developed lower fat meals for school lunches. This approach to feeding children is not healthy.

The reason for the existence of the Food Pyramid is the mistaken belief that these guidelines will decrease the development of heart disease in adults. Recently the concept has been extended to children, and the idea of feeding children lower fat diets in an effort to ward off the development of heart disease in later life has gained acceptance among some pediatric research groups.

But pediatric clinicians noted a number of years ago that children who were put onto low-fat and low-cholesterol diets failed to grow properly.<sup>1</sup> And when researchers prominently associated with the American Heart Association fed children lower fat diets and measured some of the markers they consider important predictors of heart disease, they learned that these lower fat diets were causing the very problems they wanted to prevent. The children whose genes would normally have been producing the desirable form of LDL (light fluffy LDL) started to make the dangerous form of LDL (the small dense LDL).<sup>2</sup>

### **What Roles Do Different Fatty Acids Play in Keeping Children Healthy?**

Children have been shown to be more susceptible to infectious diseases than most adults. In the past, the mortality in children was higher than it is now. That was because we did not have the antibiotic treatments that we now have. But infants who were fed human milk did not usually succumb to the viral illnesses that they were exposed to because their mothers were providing them with disease-fighting components in their milk. Some of these disease-fighting components in the mother's milk were special fatty acids that the mammary gland made. These fatty acids are called lauric acid and caproic acid. These disease-fighting fatty acids can be part of older children's diets if they consume foods that contain coconut or coconut oil, palm kernel oil, or to a lesser extent, cream and high-fat milk.

### **What Are Good Fats and Oils for Children?**

Good fats and oils are found in meat and fish and fat in vegetables, nuts, and grains, or they can be added to foods through cooking and as dressings and sauces. A spoonful of good fat or oil can be easily added to soup or stew or mixed dishes or hot cereals.

Good fats are dairy fats such as butter, cream, and whole milk. Good fats are natural fats from properly fed animals, poultry, and fish. These animal fats supply vitamin A, vitamin D, and the proper cholesterol needed for brain and vision development. Animal vitamin A is critical for growing children as they do not adequately convert the vitamin A precursor – beta-carotene – found in plants. The animal fats also supply other fat-soluble nutrients that support the immune system such as glycosphingolipids. Fish oils such as cod liver oil also supply important elongated omega-3 fatty acids as well as vitamins A and D.

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Good oils are those readily extracted from fruits such as olive oil, palm oil, coconut oil, and they are traditionally unrefined. Good oils are also those that are unrefined and extracted from many nuts and seeds. Some of these oils are called omega-3 oils, omega-6 oils, and omega-9 oils. Oils with plenty of omega-3 include flaxseed oil and perilla oil; those with moderate amounts of omega-3 fatty acids include unrefined canola oil, soybean oil, and walnut oil. Many oils such as unrefined corn oil, safflower oil, and sunflower oil do not have omega-3 but are typically high in omega-6 fatty acids, and they should be used in small amounts.

Foods for children should be chosen so that they supply a mixture of these different fats and oils. No one fat or oil can properly suit all purposes, although many of the good quality animal fats come close. They also need an amount of elongated omega-3 fats that come primarily from fatty fish and fish oils. Children need adequate amounts of the stable saturated fats; they need enough of the monounsaturated fats or oils; and they need an adequate amount and a proper balance of the essential fatty acids, which come primarily from the omega-3 and omega-6 oils. Importantly, these oils should not be partially hydrogenated or refined.

#### References:

<sup>1</sup> Smith, MM, and F. Lifshitz, *Pediatrics*, Mar 1994, 93:3:438-443.

<sup>2</sup> Dreon, MD et al, *American Journal of Clinical Nutrition* 2000;71:1611-1616.

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NATIONAL DAIRY COUNCIL®

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MANAGED BY  
DAIRY MANAGEMENT INC.™

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

FR Doc. 03-22763 Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period.  
68 Federal Register 53536, September 11, 2003

Dear Sir or Madam:

The NATIONAL DAIRY COUNCIL® (NDC) submits the following comments on the docket referenced above.

NDC is an organization that initiates and administers nutrition research, develops nutrition programs, and provides information on nutrition to health professionals and others concerned about good nutrition. The NDC has been a leader in nutrition research and education since 1915. Through its affiliated Dairy Council units, NDC is recognized throughout the nation as a leader in nutrition research and education.

NDC appreciates the opportunity to provide comments on the Center for Nutrition Policy and Promotion's (CNPP) Proposed Food Guide Pyramid Daily Food Intake Patterns [1]. NDC fully supports the development of a science- and food-based dietary guidance tool to help Americans make daily healthful food choices and recognizes the need to reassess and revise daily food intake patterns in light of recent changes in recommendations for nutrients, such as calcium, and for macronutrients such as fat, carbohydrates, protein and fiber. NDC also supports continuation of the five food groups based on their nutritional similarities, their uses in meals and consumer perceptions of the foods as similar. We believe any tool developed should be based on naturally nutrient rich foods. Equally supportable, more than ever, is USDA's goal that food intake patterns should be based on foods commonly consumed as determined from national food consumption surveys in order to make the recommendations realistic and practical.

NDC commends the CNPP for taking the initiative on this very important and timely, albeit complex, issue of integrating the most recent IOM Dietary Reference Intakes (DRI) and Acceptable Macronutrient Distribution Ranges (AMDR) recommendations into the Food Guide Pyramid (FGP) for a stronger and more actionable dietary guidance tool for Americans.

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In 1999, USDA released an adaptation of the FGP targeted to children ages two to six. This "children's pyramid" was based on the actual eating pattern of young children. As USDA observed, young children have unique food patterns and needs in comparison to older children and adults. NDC supports the continued adaptation of the food guide for young children to help parents and caregivers, as well as the children themselves, learn to build good dietary habits early. CNPP should reassess and update the "children's pyramid" during its reassessment of the daily food patterns for the U.S. population. Research clearly shows that kids are not little adults. As part of this update, NDC believes the age range for the "children's pyramid" should be expanded from ages 2 - 6 to 2 - 8 to correspond more appropriately with the cut points in the IOM DRI lifestage nutritional goals. This is especially true given differences in food preferences among this age group of children, as well as the smaller serving size that is appropriate for actual consumption.

NDC also agrees with and commends CNPP on its approach to making the FGP a scientific evidence-based document and encourages the Center to continue its steadfastness of evaluating the science as it evolves and taking action when appropriate.

The USDA CNPP has solicited comments on proposed revisions to the daily food intake patterns that serve as the technical basis for the FGP. NDC believes that proposed revisions to the FGP is an extremely important issue that needs adequate time and information for accurate and thoughtful comment. In terms of needed information, NDC recommends that CNPP make available all calculations and supporting information, including, but not limited to, nutrient composites for the food groups and subgroups and weightings for foods commonly consumed by Americans. In this way, others could develop thoughtful food pattern alternatives for consideration.

Specifically, the CNPP has particular interest in receiving comments on the five questions outlined in the Federal Register notice. NDC has addressed these in the following document.

Food guides are updated infrequently, and yet have profound impact on consumer understanding and trust in government recommendation of what and how to eat to promote health and prevent disease. It is imperative that CNPP's proposed food patterns do not place the public at risk of calcium inadequacy, jeopardize consumer confidence in what to eat or ignore the need to promote increased physical activity within the population.

Thank you for the opportunity to comment on these very important issues.

Sincerely,



Gregory Miller, PhD  
Senior Vice President  
Nutrition Research and Scientific Affairs



Peter J. Huth, PhD  
Director  
Nutrition Research and Scientific Affairs

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1. Appropriateness of using *sedentary, reference-sized individuals* in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.

In its document, the CNPP points out that: "The calorie levels for food patterns used in comparing intakes with nutritional goals are those that are appropriate, on average, for sedentary individuals in each age/gender group." [1] The apparent rationale for basing the target caloric pattern on a sedentary approach was that, "Given the sedentary lifestyles of many Americans, it was considered better not to assume any specific level of physical activity." [1]

Based on scientific research and goals stated by the IOM and the Dietary Guidelines for Americans, using sedentary energy levels for target calories in food patterns is not in the public health interest. As a public health priority, the government needs to promote increasing physical activity, not reinforce sedentary lifestyles, which would be consistent with the 2000 edition of the Dietary Guidelines. Although it is common knowledge that regular exercise is healthful, more than 60 percent of Americans are not regularly physically active, and 25 percent are not active at all. It is reasonable to anticipate that this current trend will continue unless there are effective and appropriate interventions. The trend for decreased activity by adults is similar to trends for children to be less active in and out of school. As both lack of physical activity and obesity are now recognized as risk factors for several chronic diseases, logic requires that activity recommendations accompany dietary recommendations.

For example, one of the major findings in the Institute of Medicine (IOM) DRI Macronutrient report includes recommendations for levels of physical activity to decrease risk of chronic disease [2]. The Macronutrient Report recommendation "Integration of Macronutrients in the Diet (eight steps to a healthy diet)," advises integrating the dietary recommendations for macronutrients along with adopting an active lifestyle consisting of a physical activity level (PAL) of  $\geq 1.6$ , which equates to walking at 4 miles/hr for one hour [3]. This recommendation is not viewed as aspirational but, rather, stresses the importance of balancing diet with exercise by pointing out that, "to maintain cardiovascular health, regardless of weight, adults and children should achieve a total of at least one hour of moderately intense physical activity each day." The recommendations to increase physical activity are consistent with the Surgeon General's Report [4] and Healthy People 2010 [5].

Furthermore, it is also generally accepted that weight-bearing physical activity determines the strength, shape, and mass of bone [6, 20]. The health benefits of exercise are well accepted. This has led numerous organizations to engage in increasing physical activity in the U.S. One effort is the Action For Healthy Kids program, which is working to create a healthy school environment. Fitness experts, educators and nutritionists are working together to implement activities to increase nutrition education and physical activity in schools.

The FGP is the primary education tool for putting the Dietary Guidelines into practice for consumers. The FGP should be more about educating and advocating energy levels that are consistent with the promotion of physical activity and energy balance rather than sedentary lifestyles. The proposed target energy levels ("Target Pattern") should be consistent with a

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calorie intake that combines both diet and physical activity goals for energy balance. Hence, given the obesity epidemic, it is more appropriate from a public health and consumer education perspective to base the "Target Pattern" for energy intake on goals that are consistent with promoting a lifestyle of increased physical activity and caloric balance rather than on a sedentary construct.

There is overwhelming evidence that individuals with moderate to high levels of physical activity have lower mortality rates than sedentary individuals, and also that regular exercise contributes to a sense of overall well-being. In light of the strong and specific physical activity recommendations set forth in the IOM DRI Macronutrient report, which stresses the importance of balancing diet with exercise, the proposal to use sedentary, reference-sized individuals in assigning target calorie levels for assessing the nutritional adequacy of each food intake pattern is inconsistent with the CNPP goals for the FGP to be a dietary guidance tool based on the latest scientific standard for healthful eating.

Based on the benefits associated with the "low-active" and "active" physical activity patterns as outlined in the Macronutrient report, it would be in the best interests of Americans for CNPP to be consistent with these recommendations and to incorporate the IOM physical activity recommendations into the Daily Food Guide Patterns. At the very least, CNPP should develop food patterns for different activity levels to show how to moderate calorie levels based on activity.

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2. Appropriateness of the *selection of nutritional goals* for the daily food intake patterns (i.e. CNPP-Table 3, 'Nutritional Goals for Proposed Daily Intake Patterns').

*The CNPP proposed food intake patterns are very likely to exacerbate the calcium crisis in the U.S.*

The CNPP points out that, "The goal for each (Daily Food) pattern is to have an intake at the RDA or Adequate Intake level or higher, but less than the Upper Limit of intake for that nutrient" [1]. However, based on the nutrient composition of the food intake patterns noted in CNPP-Table 5, four groups do not meet 100 percent of AI for calcium with 2-3 servings of dairy. These include children (9-13 yrs) and adolescent females (14-18 yrs), who are already at-risk populations not meeting the DRI calcium goals even with 3 servings of dairy under CNPP's proposed food patterns.

Although these levels are 93 - 98% of the AI for calcium, the DRI panel has made it clear that, "Groups with mean intakes at or above the AI can generally be assumed to have a low prevalence of inadequate intakes (low group risk) for the defined criterion of nutritional status." "If the mean intake of a group is at or above the AI, and the variance of intake is similar to the variance of intake used in the population originally used to set the AI, prevalence of inadequate nutrient intakes is likely to be low (although it cannot be estimated). This evaluation can be used with confidence when the AI is based directly on intakes of healthy populations." [7] Hence, one cannot assume that there is a low prevalence of inadequate intake for calcium in these groups, especially considering the vulnerability of this population to increased forearm fractures [8] and their history of low calcium intakes.

Currently, only about 38% of males and 29% of females aged 6 to 11 and 32% of males ages 12 to 19 and 12% of similar aged females consume 100% of the AI for calcium [9]. Children and adolescents' low calcium intake is of great concern considering that the teenage years are a period of rapid skeletal growth during which there is a critical "window of opportunity" to maximize peak bone mass and protect the skeleton against future risk of osteoporosis [10-12]. About 95% of females' total body mineral content is reached by 20 years of age [12]. After adolescence, the period for optimizing peak bone mass by calcium rapidly declines. It is important to note that the 1300 mg/d calcium recommendation for adolescents was based on the minimum calcium intake for some adolescents to reach 100% calcium retention [13].

The assessment of calcium needs is valid on an individual basis as well, as indicated by the IOM report, which states, "If an individual's usual intake equals or exceeds the AI, it can be concluded that the diet is almost certainly adequate. If, however, their intake falls below the AI, no quantitative (or qualitative) estimate can be made on the probability of nutrient inadequacy." [7] Clearly, for these populations, and for individuals within these populations, any proposed food pattern should recommend achievement of 100% of the calcium AI.

There seem to be inconsistencies in CNPP applying its own philosophical goals on being realistic and practical. The CNPP points out in reference to meeting the RDA for vitamin E that, "Meeting the new RDA, especially at lower calorie intake, would require substantial changes from typical intakes and would require the use of foods not commonly consumed," and, "This is not consistent with the philosophical goal of being realistic and practical." [1]

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We respectfully submit that the Daily Food Intake Patterns, as currently proposed by CNPP (CNPP-Table 1), have created a similar highly unrealistic situation for attaining the AI for calcium, a nutrient that is essential for bone development and is especially critical for children and adolescents during the period of peak bone mass development. NDC is very concerned that the proposed food intake patterns, if adopted, may increase costs while exacerbating the current calcium crisis in the U.S. because of the emphasis CNPP has placed on recommending unrealistically high amounts of vegetable subgroups (i.e. dark-greens [DGL], Deep-yellow [DY] and legumes [LEG]) and whole grains as non-dairy calcium sources.

CNPP's own nutrition experts agree on this issue by pointing out that, "...increasing servings of food groups other than milk to meet calcium and magnesium DRIs is less likely to be practical, at least in the near term. The FGP already recommends more servings of dark-green leafy vegetables, legumes, and whole-grain products than are currently consumed by most Americans. Substantial quantities of these foods would be required to meet the increase in the DRIs for calcium---somewhat less for magnesium. Although consumption of these nutritious foods is to be encouraged for everyone, at this time it is probably not realistic to recommend significant increases in numbers of servings from these groups as a strategy for meeting new calcium and magnesium DRIs." [13] Furthermore, as pointed out in Healthy People 2010, "With current food selection practices, use of dairy products may constitute the difference between getting enough calcium in one's diet or not." [14]

The suggested increased amounts of DGL, DY and LEG for the 2200 and 2800 calorie levels are 30 - 50% higher than the current Food Guide Pyramid recommendations; 3-4 times (i.e. 300 - 400%) higher than current consumption by Americans >2 years [15]; and 6 - 8.5 times (600 - 850%) higher than current consumption by children 2 - 19 years of age [15]. The suggested amounts of whole grains recommended for the 2200 and 2800-calorie levels are 4.5 to 5.5 times (450 - 550%) higher than Americans currently consume [15]. Based on CNPP-Table 5, the CNPP is suggesting that the proposed increased consumption of these vegetable sub-groups and whole grains will result in total non-dairy calcium intakes of approximately 303, 433, and 546 mg for 1600, 2200, and 2800 calorie patterns and, it reasons, coupled with the currently recommended 2 - 3 servings of dairy, that Americans will be able to achieve the AI for calcium (CNPP-Table 5).

While NDC supports increased consumption of fruits, vegetables and whole grains, daily food patterns should not put consumers at risk of calcium inadequacy. In reality, Americans are not consuming fruits, vegetables and grains in amounts that will achieve the levels of non-dairy calcium suggested by CNPP in CNPP-Table 5. Trend data from the 5-A-Day for Better Health program also show small insignificant changes in vegetable consumption over a five year period that are not consistent with CNPP targets [16]. Currently, the estimated non-dairy calcium consumption in the U.S. is 226 mg for 2-8 yrs old, 302 mg for 12-19 yrs old, and 358 mg for 19-50 yrs olds, requiring at least 3 servings of dairy for most Americans to achieve the calcium DRI and 4 servings for those groups with higher DRI intake recommendations (Table 1).

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NDC respectfully submits that the goals for increased fruits, vegetables and grains are laudable on one hand, but are highly unrealistic approaches for meeting calcium requirements. More importantly the unrealistic recommendations could have major negative public health implications, as suggesting that increased consumption of fruits, vegetable subgroups, whole grains and refined grains will contribute substantial amounts of calcium to the diet detracts from developing meaningful solutions to the calcium crisis, namely through the use of dairy products. These recommendations fail to meet CNPP's own goals of being realistic and practical.

***"Goals should be based on the use of commonly used foods, rather than depending on infrequently consumed foods that are unusually rich in certain nutrients."***[1]

As previously stated, the proposed amounts of vegetable consumption (i.e. DGL, DY, LEG) for each Pyramid food pattern are 30 - 50% higher than the current Food Guide Pyramid recommendations; 3-4 times higher than current consumption by Americans >2 years [15]; and 6 - 8.5 times higher than current consumption by children 2 - 19 years of age [15].

The CNPP states that the "...amounts suggested to be eaten from the group are altered to be nutritionally appropriate---for example, the amounts of whole grains, dark-green vegetables, legumes, and fruits suggested are higher than current intakes. Amounts of whole grains, dark-green vegetables, and legumes are also higher than in the original Pyramid food patterns at similar calorie levels." [1]

NDC notes that the proposed levels of dark green leafy vegetables is 0.43 servings/day (@1800 kcal/day pattern), a level that is two-fold and four-fold higher than current consumption by adults and children, respectively [15]. USDA consumption trend data, however, show that total vegetable consumption has not improved much in adults, and there has been virtually no improvement in children over a five-year period (Table 2). Moreover, in-home consumption trends for dark green vegetables, deep yellow vegetables and legumes have had overall negative growth between 1995 and 2003 (Table 3) [17]. As pointed out by CNPP's Executive Director, a key philosophical goal for a new food guide is that it should meet its nutritional goals in a *realistic manner*. It should be *useful with recognizable food groups* [18]. Based on the above data for vegetable consumption trends, CNPP's recommended levels of dark green vegetables, deep yellow vegetables and legumes are highly unrealistic. Hence, CNPP's recommendations should be consistent with its own guiding principles. CNPP would benefit from examining alternative food patterns that may provide a more practical and realistic way to meet nutrient goals.

***Calcium status can be altered by poor absorption from some vegetable sources***

Poor bioavailability of calcium from some vegetables and legumes has been noted in the DRI report for calcium as an issue that can affect calcium requirements. Specifically, the DRI panel stated, "It should be noted that calcium may be poorly absorbed from foods rich in oxalic acid (spinach, sweet potatoes, rhubarb, and beans) or phytic acid (unleavened bread, raw beans, seeds, nuts and grains, and soy isolates) [19]. In comparison to calcium absorption from milk, calcium absorption from dried beans is about half and from spinach is about one tenth." This means that a dark-green vegetable such as spinach, for example, containing 291 mg of calcium per serving, would provide only 29 mg to the body. Additionally, a serving of legumes such as

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dried beans, containing 127 mg of calcium, would provide only 63 mg to the body. Hence, considering the high amounts of DGL, DY, and LEG vegetables suggested for each food pattern (CNPP-Table 1), the amount of calcium contributed by each food pattern given in CNPP-Table 5 may be substantially overestimated, resulting in highly inaccurate conclusions about the percent of the calcium AI being met by each food pattern.

This problem is particularly pronounced in male and female adolescent groups in CNPP's proposed Food Guide Patterns, who are already at risk as discussed above. CNPP should revise the Food Patterns for these at-risk groups to include four servings of dairy. There is substantial public health risk associated with implying that increased consumption of these vegetable subgroups will contribute significant amounts of calcium to the diet because it detracts from developing meaningful solutions to the calcium crisis, namely through the use of dairy products. It is important that consumers receive the most accurate food guidance available in order to achieve calcium recommendations.

The most practical and realistic way to add calcium to the diets of Americans is through dairy products. Dairy foods are a cost-effective and convenient way to enhance the nutritional quality of a diet. Dairy foods are an excellent to good source of many nutrients beyond calcium. With the numerous low-fat dairy options available, Americans should be urged to increase dairy product consumption.

***The proposed Food Intake Patterns will not meet the AI for calcium without recommending one additional serving from the milk group***

The Food Intake patterns proposed by CNPP in CNPP-Table 1 suggest daily intake amounts of foods from the pyramid food groups that, when consumed, will meet the nutritional goals for each of the nutrients shown in CNPP-Table 5. Based on the types and amounts of foods recommended in CNPP-Table 1, however, it is highly unlikely that the AI for calcium will be achieved by most Americans because of the unrealistically high levels of fruits, vegetables and whole grains, and inadequate amounts of milk being proposed. This point is echoed by Shaw et al. [13] who point out that, "Increasing servings of food groups other than milk to meet calcium and magnesium DRIs is less likely to be practical, at least in the near term. The Food Guide Pyramid already recommends more servings of dark-green leafy vegetables, legumes, and whole-grain products than are currently consumed by most Americans. Substantial quantities of these foods would be required to meet the increase in the DRIs for calcium--- somewhat less for magnesium. Although consumption of these nutritious foods is to be encouraged for everyone, at this time it is probably not realistic to recommend significant increases in numbers of servings from these groups as a strategy for meeting new calcium and magnesium DRI." [13] These authors conclude that, "To meet new recommended levels of calcium, suggesting an additional serving from the milk group beginning by age 9 is likely to be a practical option."

This issue is clearly evident in the food intake patterns noted in CNPP-Table 5, in which four groups do not meet 100 percent of AI for calcium with 2-3 servings of dairy. These include children (9-13 yrs) and adolescent females (14-18 yrs), who are already at-risk populations not meeting the DRI calcium goals even with 3 servings of dairy under CNPP's proposed food

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patterns. As discussed elsewhere in this letter one cannot assume that there is a low prevalence of inadequate intake for calcium in these groups, especially considering the vulnerability of this population to increased forearm fractures [8] and their history of low calcium intakes. Clearly, for these populations, and individuals within these populations, to meet calcium intake recommendations, an additional serving from the milk group is important to assure achievement of meeting 100% of the AI.

Although the current FGP recommendations call for 2 - 3 daily servings from the milk group, some well-grounded government and physician health organizations recommend up to four servings of dairy per day to meet daily calcium needs including Health Canada [20], The American Academy of Pediatrics [21] and the American Heart Association [22].

For Americans with lactase non-persistence, which may produce lactose intolerance, research shows that they can still enjoy dairy products and reap the health benefits. There also are a variety of lactose-reduced and lactose-free milk products readily available today that provide all the nutritional benefits found in traditional dairy products.

- *Three to four servings from the milk group are necessary to meet the DRI and to ensure adequate intakes of calcium.*

The NDC concurs with CNPP that it is appropriate to base the *adequacy goal* for nutrients on the RDA or Adequate Intake (AI) rather than the EAR because the food guide patterns are meant for individuals rather than groups. NDC acknowledges that there are multiple ways for consumers to achieve nutrient *adequacy and moderation goals*. However, the approach CNPP has taken is a dietary prescriptive approach based on food simulations to meet the RDA for nutrients with foods that have a low prevalence of intake, and food guide patterns that, without testing for feasibility, are not likely to be consumed. Based on the current trends in consumption, it is highly unlikely that Americans will consume the amount of calcium from fruits, vegetables and whole grains as suggested in CNPP-Table 5. The result is----Food Intake Pattern recommendations that end up exacerbating low calcium intake by promoting the intake of foods that are generally poor sources of calcium and have a low probability of consumption, and limiting the intake of excellent sources like low-fat dairy products with a substantially greater probability of consumption. Food Intake Pattern recommendations should balance the need for managing calories, while using naturally nutrient dense foods to address critical nutrient needs such as calcium for growth and development.

**The following solution is a more practical alternative Food Intake Pattern for CNPP's consideration:**

- Use current FGP recommended amounts for: vegetables, fruits and grains
  - Add one additional serving of low-fat/fat-free milk (i.e. 3-4 servings/day)
  - Remove one refined grain serving
- *Adding one additional daily FGP serving of non-fat or low-fat dairy lowers saturated fat and does not increase calories*

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NDC evaluated the nutrient compositional effects of adding additional FGP servings of low-fat or fat-free dairy products (milk and yogurt) to sample illustrative USDA menus developed for using the Food Guide Pyramid [23]. In these examples, foods in each daily menu representing one serving of a refined grain from the bread group was replaced with one serving from the milk group (milk, yogurt). A total of 5 days of menus at three calorie levels (1600, 2200, and 2800 calories) were evaluated.

**Tables 4a - 4e** example menus show the results of replacing one serving of refined grains and its accompanying condiments (margarine, jelly, etc.) with one serving of dairy for 5 days of 1600 calorie menus. Servings from the Bread group were reduced from approximately 6-7 per day to 5-6 per day, while the Milk group increased from approximately 2 servings per day to 3 servings per day. Total fat and saturated fat grams were reduced by an average of 9.6% and 6.6% respectively across the 5 days, while total daily calories were not meaningfully altered.

**Table 5a - 5e** example menus show similar results for the 2200-calorie menus. Servings from the Bread group were reduced from approximately 7 - 10/day to 6 - 9/day, while dairy servings increased from about 2 -3/day to 3 - 4/day. Total fat and saturated fat grams were reduced by an average of 4.2% and 6.2% respectively, while total calories were not meaningfully altered.

**Table 6a - 6e** example menus also show similar results for the 2800-calorie menus. Servings from the Bread group were reduced from a range of 6.5 - 13.5/day to 5.5 - 12.5/day, while dairy servings increased from a range of 2.25 - 3.3/day to 3.25 - 4.3/day. Total fat and saturated fat grams were reduced by an average of 9% and 6.8% respectively, while total calories were not altered.

These data demonstrate the feasibility of increasing dairy from 2 - 3 servings/day to 3 - 4 servings/day in the diet. This increase would result in favorable changes in total fat, saturated fat and calories, as well as substantial increases in calcium (approximately 302 mg/serving) and other nutrients associated with milk, including potassium, magnesium, phosphorus, and vitamins A, D, B<sub>12</sub>, riboflavin and niacin.

These examples also indicate that removing one refined grain serving and adding one low-fat/fat-free dairy serving is practical, realistic and easy for consumers.

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Recently, NDC has examined alternative approaches for ways to meet the DRIs for calcium.

1. Assessment of calcium intake when meeting FGP recommendations.

SUMMARY

NDC assessed the calcium intake of various age groups using both the Continuing Survey of Food Intake by Individuals, 1994-96, 1998 [24] and NHANES, 1999-2000 [25]. Groups that met, and on average exceeded, the FGP dairy recommendations were more likely to have a mean calcium intake above the AI for calcium, which means the likelihood of inadequate calcium intake in these groups was low.

*However, it is important to note that the groups that met, and on average exceeded, the FGP dairy recommendations had an average dairy serving intake about one serving higher than current recommendations. This indicates that the number of dairy servings recommended by the FGP should be increased by one serving to ensure the likelihood of inadequate intake of calcium is low.*

Currently, the DRI panel does not recommend the use of the AI or the RDA to assess inadequate intakes of groups [26]. However, the DRI panel has indicated, "Groups with mean intakes at or above the AI can generally be assumed to have a low prevalence of inadequate intakes (low group risk) for the defined criterion of nutritional status." [26] Hence, we used the mean intake of calcium to determine if the prevalence of inadequate intake of calcium is likely to be low. For example, if the mean intake of a group of individuals aged 9-18 years (AI of calcium for this age group is 1300 mg/day) is greater than 1300 mg/day, then the likelihood of this group having an inadequate intake of calcium is low. With this approach, we can examine the number of dairy servings per day necessary for various age groups to ensure the likelihood of inadequate calcium intake is low.

We separated groups by age based on major differences in the DRI for calcium, namely 2-8 years, 9-18 years, 19-50 years and 51+ years. We did not separate the data by gender, as the DRI for calcium are the same for each gender.

Fig 1 and Table 7 show the mean calcium intake based on whether individuals within a particular age category met the current FGP recommendation for dairy servings consumption from CSFII. The average number of dairy servings for the children 2-8 years who met, and on average exceeded, the FGP recommendations to consume 2 or more FGP dairy servings per day was 2.95 dairy servings per day. With this level of dairy consumption, the mean intake of calcium in the 2-8 year olds who met the FGP dairy recommendations was 1145 mg/day. Since the mean calcium intake of this group meeting the recommended FGP dairy servings exceeds the AI for calcium for this age group (estimated as 714 mg/day),\* we conclude that when children this age consume approximately three servings of dairy products per day, there is a low likelihood that this group has inadequate calcium intake.

In contrast, the 2-8 year olds not meeting the FGP dairy recommendations only consumed an average of 1.22 dairy servings per day, and mean calcium intake of this group was only 607 mg/day. In children 9-18 years of age, the group with the highest AI for calcium (1300 mg/day), the mean calcium intake was 935 mg/day, (Fig. 1 and Table 7) less than the AI for

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calcium for this group. Therefore, we cannot conclude the likelihood of inadequate calcium intake in this group is low. Individuals in this age group that met or exceeded the FGP dairy recommendation (19.2% of this age group) consumed, on average, 4.2 dairy servings per day and 1665 mg calcium per day. Since the mean calcium intake of the group that met or exceeded the FGP dairy recommendation surpasses the AI for calcium, we can conclude that when children 9-18 years of age consume approximately four servings of dairy per day, there is a low likelihood that this group has inadequate calcium intake. The 9-18 year olds not meeting the FGP dairy recommendations only consumed an average of 1.45 dairy servings per day, and mean calcium intake of this group was 748 mg/day, less than half of calcium intake of peers that met the recommended number of dairy servings per day.

In adults aged 19-50 years, mean calcium intake was 787 mg/day. The adults in this group that met, and on average exceeded, the FGP dairy recommendation (22.9% of this age group) consumed an average of 3.20 dairy servings per day and had a mean calcium intake of 1420 mg/day (Fig. 1 and Table 7). The adults in this age group that did not meet the FGP dairy recommendation consumed an average of 0.87 dairy servings per day and less than 600 mg calcium/day. Given that the mean calcium intake of this group of adults that met or exceeded the recommended number of dairy servings surpasses the AI for calcium (1000 mg calcium per day), we conclude that when adults aged 19-50 years of age consume an average of 3.20 servings of dairy products per day the resulting calcium intake exceeds the AI for this group and, thus, the prevalence of inadequate intake in these adults is likely to be low. This conclusion cannot be made for adults in this age group that did not consume the recommended number of dairy servings.

<sup>1</sup>For older adults (51+ years), only 5.3% of this age group in CSFII met or exceeded the recommended 3 dairy servings per day (Table 7). The mean calcium intake of this age group was 674 mg/day, significantly lower than the 1200 mg of calcium per day recommended for this age group. Thus, we cannot conclude that the likelihood of inadequate calcium intake in this group is low. When the recommended number dairy servings were met, and on average exceeded, by individuals in this age group, the mean calcium intake was 1567 mg/day, and the average dairy consumption of the group meeting and on average exceeding the FGP dairy recommendation was 3.87 servings per day (almost a serving higher than current FGP dairy recommendation). Only in the group meeting the FGP dairy recommendation, averaging a consumption of almost four servings of dairy servings per day, can we conclude that the prevalence of inadequate intake of calcium is likely to be low.

## 2. Assessing the ideal level of dairy servings to meet calcium recommendations.

### SUMMARY

Using current nutrient intake data from CSFII and NHANES 1999-2000 we have shown that groups that exceed the FGP dairy recommendations (2-3 servings/day) are more likely to

<sup>1</sup>\*Individuals 2-3 years of age have an AI of 500 mg calcium/day while individuals aged 4-8 have an AI of 800 mg calcium/day. Since seven years are represented in the 2-8 year group, we combined 2/7 of the 500 mg/day AI with 5/7 of the 800mg/day to obtain 714 mg/day as an average AI for the entire group --  $0.285*500 + 0.714*800$ .

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have a mean calcium intake above the AI for calcium, which means the likelihood of inadequate calcium intake in these groups is low.

*The groups that met, and on average exceeded, the FGP dairy recommendations had an average dairy serving intake about one serving higher (3-4 servings/day) than the current recommendation.*

When we estimated the ideal number of dairy servings required to meet the DRI for calcium we conclude the following:

- 1) Children 2-8 years of age need at least 2 servings of dairy per day;
- 2) Children 9-18 years of age need on average 4 servings of dairy per day;
- 3) Adults aged 19-50 years of age need at least 3 servings of dairy per day; and
- 4) Adults older than 51 years of age need 3 servings of dairy per day to meet calcium recommendations.

To help determine the ideal level of dairy consumption to meet the calcium DRI, we then examined calcium intake by various levels of dairy consumption from CSFII. We separated individuals in the four age classifications used previously into six levels of dairy consumption per day: 1) less than one serving; 2) 1.0 to 1.5 servings; 3) 1.5 to 2.5 servings; 4) 2.5 to 3.5 servings; 5) 3.5 to 4.5 servings; and 6) > 4.5 servings. We then calculated the mean calcium intake and the percentage of the population not meeting the respective DRI for these nutrients. Table 8 presents calcium information from CSFII. Given the limitation discussed above regarding using the AI for calcium to determine inadequate intake, and to be consistent with the DRI panel approach for dietary assessment, we used the first group mean intake equal to or greater than the AI (which means the likelihood of inadequate calcium intake in the group is low) to determine the ideal level of dairy consumption.

In children 2-8 years of age, 1.5 to 2.5 servings (average about two servings per day) appeared to be the first intake level to exceed the AI for this age group (Fig. 2 and Table 8; an average of 700 mg calcium per day --  $0.33*500+0.67*800$ ). In children 9-18 years of age, with an AI of 1300 mg calcium/day, the first group mean intake above the AI was at 3.5 to 4.5 dairy servings per day (Fig. 2 and Table 8; average 3.92 servings per day). For adults 19-50 years of age the first group mean intake greater than the AI for this group (1000 mg calcium/day) occurred at 2.5 to 3.5 dairy servings per day (average 2.94 servings per day). In adults older than 50 years of age, the first group mean intake to exceed the AI of 1200 mg calcium per day occurred at 2.5 to 3.5 dairy servings per day (average 2.89 servings per day). Table 9 presents calcium data from NHANES 1999-2000. Results were very similar to data from CSFII, namely:

- 1) 1.5 to 2.5 servings of dairy (average dairy servings were about two servings per day) were necessary for children 2-8 years of age for the group mean calcium intake to exceed the AI for calcium of this group (average AI of 700 mg calcium/day);

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- 2) 3.5 to 4.5 servings of dairy (average dairy servings were about four servings per day) were necessary for children 9-18 years of age for the group mean calcium intake to exceed the AI for calcium of this group (AI of 1300 mg calcium / day);
- 3) 2.5 to 3.5 servings (average dairy servings were about three servings per day) of dairy were necessary for adults 19-50 years of age for the group mean calcium intake to exceed the AI for calcium of this group (AI of 1000 mg calcium/day);
- 4) 2.5 to 3.5 servings (average dairy servings were about three servings per day) of dairy were necessary for adults 50+ years of age for the group mean calcium intake to exceed the AI for calcium of this group (AI of 1200 mg calcium/day).

**Taken together, these data indicate that recommending 3-4 servings from the milk group for all individuals older than 9 years of age is necessary in order to meet the DRI's and to ensure adequate intakes of calcium.**

CNPP needs to consider Food Intake Pattern recommendations using naturally nutrient dense foods to address critical nutrient needs such as calcium for growth and development. Once again, the following solutions provide an alternative Food Intake Pattern for CNPP's consideration:

- Use current FGP recommended amounts for: vegetables, fruits and grains.
- Add one additional serving of low-fat/fat free milk (i.e. 3-4 servings/day).
- Remove one refined grain serving.

As discussed elsewhere in this letter, NDC's nutritional assessment of replacing one serving of a refined grain with additional servings from the milk group demonstrated the feasibility of increasing dairy from 2 - 3 servings/day to 3 - 4 servings/day. This increase resulted in favorable changes in total fat, saturated fat and calories as well as substantial increases in calcium (approximately 302 mg/serving) and other nutrients associated with milk including potassium, magnesium, phosphorus, and vitamins A, D, B<sub>12</sub>, riboflavin and niacin.

***Recommending one additional serving from the milk group can help lower chronic disease risk***

As outlined in the comments above, it is highly unlikely that adequate calcium intake will be achieved by most Americans based on the proposed Daily Food Intake Patterns. The more appropriate and effective strategy is to consider naturally nutrient (calcium) dense foods that consumers recognize and will consume such as low-fat dairy products. In order to effectively meet the DRI's for calcium, research outlined above indicates that 3 - 4 Food Guide Pyramid servings per day from the milk group are necessary, rather than the current 2 - 3 servings recommended by the FGP.

A growing body of literature also exists indicating that consumption of 3-4 servings of dairy foods per day also helps to lower the risk for the following chronic disease conditions, many of which are costly as well as responsible for considerable morbidity and mortality. Data discussed below also suggest that an adequate intake of dairy foods (3-4 servings per day), with their broad complement of essential nutrients, is shown to be a common factor in the reduction of the disease burden and healthcare costs of several medical conditions.

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## **IMPACT OF DAIRY FOODS ON CHRONIC DISEASE RISK**

### ***Osteoporosis***

Osteoporosis is characterized by low bone mass and bone tissue deterioration, leading to skeletal fragility. Bone mass later in life is determined primarily by peak bone mass, of which more than 90% is attained by 20 years of age. Osteoporosis is recognized today to be a "pediatric disease with geriatric consequences." [27] Dietary calcium intake early in life is positively associated with bone mass [28,29]. In a cross-sectional study of 139 women, Nieves et al. [28] found that higher lifetime calcium intake was associated with higher hipbone density compared with low lifetime calcium intake. These authors estimated that an increase in teenage calcium intake from 800 to 1,200 mg per day would increase hipbone density by 6%. In an analysis of papers published since 1975 describing studies of the relationship of calcium intake and bone health, Heaney [30] found that of 52 investigator-controlled calcium intervention studies, 50 demonstrated better bone balance at high intakes, greater bone gain during growth, reduced bone loss in the elderly, or reduced fracture risk.

Of the 86 observational studies, 64 were positive; confirming that the causal relationship observed in the intervention studies also exists in free-living persons. Fully three-fourths of the observational studies support the hypothesis that increased calcium and calcium-rich dairy foods protect the skeleton.

Six of the intervention studies used dairy foods as the calcium sources and all reported the positive link between calcium intake and bone health. All showed significantly positive effects that were as strong or stronger than the effects of calcium supplements. This is not surprising as it is long established and well understood that milk supports growth; thus, it is evident that milk and milk products are good sources of the nutrients needed for bone development and maintenance.

At least four randomized clinical trials (RCT) have reported significant fracture reduction with increased calcium intake [27-30]. For example, Chapuy et al. [31] employed a combination of calcium, phosphorus, and vitamin D, and observed an approximately 40% reduction in hip and other extremity fractures within 18 months. Dawson-Hughes et al. [32] reported that supplementation with calcium and vitamin D reduced non-vertebral fractures by 55% within 3 years. These studies also highlight the importance of the multiple nutrients existing in combination in dairy foods. In an osteoporosis prevention study in which women received 1000 mg/day calcium via either a supplement or milk, the latter group concurrently and significantly improved the intake of 11 other key dietary nutrients. Analysis by Barger-Lux and Heaney [33] of the diets of premenopausal women revealed that women consuming <60% of recommended levels of calcium also were consuming inadequate levels of at least four other key nutrients that are delivered by dairy foods.

### **Summary**

While the importance of calcium to bone health early in life is well established, its importance to skeletal integrity across the life span is also well accepted. Inadequate calcium and dairy food intake in youth sets the stage for skeletal fragility in later life, resulting in osteoporosis and increased risk of osteoporotic fractures, which can be debilitating and life-threatening. Dietary calcium has been unequivocally demonstrated to enhance bone health at every stage of life, with high routine intakes being associated with formation of greater bone mass in childhood and adolescence and with reduced bone loss and fracture risk in the elderly. The data regarding bone health and calcium and

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dairy products validate the critical need for regular, lifelong consumption of at least 3 - 4 dairy servings a day to maintain the structural integrity of the human skeleton.

### **Hypertension**

Substantial scientific evidence indicates that calcium or calcium-rich dairy foods have a beneficial effect on blood pressure regulation [34-42]. A 1984 analysis of the first National Health and Nutrition Examination Survey (NHANES I), comprising dietary data from more than 10,000 American adults identified an inverse association between dietary calcium and blood pressure levels; dietary calcium intake >1000 mg was associated with a 40-50% reduction in hypertension prevalence [43]. Of the 17 nutrients assessed in that study, including sodium and potassium, calcium was the only nutrient that differed significantly in intake between persons with and without hypertension. The relationship between higher calcium intake and lower blood pressure has now been reported in numerous population surveys [reviewed in 40-42].

RCTs that have assessed the effects on blood pressure of calcium or dairy products have confirmed a blood pressure-lowering effect of adequate calcium consumption from foods and from supplements [34-36, 39]. Although blood pressure responses to modifications in nutrient intake typically vary among individuals, the beneficial blood pressure effect tends to be more consistent when foods rather than calcium supplements are used as the mineral source (34, 35, 44). This finding indicates that calcium may serve as a marker for dairy foods, and that observed blood pressure benefits are not derived solely from calcium, but from the full nutritional profile of dairy foods, which include multiple minerals, vitamins, protein and essential fatty acids.

In the landmark controlled-feeding intervention trial *Dietary Approaches to Stop Hypertension* (DASH) [34], persons with high-normal blood pressures consumed one of three diets for 8 weeks. A control, or "typical American," diet was compared to a diet rich in fruits-and-vegetables (8-10 servings/day) and a similar fruits-and-vegetables diet that also included 3 servings of dairy products/day and was lower in total fat, saturated fat and high in fiber. The latter, the "DASH diet," resulted in impressive reductions in both SBP (5.5 mm Hg) and DBP (3 mm Hg) compared to the control, or typical American, diet. The fruits-and-vegetables diet (without the dairy component) produced blood pressure reductions of roughly half that magnitude (SBP 2.7 mm Hg; DBP 1.9 mm Hg).

Subgroup analysis of the trial revealed even more profound effects of the DASH diet within certain populations. Among African-Americans, the DASH diet resulted in blood pressure reductions of 6.9 mm Hg systolic and 3.7 mm Hg diastolic compared to the control diet [45]. These reductions were approximately double those achieved with the fruits-and-vegetables diet that did not include dairy foods. Particularly noteworthy in this cohort, in which lactose maldigestion is presumed to occur more commonly than in other racial groups, was the lack of adverse gastrointestinal effects that might be expected with the addition of 3 dairy servings to the daily diet [34].

Blood pressure changes with the DASH diet were most dramatic in persons with established hypertension (SBP  $\geq$ 140 mm Hg or DBP  $\geq$  90 mm Hg). While the fruits-and-vegetables diet compared to the control produced decreases of 7.2 SBP and 2.8 mm Hg DBP, the DASH diet, with its inclusion of dairy foods, resulted in decreases of 11.4 mm Hg SBP and 5.5 mm Hg DBP. As noted by the investigators, these blood pressure improvements rival those attainable with antihypertensive

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medications [34]. At study completion, 70% of the DASH diet group had normal blood pressure (SBP <140, DBP <90 mm Hg), compared with 23% of the control group and 45% of the fruits-and-vegetables diet group [46].

The effects on blood pressure of the DASH diet were further examined in the DASH-Sodium Trial, in which the diet was tested with various levels of sodium [47]. As seen in the first DASH Trial, blood pressure was significantly reduced in persons consuming the DASH diet compared to the control diet, and this occurred across all levels of sodium intake. This study confirmed that for most adults, with the exception of older persons with established hypertension, regular consumption of a high quality diet, rich in fruits, vegetables, and dairy products, is the optimal dietary means of controlling blood pressure.

The recently published results of the PREMIER Trial, an RCT assessing effects of simultaneous lifestyle modifications to improve blood pressure including the DASH diet, demonstrate the feasibility of increasing dairy intake [48]. In the DASH diet group in this study at 6 months, consumption of dairy products was significantly increased, with nearly 60% of participants at the dairy goal, compared to only one-third achieving the fruits-and-vegetables goal.

In the Coronary Artery Risk Development in Young Adults (CARDIA) Trial, a multicenter population-based prospective observational study, a consistent reduction was observed in the incidence of hypertension with higher consumption of dairy foods - including low- and full-fat varieties, butter and ice cream - (p for trend <0.001) in overweight individuals ( $\geq 25$  kg/m<sup>2</sup>) [49]. Other factors related to the insulin resistance syndrome (IRS) were also lower with higher dairy intake, including obesity, abnormal glucose tolerance, and dyslipidemia. The 10-year cumulative incidence of hypertension with the lowest dairy consumption (<10 times/week or <1.5 servings/day) was 22.9% compared to 8.7% in those with the highest ( $\geq 35$  times/week or  $\geq 5$  servings/day). The odds of elevated blood pressure were considerably lower with both low-fat (OR 0.79, 95% CI 0.64-0.98) and full-fat dairy (OR 0.84, 95% CI 0.71-0.99). The odds of elevated blood pressure were lower by nearly 20% for each daily eating occasion of dairy products.

### Summary

A considerable database of observational and clinical trials exists regarding the beneficial effects of dairy food consumption on blood pressure and the risk of hypertension. Prospective and cross-sectional observational studies indicate that dairy food consumption is associated with lower prevalence as well as risk of developing hypertension. The results of randomized controlled clinical trials suggest that the consumption of recommended levels of dairy products can contribute to lower systolic and diastolic blood pressure in individuals with normal and elevated blood pressure. The blood pressure-lowering effect of dairy products is best exemplified by the Dietary Approaches to Stop Hypertension (DASH) clinical trial. This study demonstrated that a low-fat dietary pattern high in fruits and vegetables (8-9 servings/d) and dairy products (~3 servings/d) produced greater reductions in SBP and DBP than either the diet high in only fruits and vegetables or the control diet.

Taken together, these data support the notion of a blood pressure-lowering effect of dairy, and provide strong support for recommending at least 3 servings of dairy foods per day in conjunction with the FGP-recommended numbers of servings of fruits and vegetables for an overall healthy diet.

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### **Weight Management and Body Composition**

Emerging research indicates that dairy products may contribute to body weight regulation through their influence on the ability of adipose tissue to store, mobilize and oxidize depot fat.

#### **Animal Model Studies**

Recent studies have used transgenic mice that over-express the agouti gene specifically in adipocytes (aP2-agouti) [50] to assess the impact of increased dairy intake on weight gain, weight loss and body fat alterations [51,52]. Zemel and colleagues [51] evaluated the effects of diets high in sucrose and fat containing graded levels of calcium from CaCO<sub>3</sub> or dairy (nonfat dry milk) on body weight and body fat gain for 6 weeks. Compared to a low calcium control diet (0.4%), weight gain was reduced by 26 and 29% in animals consuming 'medium' calcium diets (1.2% wt/wt) from either CaCO<sub>3</sub> or from dairy (25% of total dietary protein) respectively (p<0.04) without changes in food intake. On a 'high' calcium diet containing 2.4% calcium derived from dairy (50% of total dietary protein), body weight was reduced further by 39% (p<0.04).

Total fat pad mass was reduced 36% by all three elevated calcium diets, whereas the reduction in abdominal fat pad mass was greater on the 'medium' and 'high' dairy diets than on the higher CaCO<sub>3</sub> diets. Also, core temperature increased about 0.5°C in response to all three higher calcium diets (p<0.03). The control low calcium diet caused a 67% reduction in lipolysis while the higher calcium diets stimulated lipolysis by 3.4 to 5.2 fold (p<0.015). These data indicate from this transgenic model that increasing dietary calcium attenuates diet-induced adiposity by modulating adipocyte intracellular calcium and thereby coordinately regulating lipogenesis and lipolysis.

In a second study, this same group evaluated the effect of graded levels of calcium from CaCO<sub>3</sub> or dairy (nonfat dry milk) on body weight and lipid metabolism in aP2-agouti transgenic mice fed an energy-restricted diet [52]. A low-calcium (0.4% wt/wt) diet ad lib resulted in ≈100% increase in adipocyte calcium levels, a 29% increase in body weight and a doubling of total fat pad mass, whereas the higher calcium diets resulted in a 50% reduction in adipocyte calcium levels (p<0.001). Energy restriction of the low-calcium control diet had no effect on adipocyte calcium levels but did result in an 11% decrease in body weight (p<0.001). However, greater body weight reductions of 19%, 25%, and 29% were observed in the high CaCO<sub>3</sub>, medium (1.2% Ca<sup>++</sup>) and high (2.4% Ca<sup>++</sup>) dairy diets. Thus, in this animal model, dietary calcium facilitates reduction of adipose tissue mass and body weight by modulating energy metabolism, serving to reduce energy storage and increase thermogenesis.

#### **Human Studies**

Epidemiologic studies have identified strong inverse relationships between body weight and dietary calcium and dairy product intake [51, 49, 53, 54]. In their 1984 analysis of the NHANES I database, McCarron et al. [43] reported a statistically significant inverse association between calcium intake and body weight. More recently, this relationship was again identified in analysis of the NHANES III database [51].

Investigating the antihypertensive effect of calcium by increasing its intake from approximately 400 mg to 1000 mg/day with the addition of yogurt to the diets of obese blacks, Zemel et al. [51] observed

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a 4.9 kg reduction in body fat. In a later analysis of the NHANES III database, these investigators found "a profound reduction in the odds of being in the highest quartile of adiposity associated with increases in calcium and dairy product intake." [51]

Although RCT data directly assessing the calcium-weight association are somewhat limited as yet, review of studies in which calcium intake was the independent variable, with bone mass or blood pressure as the outcome variable, confirms the observational reports [55]. In a study of 82 young girls, Cadogan et al. [56] reported the impact on bone mineral acquisition of providing one pint of milk/d for 18 months. Mean calcium intake of the milk group was 1125 mg/d compared to 703 mg/d for the control group. Protein, calcium, phosphorus, magnesium, zinc, riboflavin and thiamine were higher in the milk group at the end of the trial. There was also greater acquisition of bone mineral in the milk-supplemented group; total bone density increased 9.6%, compared to 8.5% in the control group ( $p=0.017$ ). Both groups showed similar increments in height, weight, lean body mass, and fat mass, although the milk group showed non-significant trends toward greater gain in weight and lean body mass and reduction in percentage of body fat. This suggests that the weight gain in the milk group was predominately lean tissue.

Lin et al. [57] examined the effects of calcium intake on changes in body composition during a 2-year exercise intervention in 54 normal-weight young women consisting of three resistance-exercise sessions and one hour of jumping rope per week. Mean calcium intake was 781 mg/d and dairy calcium was 537 mg/d. At the end of 2 years, except for a 0.68 kg increase in lean mass, there were no changes in body composition among exercisers and non-exercisers. Total calcium and dairy calcium per kcal were negatively related to change in body weight and body fat. Thus, as calcium intake per energy intake (mg/kcal) increased, there was a decrease in body weight and body fat. These researchers concluded that the effect of calcium was specific to dairy calcium because total calcium and dairy, when adjusted for energy, predicted changes in body weight and body fat whereas non-dairy calcium did not.

Davies et al. [58] reevaluated five clinical trials originally designed to determine skeletal end points to determine the association of calcium intake and body weight. In this study, BMI and change in body weight were regressed against calcium intake per protein intake. Significant negative slopes of BMI regressed against calcium to protein ratio was found for individual studies and in combined analysis. The pooled slope was  $-0.186 \text{ kg/m}^2/\text{mg/g}$  ( $p<0.01$ ). The odds ratio for being overweight for calcium below the median intake was 2.25 ( $p<0.02$ ). These results indicate that a 100-mg increase in calcium intake may result in a 0.82 kg/y decrease in body weight in young women, 0.038 kg/y in middle-aged women, and 0.052 kg/y in older women. Melanson et al. [59] have recently shown, using whole body, indirect calorimetry, that high calcium intake promotes fat oxidation, supporting similar conclusions of Zemmel et al. in their animal model [51].

Recent findings in animals and in humans demonstrate that there are greater effects on body weight from dairy-containing foods than might be predicted from their calcium content alone. In the CARDIA trial described above, a consistent reduction in the incidence of obesity was observed in overweight individuals ( $\geq 25 \text{ kg/m}^2$ ) with increasing consumption of dairy foods ( $p$  for trend  $<0.001$ ) [49]. Other components of IRS also were improved by higher dairy intakes including hypertension, abnormal glucose tolerance, and dyslipidemia. The 10-year cumulative incidence of obesity in overweight individuals with the lowest dairy consumption ( $<1.5$  servings/d) was 64.8% compared to

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45.1% in those with the highest dairy consumption ( $\geq 5$  servings/d). The odds of obesity were considerably reduced with both reduced-fat dairy (OR 0.84, 95% CI, 0.70-1.02) and full-fat dairy (OR 0.84, 95% CI 0.73-0.97). The odds of obesity were lower by nearly 20% for each daily eating occasion of total dairy products.

A recent clinical study, published in abstract form [60], compared the relative effects of supplemental calcium and dairy products for 24 wks on weight loss during energy restriction in 32 obese adults. Body weight loss was 26% greater in the supplemental calcium group (1200 - 1300 mg Ca/d), but was 70% greater in subjects consuming identical levels of calcium supplied from 3-4 servings of dairy/d (milk, cheese, yogurt) compared to the low-calcium control group (total calcium intake: 400-500 mg/d) ( $p < 0.01$ ). When compared with the low-calcium diet, fat loss (by DEXA) in the high supplemental calcium and high dairy groups was augmented by 38% and 64%, respectively ( $p < 0.01$ ). Participants who consumed the high supplemental calcium diet or the high-dairy diet also showed significantly greater ( $p < 0.001$ ) fat loss in the trunk areas than did those who consumed the low-calcium diet. These findings are consistent with two other abstract reports by these same authors, one looking at obese African Americans [61] with essentially the same beneficial outcomes in terms of decrease in body fat, trunk fat, and increase in lean mass and the second in obese adults [62]. This latter abstract documented a greatly augmented improvement in waist circumference as well as the other indicators of reduce body fat mass. In all these studies the dietary (dairy) calcium intake in the group of adults experiencing the marked improvement in measures of adiposity was equivalent to 3-4 servings of a dairy products per day.

### **Summary**

Taken together, the available data provide strong support for a beneficial effect of increased dairy foods on body weight and fat loss. Animal studies have demonstrated an important role of increased dairy on decreasing body weight and body fat during over-consumption and during energy restriction. Most observational data and clinical trial results indicate a statistically significant inverse relationship between dairy intake/calcium intake and body weight and body fat loss. Recent clinical studies also have demonstrated that increased body weight/body fat loss, when adequate calcium is provided by supplements, is further augmented by dairy foods, indicating that additional nutrients from dairy foods are playing a role. As recently stated in the proceedings of a symposium on dairy products and weight regulation, if emerging data can be confirmed, "increasing the low dairy product and calcium intakes in the United States may greatly contribute to reducing the growing epidemic of obesity and IRS." [50]

### **Blood Lipid Effects of Dairy**

Daily calcium intake, in which dairy products provided 60% of the total calcium, was negatively correlated with plasma LDL cholesterol (LDL-C), total cholesterol and the ratio of total/HDL cholesterol [54]. In a cross-sectional analysis of NHANES III, dairy product consumption ranging from  $< 1$  to  $> 5$  servings per day was associated with a modest increase in total and saturated fat intake. However, dairy consumption was not related to plasma LDL-C, TC or triglycerides [63]. In a prospective population-based study that examined the association between dairy intake and the incidence of the Insulin Resistance Syndrome, no association between dairy intake and the incidence of high LDL-C was observed [49].

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**Estimated Healthcare Savings Associated With Adequate Dairy Food Intake (*Am J Hypertens* 2003 [in press]).**

The economic impact of increasing consumption of dairy products across the population has been addressed in a paper being published late this year in the *American Journal of Hypertension* [64]. Based on several decades of data from prospective longitudinal studies and randomized controlled trials, adequate intake of dairy foods, with their broad complement of essential nutrients, is shown to be a common factor in the reduction of the disease burden of several medical conditions.

The authors of that study searched the medical literature for RCTs and observational and prospective longitudinal studies that assessed: 1) the relationship between dairy calcium or dairy product consumption and the prevalence of these disorders, or 2) the impact on the disorder of an intervention utilizing calcium or dairy intake as a major component of the intervention. They distinguished between observational cross-sectional and prospective longitudinal studies because the latter in many cases were established to study specific conditions, while the former often included multivariate probing expeditions. Annual cost figures for the respective conditions were obtained from recent literature and published data from public and private health organizations. To derive first-year cost savings for each condition, the authors used projections of benefit from clinical outcomes data that were mid-range. It was not possible to estimate year-one cost reductions for all disorders; for stroke, coronary artery disease, and colorectal cancer, the published data do not indicate response times of less than several years.

In addition to those described above, low calcium/dairy intake also is linked to type-2 diabetes, kidney stones, certain outcomes of pregnancy, and some cancers. Summarizing the available evidence of the net benefits of increased dairy food intake on these conditions, their outcomes, and their costs, first- and fifth-year direct healthcare cost savings were conservatively estimated.

The authors estimate that increasing dairy food intake to recommended levels of 3-4 servings per day would be associated with an annual reduction of 5% in the incidence of obesity in Americans, increasing by an additional 5% per year, yielding a 25% reduction at five years. Using that estimate of impact, one-year healthcare savings would approach \$2.5 billion and at five years would exceed \$37.5 billion.

On the basis of the collective observations for hypertension, the authors project a virtually immediate 40% reduction in the prevalence of mild to moderate hypertension with an increase in dairy product intake to 3-4 servings/d. First-year healthcare cost savings would approach \$14 billion, and be sustained for a cumulative savings at five years of \$70 billion.

For purposes of this analysis, the authors used a conservative estimate, i.e., a 20% reduction in fracture risk related to dairy intakes that provide, with other food calcium sources, 1000-1500 mg Ca/d. Direct costs for all osteoporotic fractures combined were estimated to be \$17 billion for 2002. A 20% reduction translates to \$3.5 billion savings each year, achievable by year two of the higher intake, reaching cumulative savings of \$14 billion over five years.

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For the other conditions assessed in this study, stroke (\$20 b), CAD (\$16.5b), type-2 diabetes (\$37.5b) nephrolithiasis (\$2.5 b), pregnancy (\$15b) and colorectal cancer (\$0.75b), the five-year savings were equally impressive. This in-press analysis demonstrated that if adult Americans increased their intake of dairy foods to 3-4 servings/d, healthcare savings within the first year would be approximately \$26 billion and five-year cumulative savings would exceed \$200 billion.

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### 3. Appropriateness of the proposed *food intake patterns for educating Americans* about healthful eating patterns

#### *Are the proposed intakes of some foods groups or subgroups feasible?*

CNPP should be commended for its efforts to educate Americans on healthful eating patterns. The proposed Daily Food Intake Patterns (CNPP-Table 1), while laudable in their attempt to manage calories and meet nutritional goals, should be evaluated more closely to determine their feasibility and the potential public health implications.

- *As stated earlier, the CNPP suggested increased amounts of fruits, dark green vegetables (DGL), dark yellow (DY) vegetables, and legumes (LEG) for the 2200 and 2800 calorie levels are 30 - 50% higher than the current Food Guide Pyramid (FGP) recommendations and 3-4 times higher than what Americans >2 years currently consume. The recommended levels of whole grains (WG) are 4.5 to 5.5 times higher than current consumption.*

In an evaluation report of the 5-A-Day for Better Health program, total vegetable consumption increased by 0.1 and 0.3 servings/day in children and adults respectively, between 1989 and 1996 [16] suggesting small increases in mean vegetable consumption (Table 2). National eating trends data between 1995 and 2003 indicate a -16% and -22% reduction in deep yellow and legumes eating occasions and no change in dark green vegetables (Table 3) [17]. The average daily consumption of DGL, DY, and LEG is 0.2 servings each, and for WG and RG it is 1.0 and 5.8, respectively.

To meet the current FGP recommendations, the consumption of DGL, DL and LEG need to increase by almost 300%, and for the proposed Daily Food Intake Patterns by 3-4 times (300-400%, @ 2200 calories). for WG, consumption needs to increase by 3.5 times to meet the Daily Food Intake Pattern (@2200 calories).

As pointed out elsewhere in this letter, the high levels of fruits, vegetables and grains recommended by CNPP could actually result in an exacerbation of the calcium crisis in the U.S. It takes 6 - 7 servings of DGL or LEG to equal the calcium content of one serving of milk, not accounting for the potential lower bioavailability [19]. Based on the current trends in consumption, it is highly unlikely that Americans will consume the amount of calcium from fruits, vegetables and whole grains as suggested in Table 5. The result is----Food Intake Pattern recommendations that end up exacerbating low calcium intake by promoting the intake of foods that are generally poor sources of calcium and have a low probability of consumption, and limiting the intake of excellent calcium sources like low-fat dairy products that have a substantially greater probability of consumption. CNPP should consider Food Intake Pattern recommendations that balance the need for managing calories, while using naturally nutrient dense foods to address critical nutrient needs such as calcium for growth and development.

As previously discussed, the following solutions provide a more practical alternative Food Intake Pattern for CNPP's consideration:

- Use current FGP recommended amounts for: vegetables, fruits and grains.
- Add one additional serving of low-fat/fat-free milk (i.e. 3-4 servings/day).
- Remove one refined grain serving.

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NDC's nutritional assessment of replacing one serving of a refined grain with additional servings from the milk group demonstrated the feasibility of increasing dairy from 2 - 3 servings/day to 3 - 4 servings/day in the diet. This addition resulted in favorable changes in total fat, saturated fat and calories as well as substantial increases in calcium (approximately 302 mg/serving) as well as other nutrients associated with milk including potassium, phosphorus, magnesium, and vitamins A, D, B<sub>12</sub>, riboflavin and niacin.

*Increasing dairy intake is a reasonable and effective proposition to increase the calcium intake of Americans*

Milk and other dairy foods are the major source of calcium in the U.S., providing 72% of the calcium available in the food supply [65]. Few other foods provide dairy's concentrated natural source of calcium along with 8 other vitamins and minerals. Without consuming dairy products, it is difficult to meet dietary calcium recommendations [66,67]. In an analysis of food sources of calcium, milk and milk products provided 83% of the calcium in the diets of young children, 77% of the calcium in adolescent females' diets, and between 65% and 72% of the calcium in adults' diets [68]. Albeit, in all groups, especially adolescent females, calcium consumption is substantially below recommended levels.

In 2002, cheese, milk and yogurt accounted for 422 eating occasions compared to 54 for dark green vegetables, deep yellow vegetables and legumes combined [17].

Yogurt volume, although a smaller portion of the total dairy market, showed a 4.7% increase in the last year with low-fat and fat-free products accounting for more than 90% of the total volume.

*Improvements to fluid milk in schools can increase consumption by children*

During School year 2001/02, NDC sponsored a pilot study designed to improve the attractiveness of fluid milk products offered to students enrolled in public schools [69]. The School Milk Pilot Test (SMPT) was conducted in 146 schools selected from 18 school districts located in different parts of the U.S. in the fall of 2001 [65]. Of the 146 schools, 99 served as 'test' schools and the remaining 47 as 'control' schools. A variety of changes were made in the test schools including:

- Three flavor varieties were offered (white, chocolate, strawberry).
- Quality of chocolate milk was made comparable to retail products.
- Coolers to maintain milk at prescribed temperatures were installed.
- Plastic re-sealable containers were provided.

Student participation in the meal programs and the quantity of milk sales in the pilot schools was gathered daily throughout most of school year 2001/02. A net improvement of 4.4 percent in program participation was observed in test schools at the secondary level, whereas no difference was noted among elementary students. The quantity of milk sold increased measurably in both elementary (+15%) and secondary schools (22%).

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It was found that children's diets were affected by the test in different ways. Some children were attracted to participate in school meals programs who hadn't before. On the basis of the SMPT findings, it was estimated that participation in the school meals program would increase by about 430,000 students if the test measures were adopted nationwide.

Some children who were already participating in the school meals programs, but weren't drinking milk with their meals, were prompted to become milk drinkers. And, finally, some children remained outside the school meals programs but increased their consumption of milk through a la carte or vending machine purchases.

These results demonstrate that milk consumption can be effectively increased when improvements are made to product functionality, packaging and presentation.

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4. **Appropriateness of using "cups" and "ounces" vs. "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup.**

CNPP points out that, "The proposed patterns in CNPP-Table 1 show both quantity and servings information. However, use of both in consumer materials would be confusing." Also, CNPP indicates, "In addition, it is often difficult to harmonize Pyramid serving sizes with those used by FDA on Nutrition Facts labels."

Serving sizes used in the FGP are, in many cases, different than those used on the Nutrition Facts panel for the same food. For example, the FGP serving size for natural cheese is 1.5 ounces; the serving size used for the Nutrition Facts panel is 1 ounce. The FGP serving size for processed cheese is 2 ounces, while the serving size used for the Nutrition Facts panel is  $\frac{3}{4}$  ounce. Also, the FGP serving size for yogurt is 8 ounces; the serving size used for the Nutrition Facts panel varies from 4 - 8 ounces, with 6 ounces being very common. On the other hand, for numerous food products the FGP serving size is the same as that used on the Nutrition Facts panel (e.g., 1 cup milk). While the purposes of the FGP and Nutrition Facts panel may be different, they are related. Both programs are trying to help educate American consumers about food and nutrition -- the amount of food they should eat and the nutritional content of the food they eat.

Mandatory nutrition labeling of food products, including labeling of serving size, has been in place since 1993. American consumers have become accustomed to reading the Nutrition Facts panel [70]. However, consumers are still unsure how to fully utilize the FGP and nutrition labels. Point-of-purchase information is extremely valuable to consumers to help make informed food/diet choices. Consumers who may mistakenly equate FDA Facts panel servings of dairy products with FGP servings could very easily run the risk of under-consuming critical nutrients such as calcium. Thus, it may be an appropriate time for USDA and FDA to consider harmonizing their respective programs to better serve the American consumer. In an effort to help understand the impact of aligning serving sizes, we have assessed the impact of using serving sizes encountered on the Nutrition Facts panel of dairy products, which we call "marketplace" serving sizes, on achieving dietary recommendations for calcium.

We utilized the FGP analysis of Shaw and colleagues [13] using serving sizes encountered on the Nutrition Facts panel of dairy products rather than FGP servings. To do this we created a nutritional composite for dairy products based on current consumption patterns and current marketplace serving sizes. To calculate a calcium composite for a dairy serving we used the percentage of milk, cheese and yogurt consumed (data from USDA ERS) and adjusted the composite based on the actual consumption of various types milk (full fat, low fat, and skim), cheese (processed versus natural) and yogurt (8 oz versus 6 oz). The dairy composite for calcium is presented in Table 10. The average composite dairy product contained 247 mg calcium per marketplace serving. The calcium content of the average marketplace serving of dairy is considerably lower than the 302 mg calcium per FGP dairy serving. This is partly due to the lower calcium content of natural and processed cheese and to the increased presence of 6 oz containers of yogurt (which are labeled as one serving under FDA labeling rules).

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We then replicated the approach taken by Shaw et al [13] to estimate calcium intake using the new marketplace serving size dairy composite. When we used the FGP dietary patterns to calculate non-dairy calcium intake and added 2-4 marketplace servings of dairy, we found that at least 3 servings, and for most age/gender groups 4 marketplace servings of dairy products would be needed to meet the calcium AI (Table 11). For example, in females, adding 2 marketplace servings of dairy products to the non-dairy calcium provided by other foods recommended by the FGP only provided 60-78% of the AI for calcium. Three servings of marketplace dairy products raised the calcium intake to 79-103% of the AI for calcium but 9-18 year olds and those older than 50 years of age needed 4 marketplace servings to meet or exceed 100% of the AI for calcium. In those consuming pattern B (2200 kcal/day), all those aged 9 years and older needed at least three marketplace dairy servings to meet the AI for calcium. With four marketplace servings almost all groups, regardless of age or dietary pattern, met or exceeded the AI for calcium.

When we used actual food consumption data from NHANES IV to estimate the non-dairy calcium intake and added 2-4 marketplace servings of dairy products (Table 12), we concluded that 3-4 marketplace servings of dairy products are necessary to meet or exceed the AI for calcium. In 9-18 year olds, 3 marketplace servings of dairy products provided 78% of the AI for calcium in females and 79-86% of the AI for calcium in males. Additionally, in those older than 50 years of age, 3 marketplace servings of dairy products provided 82-93% of the AI for calcium. Four marketplace servings of dairy products helped these age groups approach or exceed that AI for calcium.

#### Summary

We have shown for dairy products, changing to serving sizes used on the Nutrition Facts panel would require the dairy serving recommendation to increase from 2-3 servings per day to at least 3-4 servings per day for individuals to meet 100% of the AI for calcium. Four servings of dairy products are particularly necessary for those 9-18 years of age and those 51+ years of age, when we factor in actual non-dairy calcium intake. Consumers who may mistakenly equate FDA Facts panel servings of dairy products with FGP servings could very easily run the risk of under-consuming critical nutrients such as calcium as well as other essential nutrients.

It may be an appropriate time for the USDA to seriously consider ways to harmonize the FGP servings sizes to those required by the FDA on the Nutrition Facts panel and to be consistent with serving sizes that consumers encounter in the marketplace. While this may cause a realignment of the number of servings of various foods, we believe the effort is worthwhile, since consumers will then be able to link the FGP recommendations with product labels. CNPP should consider this opportunity to make the FGP more consumer-friendly by providing recommendations in units that can be easily obtained in grocery stores.

Research contained in this letter has clearly demonstrated that 3 - 4 servings of dairy per day are necessary for Americans to achieve the calcium AI using either FGP servings or FDA Facts panel servings. In light of the calcium crisis in the U.S. as well as the obesity imperative in which 3 - 4 servings of dairy products per day are emerging as a potential solution, increasing the recommended servings of dairy from 2 - 3 per day to 3 - 4 servings per day has substantial scientific support and public health benefit.

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**5. Selection of appropriate illustrative food patterns for various consumer materials.**

The CNPP has requested comments on the selection of smaller subsets of the food patterns for use in the development of consumer materials.

NDC suggests that the criteria used for the selection of illustrative patterns should be those that would be most impactful and reflective of the general population, including caloric levels. NDC notes that the caloric levels that are reasonable and have familiarity with consumers are those that are used as the basis for the DRV's on the FDA Nutrition Facts Panel: 2000 calories and 2500 calories. These caloric levels are consistent with widely used food plans and 2000 calories approximates the caloric requirements for postmenopausal women who are at-risk for excessive intake of calories and fat. NDC encourages CNPP to choose a caloric pattern(s) that is reasonable, actionable, and consistent with what consumers are encountering in the marketplace.

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TABLE 1.

**Calcium Provided by Non-dairy Food Guide Sources<sup>1</sup>**

| Ages           | Calcium<br>DRI<br>mg/day | Non-Dairy<br>Calcium,<br>mg/day <sup>2</sup> | Percentage of DRI |           |           |
|----------------|--------------------------|--|-------------------|-----------|-----------|
|                |                          |  | (2 dairy)         | (3 dairy) | (4 dairy) |
| <b>Females</b> |                          |  |                   |           |           |
| 1-3 years      | 500                      | 191.6  | 159               | 220       | 280       |
| 4-8 years      | 800                      | 226.3  | 104               | 142       | 179       |
| 9-13 years     | 1300                     | 273.5  | <b>68</b>         | <b>91</b> | 114       |
| 14-18 years    | 1300                     | 273.9  | <b>68</b>         | <b>91</b> | 114       |
| 19-30 years    | 1000                     | 296.2  | <b>90</b>         | 120       | 150       |
| 31-50 years    | 1000                     | 312.5  | <b>92</b>         | 122       | 152       |
| 51-70 years    | 1200                     | 283.5  | <b>74</b>         | <b>99</b> | 124       |
| >70 years      | 1200                     | 238.7  | <b>70</b>         | <b>95</b> | 121       |
| <b>Males</b>   |                          |  |                   |           |           |
| 1-3 years      | 500                      | 216.7  | 164               | 225       | 285       |
| 4-8 years      | 800                      | 286.1  | 111               | 149       | 187       |
| 9-13 years     | 1300                     | 283.6  | <b>68</b>         | <b>92</b> | 115       |
| 14-18 years    | 1300                     | 381.9  | <b>76</b>         | <b>99</b> | 122       |
| 19-30 years    | 1000                     | 404.7  | <b>101</b>        | 131       | 161       |
| 31-50 years    | 1000                     | 423.5  | <b>103</b>        | 133       | 163       |
| 51-70 years    | 1200                     | 377.2  | <b>82</b>         | 107       | 132       |
| >70 years      | 1200                     | 312.3  | <b>76</b>         | 102       | 127       |

<sup>1</sup>Food Guide Pyramid dairy serving defined as 302 mg/serving.

<sup>2</sup>Non-dairy calcium intake calculated from NHANES IV.

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TABLE 2.

## Food Guide Pyramid Review of 5-Day Program

|                          | Fruit <sup>a</sup>      |            | Vegetables <sup>a</sup> |           | Total Vegetables and Fruit <sup>a</sup> |            |
|--------------------------|-------------------------|------------|-------------------------|-----------|---|------------|
|                          | 1989-1991               | 1994-1996  | 1989-1991               | 1994-1996 | 1989-1991                               | 1994-1996  |
| Total Age Total (2+ yrs) | 1.3 ± 0.03 <sup>b</sup> | 1.5 ± 0.03 |                         |           | 4.5 ± 0.06                              | 4.9 ± 0.05 |
| 2-19 yrs                 | 1.3 ± 0.06              | 1.6 ± 0.05 |                         |           | 4.0 ± 0.09                              | 4.3 ± 0.08 |
| 20+ yrs                  | 1.3 ± 0.04              | 1.5 ± 0.03 |                         |           | 4.6 ± 0.06                              | 5.2 ± 0.05 |

<sup>a</sup> Includes all forms, including condiments, candy, chips, and french fries.

<sup>b</sup> Mean standard error, adjusted to be representative of the U.S. population during the years of each survey.

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TABLE 3.\*\*

**NPD/NET IN-HOME CONSUMPTION\***

| Two Years Ending Feb.       | <u>1995</u> | <u>1996</u> | <u>1997</u> | <u>1998</u> | <u>1999</u> | <u>2000</u> | <u>2001</u> | <u>2002</u> | <u>2003</u> | 1995-<br>2003<br>Actual<br>Change |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------|
| <b><u>DARK GREEN</u></b>    | 20.9        | 20.7        | 20.0        | 19.4        | 19.8        | 20.3        | 19.5        | 19.0        | 20.9        | 0.0                               |
| BROCCOLI                    | 13.2        | 12.6        | 12.1        | 11.5        | 11.7        | 12.1        | 11.5        | 11.0        | 11.9        | -1.3                              |
| SPINACH                     | 4.1         | 4.3         | 3.9         | 3.6         | 3.7         | 3.9         | 4.2         | 4.0         | 3.8         | -0.3                              |
| ROMAINE                     | 2.4         | 2.2         | 2.4         | 3.0         | 3.5         | 3.4         | 3.2         | 3.3         | 4.7         | 2.3                               |
| COLLARD GREENS              | 1.5         | 1.7         | 1.8         | 1.5         | 1.3         | 1.2         | 1.1         | 1.2         | 1.2         | -0.3                              |
| <b><u>DEEP YELLOW</u></b>   | 36.3        | 34.6        | 34.9        | 35.1        | 33.8        | 32.4        | 31.0        | 29.8        | 30.5        | -5.8                              |
| CARROTS                     | 30.3        | 29.3        | 29.8        | 30.0        | 28.8        | 27.5        | 26.1        | 25.0        | 25.9        | -4.4                              |
| WINTER SQUASH               | 1.0         | 0.7         | 0.6         | 0.8         | 0.8         | 0.7         | 0.8         | 0.8         | 0.5         | -0.5                              |
| SWEET POTATOES              | 4.5         | 4.2         | 4.1         | 3.9         | 3.8         | 3.8         | 3.6         | 3.7         | 3.7         | -0.8                              |
| PUMPKIN                     | 0.5         | 0.4         | 0.4         | 0.4         | 0.4         | 0.4         | 0.5         | 0.4         | 0.3         | -0.2                              |
| <b><u>LEGUMES</u></b>       | 5.8         | 6.0         | 6.3         | 5.4         | 5.5         | 5.5         | 5.1         | 4.7         | 4.5         | -1.3                              |
| PINTO BEANS                 | 3.0         | 3.0         | 3.3         | 3.1         | 3.1         | 3.0         | 2.7         | 2.4         | 2.2         | -0.8                              |
| KIDNEY/RED BEANS            | 2.6         | 2.8         | 2.6         | 2.0         | 2.0         | 2.2         | 2.1         | 2.0         | 2.0         | -0.6                              |
| GARBANZO<br>BEANS/CHICKPEAS | 0.4         | 0.4         | 0.5         | 0.4         | 0.4         | 0.5         | 0.4         | 0.4         | 0.4         | 0.0                               |

\*Measured as an eating occasion, not volume  
Includes eatings 'as is' and ingredient use  
Measure = annual eatings per capita

\*\*From: The NPD Group, Inc. 2003  
National Eating Trends, In Home Consumption

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Table 4a  
Adding One Additional Dairy Serving  
Example of Food Guide Pyramid Menu  
(1,600 calories)

| FOOD GUIDE PYRAMID 1,600 CALORIE MENU, DAY 1*                             |                        |              |          |                        |              |                    |                     |                        |
|---|------------------------|--------------|----------|------------------------|--------------|--------------------|---------------------|------------------------|
| Item  | Bread                  | Vegetable    | Fruit    | Milk                   | Meat Oz.     | Fat Grams          | Saturated Fat Grams | Calories               |
| <b>BREAKFAST</b>  |                        |              |          |                        |              |                    |                     |                        |
| Orange juice, 3/4 cup   |                        |              | 1        |                        |              | trace              |                     | 84                     |
| Oatmeal, 1/2 cup  | 1                      |              |          |                        |              | 1                  |                     | 73                     |
| White toast, 1 slice  | 1                      |              |          |                        |              | 1                  | .2                  | 69                     |
| Soft margarine, 1 teaspoon  |                        |              |          |                        |              | 4                  | .6                  | 34                     |
| Non-fat yogurt  |                        |              |          |                        |              | .4                 | .2                  | 98                     |
| Jelly, 1 teaspoon   |                        |              |          |                        |              | trace              |                     | 16                     |
| Skim milk, 1/2 cup  |                        |              |          | 1-1/2                  |              | trace              |                     | 43                     |
| <b>LUNCH</b>  |                        |              |          |                        |              |                    |                     |                        |
| *Split pea soup, 1 cup<br>split peas and ham<br>carrots and onions        |                        | 1/2          |          |                        | 1-1/4        | 2                  |                     | 218                    |
| *Quick tuna and sprouts sandwich<br>tuna<br>whole-wheat sandwich roll     | 2                      |              |          |                        | 1-1/2        | 4                  |                     | 202                    |
| Mixed greens salad, 1 cup   |                        | 1            |          |                        |              | trace              |                     | 9                      |
| Reduced-calorie Italian dressing<br>1 tablespoon                          |                        |              |          |                        |              | 1                  |                     | 16                     |
| *Chocolate mint pie, 1 serving  | 1/2                    |              |          | 1/4                    |              | 6                  |                     | 176                    |
| <b>DINNER</b>   |                        |              |          |                        |              |                    |                     |                        |
| *Savory sirloin, 3 ounces   |                        |              |          |                        | 3            | 5                  |                     | 129                    |
| *Corn and zucchini combo, 1/2 cup   |                        | 1            |          |                        |              | 2                  |                     | 76                     |
| Tomato and lettuce salad, 1 serving<br>Medium tomato, 1 lettuce leaf      |                        | 1            |          |                        |              | trace              |                     | 27                     |
| Reduced-calorie French dressing<br>1 tablespoon                           |                        |              |          |                        |              | 1                  |                     | 22                     |
| Small whole-wheat roll  | 1                      |              |          |                        |              | 1                  |                     | 72                     |
| Soft margarine, 1 teaspoon  |                        |              |          |                        |              | 4                  |                     | 34                     |
| *Yogurt-strawberry parfait, 1 cup<br>lowfat frozen yogurt<br>strawberries |                        |              | 1        | 1/2                    |              | 2                  |                     | 128                    |
| <b>SNACKS</b>   |                        |              |          |                        |              |                    |                     |                        |
| Graham crackers, 3 squares  | 1                      |              |          |                        |              | 2                  |                     | 81                     |
| Skim milk, 1 cup  |                        |              |          | 1                      |              | trace              |                     | 85                     |
| <b>TOTAL</b>  | <b>6-1/2<br/>5-1/2</b> | <b>3-1/2</b> | <b>2</b> | <b>2-1/4<br/>3-1/4</b> | <b>5-3/4</b> | <b>36<br/>31.4</b> | <b>8.7<br/>8.1</b>  | <b>1,594<br/>1,589</b> |

Remove →  
Remove →  
Add →

\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 4b  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(1,600 calories)

| FOOD GUIDE PYRAMID 1,600 CALORIE MENU, DAY 2*                               |                           |           |       |                   |          |                       |                     |                           |
|---|---------------------------|-----------|-------|-------------------|----------|-----------------------|---------------------|---------------------------|
| Item  | Bread                     | Vegetable | Fruit | Milk              | Meat Oz. | Fat Grams             | Saturated Fat Grams | Calories                  |
| <b>BREAKFAST</b>  |                           |           |       |                   |          |                       |                     |                           |
| Grapefruit juice, 3/4 cup   |                           |           | 1     |                   |          | trace                 |                     | 70                        |
| * Breakfast pita, 1 serving<br>4-inch whole wheat pita<br>vegetables<br>egg | 1                         | 1/4       |       |                   | 1/2      | 6                     |                     | 171                       |
| Skim milk, 1 cup  |                           |           |       | 1                 |          | trace                 |                     | 86                        |
| <b>LUNCH</b>  |                           |           |       |                   |          |                       |                     |                           |
| *Turkey pasta salad, 1 serving<br>macaroni<br>red grapes<br>turkey          | 1                         |           | 1/2   |                   | 2        | 6                     |                     | 264                       |
| Tomato wedges, lettuce leaf   |                           | 1         |       |                   |          | trace                 |                     | 27                        |
| Small hard roll   | 1                         |           |       |                   |          | 1                     |                     | 78                        |
| Soft margarine, 1 teaspoon  |                           |           |       |                   |          | 4                     |                     | 34                        |
| Skim milk, 1 cup  |                           |           |       | 1                 |          | trace                 |                     | 86                        |
| <b>DINNER</b>   |                           |           |       |                   |          |                       |                     |                           |
| * Creole fish fillets, 1 serving<br>cod<br>vegetables                       |                           | 1         |       |                   | 3        | 1                     |                     | 131                       |
| Small new potatoes with skin, 2   |                           | 1         |       |                   |          | trace                 |                     | 68                        |
| Cooked green peas, 1/2 cup<br>with soft margarine, 1 teaspoon               |                           | 1         |       |                   |          | trace<br>4            |                     | 67<br>34                  |
| * Whole-wheat cornmeal muffins  | 2                         |           |       |                   |          | 4                     |                     | 129                       |
| Soft margarine, 1 teaspoon  |                           |           |       |                   |          | 4                     |                     | 34                        |
| * Peach crisp, 1/2 cup<br>rolled oats and flour<br>frozen peaches           | 1/2                       |           | 3/4   |                   |          | 4                     |                     | 153                       |
| <b>SNACKS</b>   |                           |           |       |                   |          |                       |                     |                           |
| ± 1/2 Medium bagel  | 1-2                       |           |       |                   |          | 0.5 ±                 | .05 ±               | 77 ± 53                   |
| <del>Soft margarine, 1 teaspoon</del>                                       |                           |           |       |                   |          | <del>4.0</del>        | <del>0.6</del>      | <del>34</del>             |
| Jelly, 1 teaspoon   |                           |           |       |                   |          | trace                 |                     | 16                        |
| Skim chocolate milk, 1 cup  |                           |           |       | 1                 |          | .2                    | .1                  | 139                       |
| <b>TOTAL</b>  | <del>7-1/2</del><br>6-1/2 | 4-1/4     | 2-1/4 | <del>2</del><br>3 | 5-1/2    | <del>39</del><br>38.2 | <del>8</del><br>6.9 | <del>1,635</del><br>1,664 |

Change→

Remove→

Add→

\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 4c  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(1,600 calories)

| FOOD GUIDE PYRAMID 1,600 CALORIE MENU, DAY 5*  |                           |           |       |                   |          |                       |                     |                           |
|--|---------------------------|-----------|-------|-------------------|----------|-----------------------|---------------------|---------------------------|
| Item   | Bread                     | Vegetable | Fruit | Milk              | Meat Oz. | Fat Grams             | Saturated Fat Grams | Calories                  |
| <b>BREAKFAST</b>   |                           |           |       |                   |          |                       |                     |                           |
| Medium grapefruit, 1/2   |                           |           | 1     |                   |          | trace                 |                     | 41                        |
| Ready-to-eat cereal flakes, 1 ounce  | 1                         |           |       |                   |          | trace                 |                     | 111                       |
| Toasted raisin English muffin, 1/2   | 1                         |           |       |                   |          | 1                     |                     | 69                        |
| Jelly, 1 teaspoon  |                           |           |       |                   |          | trace                 |                     | 16                        |
| Skim milk, 1/2 cup   |                           |           |       | 1/2               |          | trace                 |                     | 43                        |
| <b>LUNCH</b>   |                           |           |       |                   |          |                       |                     |                           |
| *Taco salad, 1 serving<br>unsalted tortilla chips<br>tomato puree and greens<br>lowfat, low-sodium cheddar cheese<br>beef and bean | 3/4                       | 1-1/2     |       | 1/2               | 2-1/2    | 19                    |                     | 455                       |
| Sherbet, 1/2 cup   |                           |           |       |                   |          | 2                     |                     | 135                       |
| <b>DINNER</b>  |                           |           |       |                   |          |                       |                     |                           |
| *Pork and vegetable stir-fry, 1 serving<br>rice<br>vegetables<br>pork  | 1-1/2                     | 1         |       |                   | 3        | 9                     |                     | 370                       |
| Cooked broccoli, 1/2 cup   |                           | 1         |       |                   |          | trace                 |                     | 26                        |
| <del>Small white roll</del>  | <del>1</del>              |           |       |                   |          | <del>2</del>          | <del>.1</del>       | <del>83</del>             |
| Skim milk, 1 cup   |                           |           |       | 1                 |          | .2                    | .1                  | 85                        |
| Minted pineapple chunks, juice-pack,<br>1/2 cup  |                           |           | 1     |                   |          | trace                 |                     | 75                        |
| <b>SNACKS</b>  |                           |           |       |                   |          |                       |                     |                           |
| Wheat crackers, 6  | 1                         |           |       |                   |          | 4                     |                     | 86                        |
| Skim milk, 1 cup   |                           |           |       | 1                 |          | trace                 |                     | 85                        |
| <b>TOTAL</b>   | <del>6-1/4</del><br>5-1/4 | 3-1/2     | 2     | <del>2</del><br>3 | 5-1/2    | <del>37</del><br>35.2 | 12                  | <del>1,595</del><br>1,597 |

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\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 4d  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(1,600 calories)

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| FOOD GUIDE PYRAMID 1,600 CALORIE MENU, DAY 4*  |                |           |       |                |          |           |                     |                |
|--|----------------|-----------|-------|----------------|----------|-----------|---------------------|----------------|
| Item   | Bread          | Vegetable | Fruit | Milk           | Meat Oz. | Fat Grams | Saturated Fat Grams | Calories       |
| <b>BREAKFAST</b>   |                |           |       |                |          |           |                     |                |
| Fresh sliced strawberries, 1/2 cup   |                |           | 1     |                |          | trace     |                     | 25             |
| Whole grain cereal flakes, 1 ounce   | 1              |           |       |                |          | trace     |                     | 99             |
| Medium toasted plain bagel, 1/2  | 1              |           |       |                |          | trace     | .05                 | 74             |
| Cream cheese, 1/2 tablespoon   |                |           |       |                |          | 3         | 1.6                 | 25             |
| Non-fat yogurt, 1 cup  |                |           |       | 1              |          | .4        | .2                  | 98             |
| 2% fat milk, 1 cup   |                |           |       | 1              |          | 5         |                     | 122            |
| <b>LUNCH</b>   |                |           |       |                |          |           |                     |                |
| * Broiled chicken fillet sandwich<br>chicken<br>whole-wheat roll<br>tomato slice<br>lettuce leaf     | 2              |           |       |                | 2        | 9         |                     | 315            |
| Mayonnaise, 1 packet   |                |           |       |                |          | 8         |                     | 72             |
| * Confetti coleslaw, 1/2 cup   |                | 1         |       |                |          | trace     |                     | 36             |
| 2% fat milk, 1 cup   |                |           |       | 1              |          | 5         |                     | 122            |
| <b>DINNER</b>  |                |           |       |                |          |           |                     |                |
| * Lentil stroganoff, 1 serving<br>noodles<br>lentils<br>vegetables, cut<br>yogurt                    | 1-1/2          | 1-1/4     |       | 1/4            | 2        | 5         |                     | 520            |
| Cooked whole green beans, 1/2 cup  |                | 1         |       |                |          | trace     |                     | 22             |
| Tomato and cucumber salad<br>Tomato, cucumber, lettuce leaf  | 1              |           |       |                |          | trace     |                     | 17             |
| Reduced-calorie vinaigrette dressing,<br>1 tablespoon  |                |           |       |                |          | 1         |                     | 16             |
| Medium honeydew melon, 1/8   |                |           | 1     |                |          | trace     |                     | 44             |
| <b>SNACKS</b>  |                |           |       |                |          |           |                     |                |
| * Roast beef sandwich, 1/2<br>roast beef<br>whole-wheat bread<br>lettuce leaf<br>mustard, 1 teaspoon | 1              |           |       |                | 1        | 3         |                     | 116            |
| <b>TOTAL</b>   | 6-1/2<br>5-1/2 | 4-1/4     | 2     | 2-1/4<br>3-1/4 | 5        | 39<br>36  | 13<br>11.5          | 1,625<br>1,624 |

\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 4e  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(1,600 calories)

| FOOD GUIDE PYRAMID 1,600 CALORIE MENU, DAY 5*                                      |                |              |              |                |              |                    |                     |                        |
|--|----------------|--------------|--------------|----------------|--------------|--------------------|---------------------|------------------------|
| Item   | Bread          | Vegetable    | Fruit        | Milk           | Meat Oz.     | Fat Grams          | Saturated Fat Grams | Calories               |
| <b>BREAKFAST</b>   |                |              |              |                |              |                    |                     |                        |
| Medium cantaloupe, 1/4   |                |              | 1            |                |              | trace              |                     | 48                     |
| * Whole-wheat pancakes, 2  | 2              |              |              |                |              | 4                  |                     | 172                    |
| * Blueberry sauce, 1/4 cup   |                |              | 1/3          |                |              | trace              |                     | 33                     |
| Skim milk, 1 cup   |                |              |              | 1              |              | trace              |                     | 86                     |
| <b>LUNCH</b>   |                |              |              |                |              |                    |                     |                        |
| * Chili-stuffed baked potato medium potato tomato sauce beef and beans             |                | 1<br>1/2     |              |                | 2-1/2        | 9                  |                     | 397                    |
| * Spinach-orange salad, 1 cup spinach chopped vegetables orange sections and juice |                | 1<br>1/2     | 1/2          |                |              | 7                  |                     | 108                    |
| Wheat crackers, 6  | 4              |              |              |                |              | 4                  | 1                   | 86                     |
| Skim milk, 1 cup   |                |              |              | 1              |              | .2                 | .1                  | 85                     |
| <b>DINNER</b>  |                |              |              |                |              |                    |                     |                        |
| * Apricot-glazed chicken, 1 serving chicken apricots, raisins, and orange juice    |                |              | 1/2          |                | 3            | 2                  |                     | 212                    |
| * Rice-pasta pilaf, 3/4 cup  | 1-1/2          | 1/4          |              |                |              | 5                  |                     | 203                    |
| Tossed salad, 1 cup  |                | 1            |              |                |              | trace              |                     | 13                     |
| Reduced-calorie Italian dressing, 1 tablespoon                                     |                |              |              |                |              | 1                  |                     | 16                     |
| Small hard roll  | 1              |              |              |                |              | 1                  |                     | 78                     |
| Vanilla ice milk, 1/2 cup  |                |              |              | 1/3            |              | 3                  |                     | 91                     |
| <b>SNACKS</b>  |                |              |              |                |              |                    |                     |                        |
| Fig bar, 1   | 1/2            |              |              |                |              | 1                  |                     | 57                     |
| Skim milk, 3/4 cup   |                |              |              | 3/4            |              | trace              |                     | 64                     |
| <b>TOTAL</b>   | <b>6<br/>5</b> | <b>4-1/4</b> | <b>2-1/3</b> | <b>2<br/>3</b> | <b>5-1/2</b> | <b>37<br/>33.2</b> | <b>11<br/>10.1</b>  | <b>1,664<br/>1,663</b> |

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Table 5a  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(2,200 calories)

| FOOD GUIDE PYRAMID 2,200 CALORIE MENU, DAY 2*                               |                           |           |       |                   |          |            |                     |                           |
|---|---------------------------|-----------|-------|-------------------|----------|------------|---------------------|---------------------------|
| Item  | Bread                     | Vegetable | Fruit | Milk              | Meat Oz. | Fat Grams  | Saturated Fat Grams | Calories                  |
| <b>BREAKFAST</b>  |                           |           |       |                   |          |            |                     |                           |
| Grapefruit juice, 3/4 cup   |                           |           | 1     |                   |          | trace      |                     | 70                        |
| * Breakfast pita, 1 serving<br>4-inch whole wheat pita<br>vegetables<br>egg | 1                         | 1/4       |       |                   | 1/2      | 6          |                     | 171                       |
| 2% fat milk, 1 cup  |                           |           |       | 1                 |          | 5          |                     | 122                       |
| <b>LUNCH</b>  |                           |           |       |                   |          |            |                     |                           |
| *Turkey pasta salad, 1 serving<br>macaroni<br>red grapes<br>turkey          | 1                         |           | 1/2   |                   | 2        | 6          |                     | 264                       |
| Tomato wedges, lettuce leaf   |                           | 1         |       |                   |          | trace      |                     | 27                        |
| Small hard roll, 2  | 2                         |           |       |                   |          | 2          |                     | 156                       |
| Soft margarine, 2 teaspoons   |                           |           |       |                   |          | 8          |                     | 68                        |
| Small oatmeal cookies, 4  | 1                         |           |       |                   |          | 5          |                     | 109                       |
| 2% fat milk, 1 cup  |                           |           |       | 1                 |          | 5          |                     | 122                       |
| <b>DINNER</b>   |                           |           |       |                   |          |            |                     |                           |
| * Creole fish fillets, 1-1/3 serving<br>cod<br>vegetables                   |                           | 1-1/3     |       |                   | 4        | 2          |                     | 175                       |
| Small new potatoes with skin, 2   |                           | 1         |       |                   |          | trace      |                     | 68                        |
| Cooked green peas, 1/2 cup<br>with soft margarine, 1 teaspoon               |                           | 1         |       |                   |          | trace<br>4 |                     | 67<br>34                  |
| * Whole-wheat cornmeal muffins, 2   | 4                         |           |       |                   |          | 9          |                     | 259                       |
| Soft margarine, 2 teaspoons   |                           |           |       |                   |          | 8          |                     | 68                        |
| * Peach crisp, 1/2 cup<br>rolled oats and flour<br>frozen peaches           | 1/2                       |           | 3/4   |                   |          | 4          |                     | 153                       |
| <b>SNACKS</b>   |                           |           |       |                   |          |            |                     |                           |
| Medium bagel  | 2                         |           |       |                   |          | 4          | 1                   | 153                       |
| Soft margarine, 2 teaspoons   |                           |           |       |                   |          | 8          | 1.2                 | 68                        |
| Small fresh pear  |                           |           | 1     |                   |          | 1          |                     | 82                        |
| Skim chocolate milk, 1 cup  |                           |           |       | 1                 |          | .2         | .1                  | 139                       |
| <b>TOTAL</b>  | <del>7-1/2</del><br>6-1/2 | 4-1/4     | 2-1/4 | <del>2</del><br>3 | 5-1/2    | 39<br>38.2 | 8<br>6.9            | <del>1,635</del><br>1,664 |

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Table 5b  
 Adding One Additional Dairy Serving  
 Food Guide Pyramid Menu Example  
 (2,200 calories)

| FOOD GUIDE PYRAMID 2,200 CALORIE MENU, DAY 3*   |                     |           |       |        |          |            |                     |                |
|---|---------------------|-----------|-------|--------|----------|------------|---------------------|----------------|
| Item  | Bread               | Vegetable | Fruit | Milk   | Meat Oz. | Fat Grams  | Saturated Fat Grams | Calories       |
| <b>BREAKFAST</b>  |                     |           |       |        |          |            |                     |                |
| Medium grapefruit, 1/2  |                     |           | 1     |        |          | trace      |                     | 41             |
| Medium Banana   |                     |           | 1     |        |          | 1          |                     | 108            |
| Ready-to-eat cereal flakes, 1 ounce   | 1                   |           |       |        |          | trace      |                     | 111            |
| Toasted raisin English muffin, 1/2  | 1                   |           |       |        |          | 1          |                     | 69             |
| Soft margarine, 2 teaspoons   |                     |           |       |        |          | 8          |                     | 68             |
| Skim milk, 1/2 cup  |                     |           |       | 1/2    |          | trace      |                     | 43             |
| <b>LUNCH</b>  |                     |           |       |        |          |            |                     |                |
| *Taco salad, 1 serving<br>unsalted tortilla chips<br>tomato puree and greens<br>low-fat, low-sodium cheddar cheese<br>beef and bean | 3/4                 | 1-1/2     |       | 1/2    | 2-1/2    | 19         |                     | 455            |
| Medium gingersnaps, 2   | 1                   |           |       |        |          | 2          |                     | 101            |
| <b>DINNER</b>   |                     |           |       |        |          |            |                     |                |
| * Pork and vegetable stir-fry, 1 serving<br>rice<br>vegetables<br>pork  | 1-1/2               | 1         |       |        | 3        | 9          |                     | 370            |
| Cooked broccoli, 1/2 cup  |                     | 1         |       |        |          | trace      |                     | 26             |
| Small white roll, 2 1   | 2 1                 |           |       |        |          | 3 1.5      |                     | 167 84         |
| Soft margarine, 2 1 teaspoon  |                     |           |       |        |          | 8 4        | 1.20 .6             | 68 34          |
| Skim milk, 1 cup  |                     |           |       | 1      |          | .2         | .1                  | 85             |
| Minted pineapple chunks, juice-pack, 1/2 cup  |                     |           | 1     |        |          | trace      |                     | 75             |
| <b>SNACKS</b>   |                     |           |       |        |          |            |                     |                |
| Wheat crackers, 6   | 1                   |           |       |        |          | 4          |                     | 86             |
| Cheddar cheese, 1-1/2 ounces  |                     |           |       | 1      |          | 14         |                     | 171            |
| Turkey sandwich, 1/2<br>Rye bread<br>turkey<br>lettuce leaf<br>mayonnaise-type salad dressing,<br>reduced calorie, 1/2 tablespoon   | 1                   |           |       |        | 1        | 4          |                     | 137            |
| No-salt-added tomato juice, 3/4 cup   |                     | 1         |       |        |          | trace      |                     | 31             |
| <b>TOTAL</b>  | 10-<br>1/4<br>9-1/4 | 4-1/2     | 3     | 2<br>3 | 6-1/2    | 73<br>67.7 | 25<br>24.5          | 2,196<br>2,163 |

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Table 5c  
 Adding One Additional Dairy Serving  
 Food Guide Pyramid Menu Example  
 (2,200 calories)

| FOOD GUIDE PYRAMID 2,200 CALORIE MENU, DAY 4*  |                           |           |       |                           |          |            |                     |                           |
|--|---------------------------|-----------|-------|---------------------------|----------|------------|---------------------|---------------------------|
| Item   | Bread                     | Vegetable | Fruit | Milk                      | Meat Oz. | Fat Grams  | Saturated Fat Grams | Calories                  |
| <b>BREAKFAST</b>   |                           |           |       |                           |          |            |                     |                           |
| Fresh sliced strawberries, 1/2 cup   |                           |           | 1     |                           |          | trace      |                     | 25                        |
| Whole grain cereal flakes, 1 ounce   | 1                         |           |       |                           |          | trace      |                     | 99                        |
| Medium toasted plain bagel, ± 1/2  | ± 1                       |           |       |                           |          | 1-5        | trace               | 149 75                    |
| Cream cheese, ± 1/2 tablespoon   |                           |           |       |                           |          | 5-2.5      | 3-2-1.6             | 51-25                     |
| 2% fat milk, 1 cup   |                           |           |       | 1                         |          | 5          |                     | 122                       |
| <b>LUNCH</b>   |                           |           |       |                           |          |            |                     |                           |
| * Broiled chicken fillet sandwich<br>chicken<br>whole-wheat roll<br>tomato slice<br>lettuce leaf | 2                         |           |       |                           | 2        | 9          |                     | 315                       |
| Mayonnaise, 1 packet   |                           |           |       |                           |          | 8          |                     | 72                        |
| * Confetti coleslaw, 1/2 cup   |                           | 1         |       |                           |          | trace      |                     | 36                        |
| Medium fresh orange  |                           |           | 1     |                           |          | trace      |                     | 62                        |
| 2% fat milk, 1 cup   |                           |           |       | 1                         |          | 5          |                     | 122                       |
| <b>DINNER</b>  |                           |           |       |                           |          |            |                     |                           |
| * Lentil stroganoff, 1 serving<br>noodles<br>lentils<br>vegetables, cut<br>yogurt                | 1-1/2                     | 1-1/4     |       | 1/4                       | 2        | 5          |                     | 520                       |
| Cooked whole green beans, 1/2 cup<br>with soft margarine, 1 teaspoon                             |                           | 1         |       |                           |          | trace<br>4 |                     | 22<br>34                  |
| Tomato and cucumber salad<br>Tomato, cucumber, lettuce leaf                                      | 1                         |           |       |                           |          | trace      |                     | 17                        |
| Reduced-calorie vinaigrette dressing,<br>1 tablespoon  |                           |           |       |                           |          | 1          |                     | 16                        |
| Small pumpernickel roll  | 1                         |           |       |                           |          | 1          |                     | 78                        |
| Soft margarine, 1 teaspoon   |                           |           |       |                           |          | 4          |                     | 34                        |
| Medium honeydew melon, 1/8   |                           |           | 1     |                           |          | trace      |                     | 44                        |
| Skim milk, 1 cup   |                           |           |       | 1                         |          | .2         | .1                  | 85                        |
| <b>SNACKS</b>  |                           |           |       |                           |          |            |                     |                           |
| No-salt added vegetable juice, 3/4 cup   |                           | 1         |       |                           |          | trace      |                     | 34                        |
| * Roast beef sandwich<br>roast beef<br>whole-wheat bread<br>lettuce leaf<br>mustard, 1 teaspoon  | 2                         |           |       |                           | 2        | 5          |                     | 227                       |
| 2% fat milk, 1 cup   |                           |           |       | 1                         |          | 5          |                     | 122                       |
| <b>TOTAL</b>   | <del>9-1/2</del><br>8-1/2 | 5-1/4     | 3     | <del>3-1/4</del><br>4-1/4 | 6        | 58<br>55.2 | 20<br>18.5          | <del>2,201</del><br>2,186 |

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Table 5d  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(2,200 calories)

| FOOD GUIDE PYRAMID 2,200 CALORIE MENU, DAY 5*   |                    |              |              |                        |          |                    |                     |                        |
|---|--------------------|--------------|--------------|------------------------|----------|--------------------|---------------------|------------------------|
| Item  | Bread              | Vegetable    | Fruit        | Milk                   | Meat Oz. | Fat Grams          | Saturated Fat Grams | Calories               |
| <b>BREAKFAST</b>  |                    |              |              |                        |          |                    |                     |                        |
| Medium cantaloupe, 1/4  |                    |              | 1            |                        |          | trace              |                     | 48                     |
| * Whole-wheat pancakes, 2   | 2                  |              |              |                        |          | 4                  |                     | 172                    |
| * Blueberry sauce, 1/4 cup  |                    |              | 1/3          |                        |          | trace              |                     | 33                     |
| Soft margarine, 1 teaspoon  |                    |              |              |                        |          | 4                  |                     | 34                     |
| Turkey patty, 1 serving   |                    |              |              |                        | 1-1/2    | 6                  |                     | 123                    |
| Skim milk, 1 cup  |                    |              |              | 1                      |          | trace              |                     | 86                     |
| <b>LUNCH</b>  |                    |              |              |                        |          |                    |                     |                        |
| * Chili-stuffed baked potato<br>medium potato<br>tomato sauce<br>beef and beans             |                    | 1<br>1/2     |              |                        | 2-1/2    | 9                  |                     | 397                    |
| Low-fat, low-sodium cheddar cheese<br>3 tablespoons   |                    |              |              | 1/3                    |          | 1                  |                     | 36                     |
| * Spinach-orange salad, 1 cup<br>spinach<br>chopped vegetables<br>orange sections and juice |                    | 1<br>1/2     | 1/2          |                        |          | 7                  |                     | 108                    |
| Wheat crackers, 6   | 1                  |              |              |                        |          | 4                  |                     | 86                     |
| Skim milk, 1 cup  |                    |              |              | 1                      |          | .2                 | 0.1                 | 85                     |
| <b>DINNER</b>   |                    |              |              |                        |          |                    |                     |                        |
| * Apricot-glazed chicken, 1 serving<br>chicken<br>apricots, raisins, and orange juice       |                    |              | 1/2          |                        | 3        | 2                  |                     | 212                    |
| *Rice-pasta pilaf, 3/4 cup  | 1-1/2              | 1/4          |              |                        |          | 5                  |                     | 203                    |
| Tossed salad, 1 cup   |                    | 1            |              |                        |          | trace              |                     | 13                     |
| Reduced-calorie Italian dressing,<br>1 tablespoon   |                    |              |              |                        |          | 1                  |                     | 16                     |
| Small hard roll, 2  | 2                  |              |              |                        |          | 2                  |                     | 156                    |
| Soft margarine, 2 teaspoons   |                    |              |              |                        |          | 8                  |                     | 68                     |
| Vanilla ice milk, 1/2 cup   |                    |              |              | 1/3                    |          | 3                  |                     | 91                     |
| <b>SNACKS</b>   |                    |              |              |                        |          |                    |                     |                        |
| Large soft pretzel  | 2 1/2              |              |              |                        |          | 2                  | 0.4                 | 190                    |
| Medium apple, 1/2   |                    |              | 1/2          |                        |          | trace              |                     | 41                     |
| Non-fat yogurt, 1 cup   |                    |              |              | 1                      |          | .2                 | 0.1                 | 98                     |
| <b>TOTAL</b>  | <b>8<br/>7-1/2</b> | <b>4-1/4</b> | <b>2-3/4</b> | <b>2-2/3<br/>3-2/3</b> | <b>7</b> | <b>58<br/>56.2</b> | <b>17<br/>16.7</b>  | <b>2,199<br/>2,107</b> |

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Table 6a  
Adding One Additional Dairy Serving  
Example of Food Guide Pyramid Menu  
(2,800 calories)

| FOOD GUIDE PYRAMID 2,800 CALORIE MENU, DAY 1*                             |                              |              |          |                              |              |                          |                          |                              |
|---|------------------------------|--------------|----------|------------------------------|--------------|--------------------------|--------------------------|------------------------------|
| Item  | Bread                        | Vegetable    | Fruit    | Milk                         | Meat Oz.     | Fat Grams                | Saturated Fat Grams      | Calories                     |
| <b>BREAKFAST</b>  |                              |              |          |                              |              |                          |                          |                              |
| Orange juice, 3/4 cup   |                              |              | 1        |                              |              | trace                    |                          | 84                           |
| Oatmeal, 1/2 cup  | 1                            |              |          |                              |              | 1                        |                          | 73                           |
| White toast, 1 slice  | 1                            |              |          |                              |              | 1                        | .2                       | 69                           |
| Soft margarine, 1 teaspoon  |                              |              |          |                              |              | 4                        | .6                       | 34                           |
| Non-fat yogurt  |                              |              |          |                              |              | .4                       | .2                       | 98                           |
| Jelly, 1 teaspoon   |                              |              |          |                              |              | trace                    |                          | 16                           |
| Skim milk, 1/2 cup  |                              |              |          | 1-1/2                        |              | trace                    |                          | 43                           |
| <b>LUNCH</b>  |                              |              |          |                              |              |                          |                          |                              |
| *Split pea soup, 1 cup<br>split peas and ham<br>carrots and onions        |                              | 1/2          |          |                              | 1-1/4        | 2                        |                          | 218                          |
| *Quick tuna and sprouts sandwich<br>tuna<br>whole-wheat sandwich roll     | 2                            |              |          |                              | 1-1/2        | 4                        |                          | 202                          |
| Mixed greens salad, 1 cup   |                              | 1            |          |                              |              | trace                    |                          | 9                            |
| Reduced-calorie Italian dressing<br>1 tablespoon                          |                              |              |          |                              |              | 1                        |                          | 16                           |
| *Chocolate mint pie, 1 serving  | 1/2                          |              |          | 1/4                          |              | 6                        |                          | 176                          |
| <b>DINNER</b>   |                              |              |          |                              |              |                          |                          |                              |
| *Savory sirloin, 3 ounces   |                              |              |          |                              | 3            | 5                        |                          | 129                          |
| *Corn and zucchini combo, 1/2 cup   |                              | 1            |          |                              |              | 2                        |                          | 76                           |
| Tomato and lettuce salad, 1 serving<br>Medium tomato, 1 lettuce leaf      |                              | 1            |          |                              |              | trace                    |                          | 27                           |
| Reduced-calorie French dressing<br>1 tablespoon                           |                              |              |          |                              |              | 1                        |                          | 22                           |
| Small whole-wheat roll  | 1                            |              |          |                              |              | 1                        |                          | 72                           |
| Soft margarine, 1 teaspoon  |                              |              |          |                              |              | 4                        |                          | 34                           |
| *Yogurt-strawberry parfait, 1 cup<br>lowfat frozen yogurt<br>strawberries |                              |              | 1        | 1/2                          |              | 2                        |                          | 128                          |
| <b>SNACKS</b>   |                              |              |          |                              |              |                          |                          |                              |
| Graham crackers, 3 squares  | 1                            |              |          |                              |              | 2                        |                          | 81                           |
| Skim milk, 1 cup  |                              |              |          | 1                            |              | trace                    |                          | 85                           |
| <b>TOTAL</b>  | <b>6-1/2</b><br><b>5-1/2</b> | <b>3-1/2</b> | <b>2</b> | <b>2-3/4</b><br><b>3-1/4</b> | <b>5-3/4</b> | <b>36</b><br><b>31.4</b> | <b>8.7</b><br><b>8.1</b> | <b>1,594</b><br><b>1,589</b> |

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\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 6b  
Adding One Additional Dairy Serving  
Food Guide Pyramid Menu Example  
(2,800 calories)

| FOOD GUIDE PYRAMID 2,800 CALORIE MENU, DAY 2*                               |                             |           |       |                           |          |            |                       |                |
|---|-----------------------------|-----------|-------|---------------------------|----------|------------|-----------------------|----------------|
| Item  | Bread                       | Vegetable | Fruit | Milk                      | Meat Oz. | Fat Grams  | Saturated Fat Grams   | Calories       |
| <b>BREAKFAST</b>  |                             |           |       |                           |          |            |                       |                |
| Grapefruit juice, 3/4 cup   |                             |           | 1     |                           |          | trace      |                       | 70             |
| * Breakfast pita, 1 serving<br>4-inch whole wheat pita<br>vegetables<br>egg | 1                           | 1/4       |       |                           | 1/2      | 6          |                       | 171            |
| Large bran muffin   | 1-1/2                       |           |       |                           |          | 7          |                       | 173            |
| Soft margarine, 1 teaspoon  |                             |           |       |                           |          | 4          |                       | 34             |
| 2% fat milk, 1 cup  |                             |           |       | 1                         |          | 5          |                       | 122            |
| <b>LUNCH</b>  |                             |           |       |                           |          |            |                       |                |
| *Turkey pasta salad, 1 serving<br>macaroni<br>red grapes<br>turkey          | 1                           |           | 1/2   |                           | 2        | 6          |                       | 264            |
| Tomato wedges, lettuce leaf   |                             | 1         |       |                           |          | trace      |                       | 27             |
| Small hard roll, 2  | 2                           |           |       |                           |          | 2          |                       | 156            |
| Soft margarine, 2 teaspoons   |                             |           |       |                           |          | 8          |                       | 68             |
| Medium tangerine  |                             |           | 1     |                           |          | trace      |                       | 37             |
| Small oatmeal cookies, 6  | 1-1/2                       |           |       |                           |          | 7          |                       | 164            |
| 2% fat milk, 1 cup  |                             |           |       | 1                         |          | 5          |                       | 122            |
| <b>DINNER</b>   |                             |           |       |                           |          |            |                       |                |
| * Creole fish fillets, 1-1/3 serving<br>cod<br>vegetables                   |                             | 1-1/3     |       |                           | 4        | 2          |                       | 175            |
| Small new potatoes with skin, 2   |                             | 1         |       |                           |          | trace      |                       | 68             |
| Cooked green peas, 3/4 cup<br>with soft margarine, 1 teaspoon               |                             | 1-1/2     |       |                           |          | trace<br>4 |                       | 101<br>34      |
| * Whole-wheat cornmeal muffins, 2   | 4                           |           |       |                           |          | 9          |                       | 259            |
| Soft margarine, 1 teaspoon  |                             |           |       |                           |          | 4          |                       | 34             |
| * Peach crisp, 1/2 cup<br>rolled oats and flour<br>frozen peaches           | 1/2                         |           | 3/4   |                           |          | 4          |                       | 153            |
| <b>SNACKS</b>   |                             |           |       |                           |          |            |                       |                |
| Medium bagel, 1 1/2   | 2-1                         |           |       |                           |          | 1-5        | 1                     | 153-77         |
| Soft margarine, 2 1 teaspoons   |                             |           |       |                           |          | 8-4        | 1-2-6                 | 68-34          |
| Jelly, 2 1 teaspoon   |                             |           |       |                           |          | trace      |                       | 32-16          |
| Small fresh pear  |                             |           | 1     |                           |          | 1          |                       | 82             |
| Low-fat fruit flavored yogurt, 1/2 cup                                      |                             |           |       | 1/2                       |          | 1          |                       | 125            |
| Unsalted, roasted peanuts,<br>2-1/2 tablespoons (1/2 oz.)                   |                             |           |       |                           | 1/2      | 11         |                       | 132            |
| Skim chocolate milk, 1 cup  |                             |           |       | 1                         |          | .2         | .1                    | 139            |
| <b>TOTAL</b>  | <del>13-1/2</del><br>12-1/2 | 5         | 4-1/4 | <del>2-1/2</del><br>3-1/2 | 7        | 95<br>90.5 | <del>23</del><br>22.4 | 2,824<br>2,836 |

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\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 6c  
Adding One Additional Dairy Serving  
Example of Food Guide Pyramid Menu  
(2,800 calories)

| FOOD GUIDE PYRAMID 2,800 CALORIE MENU, DAY 3  |                             |           |       |                           |          |                       |                         |                           |
|---|-----------------------------|-----------|-------|---------------------------|----------|-----------------------|-------------------------|---------------------------|
| Item  | Bread                       | Vegetable | Fruit | Milk                      | Meat Oz. | Fat Grams             | Saturated Fat Grams     | Calories                  |
| <b>BREAKFAST</b>  |                             |           |       |                           |          |                       |                         |                           |
| Medium grapefruit, 1/2  |                             |           | 1     |                           |          | trace                 |                         | 41                        |
| Medium banana   |                             |           | 1     |                           |          | 1                     |                         | 108                       |
| Ready-to-eat cereal flakes, 1 ounce   | 1                           |           |       |                           |          | trace                 |                         | 111                       |
| Toasted raisin english muffin   | 2                           |           |       |                           |          | 1                     |                         | 138                       |
| Soft margarine, 2 teaspoons   |                             |           |       |                           |          | 8                     |                         | 68                        |
| Skim milk, 1 cup  |                             |           |       | 1                         |          | trace                 |                         | 86                        |
| <b>LUNCH</b>  |                             |           |       |                           |          |                       |                         |                           |
| *Taco salad, 1 serving<br>unsalted tortilla chips<br>tomato sauce and greens<br>lowfat, low-sodium cheddar cheese<br>beef and beans | 3/4                         | 1-1/2     |       | 1/2                       | 2-1/2    | 19                    |                         | 455                       |
| Sherbet, 1/2 cup  |                             |           |       |                           |          | 2                     |                         | 135                       |
| Medium gingersnaps, 3   | 1-1/2                       |           |       |                           |          | 3                     |                         | 151                       |
| Skim milk, 1 cup  |                             |           |       | 1                         |          | trace                 |                         | 86                        |
| <b>DINNER</b>   |                             |           |       |                           |          |                       |                         |                           |
| *Pork and vegetable stirfry, 1 serving<br>rice<br>vegetables<br>pork  | 1-1/2                       | 1         |       |                           | 3        | 9                     |                         | 370                       |
| Cooked broccoli, 1 cup  |                             | 2         |       |                           |          | 1                     |                         | 52                        |
| Small white rolls, 2  | 2                           |           |       |                           |          | 3                     |                         | 167                       |
| Soft margarine, 2 teaspoons   |                             |           |       |                           |          | 8                     |                         | 68                        |
| Minted pineapple chunks, juice-pack,<br>1/2 cup   |                             |           | 1     |                           |          | trace                 |                         | 75                        |
| <b>SNACKS</b>   |                             |           |       |                           |          |                       |                         |                           |
| Wheat crackers, 6   | 1                           |           |       |                           |          | 4                     | 1                       | 86                        |
| Skim chocolate milk, 1 cup  |                             |           |       | 1                         |          | 0.2                   | 0.1                     | 139                       |
| Orange juice, 3/4 cup   |                             |           | 1     |                           |          | trace                 |                         | 84                        |
| Cheddar cheese, 1-1/2 oz.   |                             |           |       | 1                         |          | 14                    |                         | 171                       |
| Turkey sandwich<br>rye bread<br>turkey<br>lettuce leaf<br>mayonnaise-type salad dressing,<br>reduced calorie, 1 tablespoon          | 2                           |           |       |                           | 2        | 9                     |                         | 275                       |
| Raw vegetables<br>broccoli florets, 2<br>cauliflower florets, 2<br>medium carrot sticks, 2  |                             | 1         |       |                           |          | trace                 |                         | 16                        |
| Spinach dip (lowfat, yogurt base),<br>2 tablespoons   |                             |           |       |                           |          | 2                     |                         | 40                        |
| <b>TOTAL</b>  | <del>11-3/4</del><br>10-3/4 | 5-1/2     | 4     | <del>3-1/2</del><br>4-1/2 | 7-1/2    | <del>84</del><br>80.2 | <del>28.2</del><br>27.3 | <del>2,783</del><br>2,836 |

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\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 6d

Adding One Additional Dairy Serving Food Guide Pyramid Menu Example (2,800 calories)

| FOOD GUIDE PYRAMID 2,800 CALORIE MENU, DAY 4*  |                             |           |       |                           |          |                       |                       |                           |
|--|-----------------------------|-----------|-------|---------------------------|----------|-----------------------|-----------------------|---------------------------|
| Item   | Bread                       | Vegetable | Fruit | Milk                      | Meat Oz. | Fat Grams             | Saturated Fat Grams   | Calories                  |
| <b>BREAKFAST</b>   |                             |           |       |                           |          |                       |                       |                           |
| Fresh sliced strawberries, 1/2 cup   |                             |           | 1     |                           |          | trace                 |                       | 25                        |
| Hard cooked egg, 1   |                             |           |       |                           | 1        | 5                     |                       | 74                        |
| Whole grain cereal flakes, 1 ounce   | 1                           |           |       |                           |          | trace                 |                       | 99                        |
| Medium toasted plain bagel   | 2                           |           |       |                           |          | 1                     |                       | 149                       |
| Cream cheese, 2 tablespoon   |                             |           |       |                           |          | 10                    |                       | 101                       |
| 2% fat milk, 1 cup   |                             |           |       | 1                         |          | 5                     |                       | 122                       |
| <b>LUNCH</b>   |                             |           |       |                           |          |                       |                       |                           |
| * Broiled chicken fillet sandwich<br>chicken<br>whole-wheat roll<br>tomato slice<br>lettuce leaf | 2                           |           |       |                           | 2        | 9                     |                       | 315                       |
| Mayonnaise, 1 packet   |                             |           |       |                           |          | 8                     |                       | 72                        |
| * Confetti coleslaw, 1/2 cup   |                             | 1         |       |                           |          | trace                 |                       | 36                        |
| Medium fresh orange  |                             |           | 1     |                           |          | trace                 |                       | 62                        |
| * Lemon pound cake, 1 slice  | 3/4                         |           |       |                           |          | 8                     | 5.8                   | 193                       |
| 2% fat milk, 1 cup   |                             |           |       | 1                         |          | 5                     |                       | 122                       |
| <b>DINNER</b>  |                             |           |       |                           |          |                       |                       |                           |
| * Lentil stroganoff, 1 serving<br>noodles<br>lentils<br>vegetables, cut<br>yogurt                | 1-1/2                       | 1-1/4     |       | 1/4                       | 2        | 5                     |                       | 520                       |
| Cooked whole green beans, 1 cup<br>with soft margarine, 1 teaspoon                               |                             | 2         |       |                           |          | trace<br>4            |                       | 43<br>34                  |
| Tomato and cucumber salad<br>Tomato, cucumber, lettuce leaf                                      | 1                           |           |       |                           |          | trace                 |                       | 17                        |
| Reduced-calorie vinaigrette dressing,<br>1 tablespoon  |                             |           |       |                           |          | 1                     |                       | 16                        |
| Small pumpernickel rolls, 2  | 2                           |           |       |                           |          | 2                     |                       | 155                       |
| Soft margarine, 2 teaspoons  |                             |           |       |                           |          | 8                     |                       | 68                        |
| Medium honeydew melon, 1/4   |                             |           | 2     |                           |          | trace                 |                       | 88                        |
| Skim chocolate milk, 1 cup   |                             |           |       | 1                         |          | .2                    | .1                    | 139                       |
| <b>SNACKS</b>  |                             |           |       |                           |          |                       |                       |                           |
| No-salt added vegetable juice, 3/4 cup   |                             | 1         |       |                           |          | trace                 |                       | 34                        |
| * Roast beef sandwich<br>roast beef<br>whole-wheat bread<br>lettuce leaf<br>mustard, 1 teaspoon  | 2                           |           |       |                           | 2        | 5                     |                       | 227                       |
| 2% fat milk, 1 cup   |                             |           |       | 1                         |          | 5                     |                       | 122                       |
| Lemonade, 1 cup  |                             |           |       |                           |          | trace                 |                       | 100                       |
| <b>TOTAL</b>   | <del>11-1/4</del><br>10-1/2 | 6-1/4     | 4     | <del>3-1/4</del><br>4-1/4 | 7        | <del>91</del><br>73.2 | <del>28</del><br>22.3 | <del>2,794</del><br>2,740 |

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\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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Table 6e  
 Adding One Additional Dairy Serving Food Guide Pyramid Menu Example  
 (2,800 calories)

| FOOD GUIDE PYRAMID 2,800 CALORIE MENU, DAY 5*   |                        |           |       |                           |          |                       |                       |                           |
|---|------------------------|-----------|-------|---------------------------|----------|-----------------------|-----------------------|---------------------------|
| Item  | Bread                  | Vegetable | Fruit | Milk                      | Meat Oz. | Fat Grams             | Saturated Fat Grams   | Calories                  |
| <b>BREAKFAST</b>  |                        |           |       |                           |          |                       |                       |                           |
| Medium cantaloupe, 1/4  |                        |           | 1     |                           |          | trace                 |                       | 48                        |
| * Whole-wheat pancakes, 3   | 3                      |           |       |                           |          | 6                     |                       | 257                       |
| * Blueberry sauce, 6 tablespoons  |                        |           | 1/2   |                           |          | trace                 |                       | 50                        |
| Soft margarine, 2 teaspoon  |                        |           |       |                           |          | 8                     |                       | 68                        |
| Turkey patty, 1 serving   |                        |           |       |                           | 1-1/2    | 6                     |                       | 123                       |
| 2% fat milk, 1 cup  |                        |           |       | 1                         |          | 5                     |                       | 122                       |
| <b>LUNCH</b>  |                        |           |       |                           |          |                       |                       |                           |
| * Chili-stuffed baked potato<br>medium potato<br>tomato sauce<br>beef and beans             |                        | 1<br>1/2  |       |                           |          | 9                     |                       | 397                       |
| Low-fat, low-sodium cheddar cheese<br>3 tablespoons   |                        |           |       | 1/3                       |          | 1                     |                       | 36                        |
| * Spinach-orange salad, 1 cup<br>spinach<br>chopped vegetables<br>orange sections and juice |                        | 1<br>1/2  | 1/2   |                           |          | 7                     |                       | 108                       |
| Wheat crackers, 6   | 1                      |           |       |                           |          | 4                     |                       | 86                        |
| Fig bars, 2   | 1                      |           |       |                           |          | 2                     |                       | 115                       |
| 2% fat milk, 1 cup  |                        |           |       | 1                         |          | 5                     | .1                    | 122                       |
| <b>DINNER</b>   |                        |           |       |                           |          |                       |                       |                           |
| * Apricot-glazed chicken, 1 serving<br>chicken<br>apricots, raisins, and orange juice       |                        |           | 1/2   |                           | 3        | 2                     |                       | 212                       |
| *Rice-pasta pilaf, 3/4 cup  | 1-1/2                  | 1/4       |       |                           |          | 5                     |                       | 203                       |
| Tossed salad, 1 cup   |                        | 1         |       |                           |          | trace                 |                       | 13                        |
| Reduced-calorie Italian dressing,<br>1 tablespoon   |                        |           |       |                           |          | 1                     |                       | 16                        |
| Small hard roll, 2  | 2                      |           |       |                           |          | 2                     |                       | 156                       |
| Soft margarine, 2 teaspoons   |                        |           |       |                           |          | 8                     |                       | 68                        |
| Vanilla ice milk, 1/2 cup   |                        |           |       | 1/3                       |          | 3                     |                       | 91                        |
| <b>SNACKS</b>   |                        |           |       |                           |          |                       |                       |                           |
| Remove → Large soft pretzel   | 2-1/2                  |           |       |                           |          | 2                     | 0.4                   | 190                       |
| Medium apple, 1/2   |                        |           | 1/2   |                           |          | trace                 |                       | 41                        |
| Lemonade, 1 cup   |                        |           |       |                           |          | trace                 |                       | 100                       |
| 2% fat milk, 1 cup  |                        |           |       | 1                         |          | 5                     |                       | 122                       |
| Add → Non-fat yogurt, 1 cup   |                        |           |       | 1                         |          | .2                    | .1                    | 98                        |
| <b>TOTAL</b>  | <del>11</del><br>8-1/2 | 5-1/4     | 4     | <del>3-2/3</del><br>4-2/3 | 7        | <del>87</del><br>85.2 | <del>27</del><br>26.7 | <del>2,860</del><br>2,755 |

\*From: Using the Food Guide Pyramid: A Resource for Nutrition Educators. U.S. Department of Agriculture: Food, Nutrition, and Consumer Services, Center for Nutrition Policy and Promotion.

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TABLE 7.

IMPACT OF MEETING FOOD GUIDE PYRAMID DAIRY RECOMMENDATION ON CALCIUM INTAKE -  
CSFII 1994-96, 1998

|                                    | Total for<br>Age Group | FGP Dairy Recommendations <sup>1</sup> |             | Percentage<br>Meeting FGP<br>Dairy<br>Recommendation |
|------------------------------------|------------------------|--|-------------|--|
|                                    |                        | Met                                    | Not Met     |  |
| <b>CHILDREN 2-8 YEARS</b>          |                        |  |             |  |
| Calcium, mg/day <sup>2</sup>       | 849.9 (8.4)            | 1144.3 (7.3)                           | 607.3 (4.3) |  |
| Calcium, % meeting AI              | 80.8                   | 97.4                                   | 30.8        |  |
| Number of subjects                 | 3574                   | 2928                                   | 3646        | 44.5   |
| Dairy consumption,<br>servings/day | 2.00 (0.02)            | 2.95 (0.02)                            | 1.22 (0.01) |  |
| <b>CHILDREN 9-18 YEARS</b>         |                        |  |             |  |
| Calcium, mg/day                    | 934.7 (13.5)           | 1665.1 (28.0)                          | 748.1 (8.5) |  |
| Calcium, % meeting AI              | 18.4                   | 79.1                                   | 2.9         |  |
| Number of subjects                 | 2031                   | 989                                    | 1642        | 19.2   |
| Dairy consumption,<br>servings/day | 2.01 (0.04)            | 4.19 (0.08)                            | 1.45 (0.02) |  |
| <b>ADULTS 19-50 YEARS</b>          |                        |  |             |  |
| Calcium, mg/day                    | 737.3 (12.8)           | 1420.2 (38.4)                          | 596.4 (5.0) |  |
| Calcium, % meeting AI              | 23.8                   | 83.1                                   | 3.0         |  |
| Number of subjects                 | 4913                   | 1124                                   | 3789        | 22.9   |
| Dairy consumption,<br>servings/day | 1.41 (0.03)            | 3.20 (0.06)                            | 0.87 (0.01) |  |
| <b>ADULTS 51+ YEARS</b>            |                        |  |             |  |
| Calcium, mg/day                    | 874.0 (6.0)            | 1566.9 (28.1)                          | 627.9 (5.1) |  |
| Calcium, % meeting AI              | 8.0                    | 90.9                                   | 3.7         |  |
| Number of subjects                 | 2442                   | 235                                    | 4207        | 5.3  |
| Dairy consumption,<br>servings/day | 1.16 (0.01)            | 3.87 (0.07)                            | 1.02 (0.01) |  |

<sup>1</sup> Food Guide Pyramid recommends 2 servings of dairy products per day for those 8 years and younger, 3 servings/day for those 9-18 years, 2 servings/day for those 19-50 years and 3 servings/day for those greater than 50 years

<sup>2</sup> Mean (SEM)

TABLE 8. IMPACT OF VARIOUS LEVELS OF DAIRY CONSUMPTION ON CALCIUM INTAKE -- CSFII 1994-96, 1998

NUMBER OF DAIRY SERVINGS CONSUMED PER DAY

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> 1      1 to 1.5      1.5 to 2.5      2.5 to 3.5      3.5 to 4.5      > 4.5

|  | CHILDREN 2-8 YEARS  |             |             |               |               |                |
|--|---------------------|-------------|-------------|---------------|---------------|----------------|
| Calcium, mg/day <sup>1</sup>                 | 415.3 (5.8)         | 617.8 (4.5) | 835.4 (6.9) | 1139.1 (6.2)  | 1466.3 (10.0) | 1932.4 (43.5)  |
| Calcium, % meeting AI                        | 6.2                 | 29.2        | 72.1        | 100.0         | 100.0         | 100.0          |
| Number of subjects                           | 1118                | 1244        | 2386        | 1228          | 429           | 169            |
| Dairy consumption, servings/day <sup>1</sup> | 0.59 (0.01)         | 1.26 (0.01) | 1.96 (0.01) | 2.93 (0.01)   | 3.92 (0.02)   | 5.47 (0.12)    |
|  | CHILDREN 9-18 YEARS |             |             |               |               |                |
| Calcium, mg/day (SEM)                        | 436.5 (7.9)         | 630.4 (7.8) | 915.1 (7.9) | 1261.1 (11.9) | 1539.7 (17.5) | 2227.4 (50.1)  |
| Calcium, % meeting AI                        | 0.9                 | 0.0         | 1.9         | 33.5          | 83.0          | 100.0          |
| Number of subjects                           | 495                 | 363         | 691         | 349           | 133           | 109            |
| Dairy consumption, servings/day              | 0.32 (0.01)         | 1.25 (0.01) | 1.36 (0.01) | 2.36 (0.02)   | 3.92 (0.03)   | 5.86 (0.14)    |
|  | ADULTS 19-50 YEARS  |             |             |               |               |                |
| Calcium, mg/day (SEM)                        | 458.2 (4.7)         | 727 (6.5)   | 964.8 (6.8) | 1323.3 (12.8) | 1679.5 (25.6) | 2369.2 (164.6) |
| Calcium, % meeting AI                        | 0.4                 | 5.7         | 39.1        | 95.4          | 100.0         | 100.0          |
| Number of subjects                           | 2287                | 905         | 1025        | 417           | 165           | 114            |
| Dairy consumption, servings/day              | 0.48 (0.01)         | 1.23 (0.01) | 1.93 (0.01) | 2.94 (0.02)   | 3.97 (0.03)   | 6.17 (0.15)    |
|  | ADULTS 51+ YEARS    |             |             |               |               |                |
| Calcium, mg/day (SEM)                        | 439.8 (4.1)         | 698.9 (6.1) | 929.3 (6.8) | 1241.3 (13.4) | 1593.4 (24.9) | 2100.7 (70.6)  |
| Calcium, % meeting AI                        | 0.3                 | 1.3         | 7.0         | 53.0          | 100.0         | 100.0          |
| Number of subjects                           | 2310                | 837         | 884         | 271           | 37            | 43             |
| Dairy consumption, servings/day              | 0.46 (0.01)         | 1.23 (0.01) | 1.92 (0.02) | 2.89 (0.02)   | 3.89 (0.03)   | 5.60 (0.21)    |

<sup>1</sup>Mean (SEM)

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TABLE 9. IMPACT OF VARIOUS LEVELS OF DAIRY CONSUMPTION ON CALCIUM INTAKE -- NHANES 1999-2000

|                                 | NUMBER OF DAIRY SERVINGS CONSUMED PER DAY |              |              |               |               |
|---------------------------------|---|--------------|--------------|---------------|---------------|
|                                 | < 1                                       | 1 to 1.5     | 1.5 to 2.5   | 2.5 to 3.5    | 3.5 to 4.5    |
| <b>CHILDREN 2-8 YEARS</b>       |   |              |              |               |               |
| Calcium, mg/day <sup>1</sup>    | 408.8 (14.9)                              | 610.2 (11.1) | 871.7 (10.8) | 1121.7 (24.3) | 1401.2 (22.0) |
| Calcium, % meeting AI           | 6.7                                       | 24.8         | 68.3         | 99.1          | 100.0         |
| Number of subjects              | 285                                       | 181          | 327          | 180           | 96            |
| Dairy consumption, servings/day | 0.48 (0.03)                               | 1.23 (0.01)  | 1.94 (0.02)  | 2.56 (0.03)   | 3.90 (0.03)   |
| Calcium, mg/day                 | 382.3 (10.0)                              | 652 (13.0)   | 900.7 (13.8) | 1225.5 (16.3) | 1517.1 (21.7) |
| Calcium, % meeting AI           | 0.6                                       | 0.6          | 5.0          | 35.6          | 85.9          |
| Number of subjects              | 839                                       | 399          | 514          | 349           | 163           |
| Dairy consumption, servings/day | 0.40 (0.02)                               | 1.22 (0.01)  | 1.97 (0.02)  | 2.95 (0.03)   | 3.97 (0.04)   |
| Calcium, mg/day                 | 423.4 (8.0)                               | 728.1 (15.6) | 955.8 (13.5) | 1308.4 (20.3) | 1604.2 (40.0) |
| Calcium, % meeting AI           | 2.0                                       | 11.2         | 35.6         | 93.2          | 95.3          |
| Number of subjects              | 1036                                      | 361          | 454          | 269           | 141           |
| Dairy consumption, servings/day | 0.38 (0.01)                               | 1.23 (0.01)  | 1.94 (0.02)  | 2.98 (0.02)   | 3.99 (0.03)   |
| Calcium, mg/day                 | 422.4 (9.3)                               | 694.2 (13.4) | 910.6 (13.9) | 1217.1 (21.5) | 1421.8 (37.3) |
| Calcium, % meeting AI           | 0.6                                       | 1.8          | 8.5          | 53.2          | 65.3          |
| Number of subjects              | 986                                       | 365          | 368          | 179           | 62            |
| Dairy consumption, servings/day | 0.36 (0.01)                               | 1.24 (0.01)  | 1.92 (0.02)  | 2.98 (0.03)   | 3.87 (0.04)   |

<sup>1</sup>Mean (SEM)

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TABLE 10.

**Composite Calcium Content of  
Marketplace Dairy Products**

| Marketplace Servings     | Calcium<br>mg/serving |
|--------------------------|-----------------------|
| Milk, 1 cup              | 300                   |
| Yogurt, 8 oz             | 300                   |
| Yogurt, 6 oz             | 200                   |
| Cheese, natural - 1 oz   | 200                   |
| Cheese, proc. - 3/4 oz   | 129                   |
| Composite <sup>1,2</sup> | 247                   |

Note: From USDA ERS, US consumption of dairy products is 44.4% from milk, 34.7% from cheese and 20.8% from other dairy products including yogurt

<sup>1</sup>Assumes 55% yogurt consumption is 8 ozs and 45% of yogurt consumption is 6 oz; assumes cheese consumption split 62.3 % natural cheese

<sup>2</sup>For children 2-6 the composite is 170 mg/serving, which represents 1/3 servings except milk

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TABLE 11.  
Calcium Provided by Food Guide Pyramid Patterns with Marketplace Based Dairy Servings<sup>1</sup>  
Percentage of DRI

| Ages        | Calcium DRI, mg/d | Mean Calories/d <sup>2</sup> | Percent Pattern A <sup>3</sup> | Child     |           |           |           |           |           |           |           |           |
|-------------|-------------------|------------------------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|             |                   |                              |                                | 2-6 years |           | Pattern A |           | Pattern B |           | Pattern C |           |           |
|             |                   |                              |                                | (2 dairy) | (3 dairy) | (4 dairy) | (2 dairy) | (3 dairy) | (4 dairy) | (2 dairy) | (3 dairy) | (4 dairy) |
| 1-3 years   | 500               | 1548                         | 77.0                           |           |           |           |           |           |           |           |           |           |
| 4-8 years   | 800               | 1845                         | 59.7                           | 98        | 129       | 159       | 116       | 147       | 178       | 129       | 160       | 191       |
| 9-13 years  | 1300              | 2107                         | 47.8                           | 60        | 79        | 98        | 72        | 91        | 110       | 80        | 99        | 118       |
| Females     |                   |                              |                                |           |           |           |           |           |           |           |           |           |
| 14-18 years | 1300              | 1958                         | 50.8                           | 60        | 79        | 98        | 72        | 91        | 110       | 80        | 99        | 118       |
| 19-30 years | 1000              | 2040                         | 51.2                           | 78        | 103       | 128       | 93        | 118       | 143       | 104       | 128       | 153       |
| 31-50 years | 1000              | 1939                         | 54.5                           | 78        | 103       | 128       | 93        | 118       | 143       | 104       | 128       | 153       |
| 51-70 years | 1200              | 1697                         | 68.5                           | 65        | 86        | 106       | 78        | 98        | 119       | 86        | 107       | 127       |
| >70 years   | 1200              | 1440                         | 80.6                           | 65        | 86        | 106       | 78        | 98        | 119       | 86        | 107       | 127       |
| Males       |                   |                              |                                |           |           |           |           |           |           |           |           |           |
| 14-18 years | 1300              | 2806                         | 24.6                           |           |           |           | 72        | 91        | 110       | 80        | 99        | 118       |
| 19-30 years | 1000              | 2867                         | 22.8                           |           |           |           | 93        | 118       | 143       | 104       | 128       | 153       |
| 31-50 years | 1000              | 2713                         | 22.9                           |           |           |           | 93        | 118       | 143       | 104       | 128       | 153       |
| 51-70 years | 1200              | 2354                         | 33.0                           | 65        | 86        | 106       | 78        | 98        | 119       | 86        | 107       | 127       |
| >70 years   | 1200              | 1930                         | 50.3                           | 65        | 86        | 106       | 78        | 98        | 119       | 86        | 107       | 127       |

<sup>1</sup> 72% of calcium comes from dairy sources; 32% from milk, 25% from cheese and 15% from other dairy products including yogurt (ERS, 1999). Non-dairy calcium intake calculated from food patterns and calcium composites from Shaw, et al., 2000 -- Pattern A: 287 mg/d; Pattern B : 437 mg/day and Pattern C: 541 mg/d. Marketplace dairy serving composite was 256 mg/d.

<sup>2</sup> Calories from NHANES IV.

<sup>3</sup> Pattern A defined as less than 1900 kcal/day in NHANES IV; the midpoint between Pattern A and B.

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TABLE 12.  
Calcium Provided by Non-dairy plus Marketplace Based Dairy Servings<sup>1</sup>

| Ages           | Calcium DRI | Non-Dairy Calcium,  | Percentage of DRI             |           |
|----------------|-------------|---------------------|-------------------------------|-----------|
|                | mg/day      | mg/day <sup>2</sup> | (2 dairy) (3 dairy) (4 dairy) | (4 dairy) |
| <b>Females</b> |             |                     |                               |           |
| 1-3 years      | 500         | 191.6               | 106                           | 140       |
| 4-8 years      | 800         | 226.3               | 90                            | 121       |
| 9-13 years     | 1300        | 273.5               | <b>59</b>                     | <b>78</b> |
| 14-18 years    | 1300        | 273.9               | <b>59</b>                     | <b>78</b> |
| 19-30 years    | 1000        | 296.2               | <b>79</b>                     | 104       |
| 31-50 years    | 1000        | 312.5               | <b>81</b>                     | 105       |
| 51-70 years    | 1200        | 283.5               | <b>65</b>                     | <b>85</b> |
| >70 years      | 1200        | 238.7               | <b>61</b>                     | <b>82</b> |
| <b>Males</b>   |             |                     |                               |           |
| 1-3 years      | 500         | 216.7               | 111                           | 145       |
| 4-8 years      | 800         | 286.1               | <b>98</b>                     | 128       |
| 9-13 years     | 1300        | 283.6               | <b>60</b>                     | <b>79</b> |
| 14-18 years    | 1300        | 381.9               | <b>67</b>                     | <b>86</b> |
| 19-30 years    | 1000        | 404.7               | <b>90</b>                     | 115       |
| 31-50 years    | 1000        | 423.5               | <b>92</b>                     | 116       |
| 51-70 years    | 1200        | 377.2               | <b>73</b>                     | <b>93</b> |
| >70 years      | 1200        | 312.3               | <b>67</b>                     | <b>88</b> |

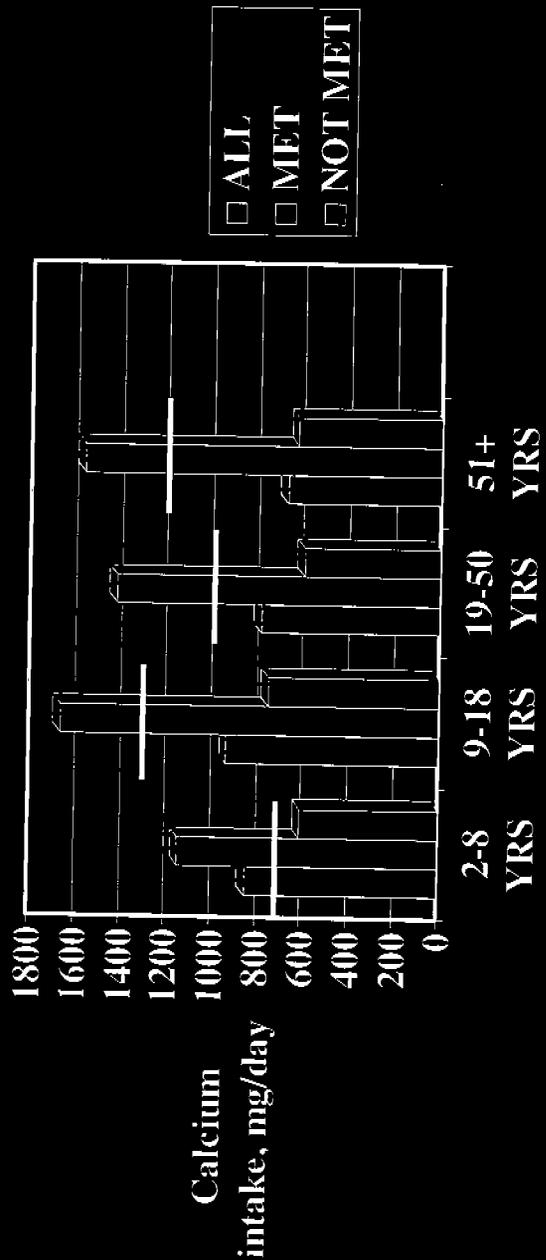
<sup>1</sup>Marketplace dairy serving defined as 256 mg/serving.

<sup>2</sup>Non-dairy calcium intake calculated from NHANES IV.

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FIGURE 1.

# CALCIUM INTAKE OVERALL AND BASED ON MEETING FGP RECOMMENDATIONS

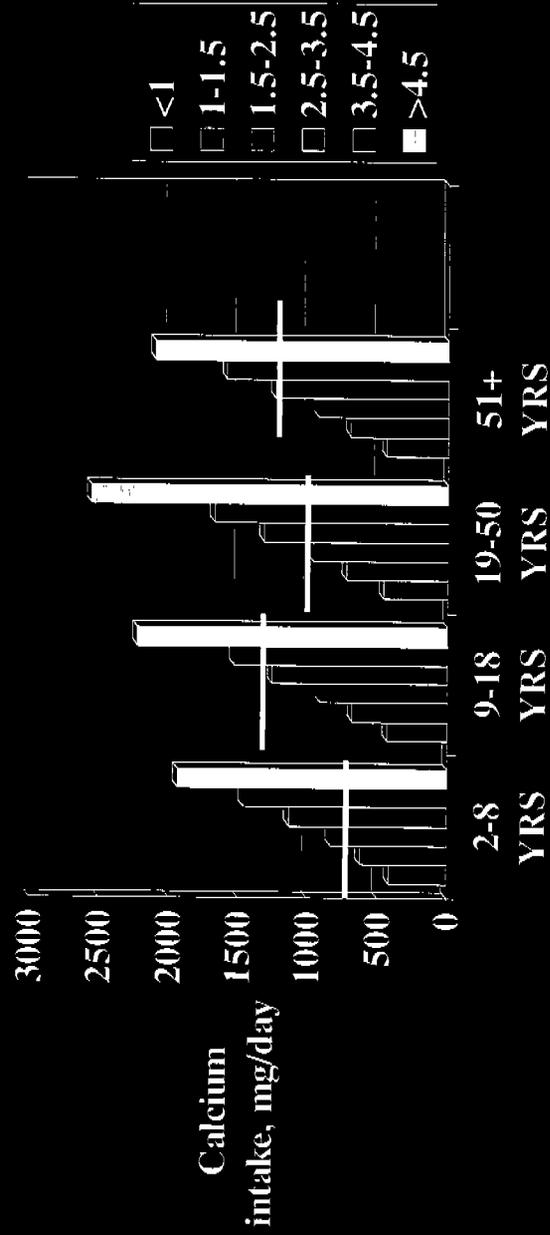


— Calcium AI for respective age group  
Data: CSFII, 1994-96, 1998

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FIGURE 2.

# CALCIUM INTAKE BASED ON NUMBER OF DAIRY SERVINGS



— Calcium AI for respective age group

Data: CSFII, 1994-96, 1998

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## PRODUCE FOR BETTER HEALTH FOUNDATION

October 24, 2003

Dr. Eric Hentges  
Director, Center for Nutrition Policy and Promotion  
Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

**Subject: PBH Comments in response to Federal Register 53536, Vol. 68, No. 176**

To Dr. Hentges:

Produce for Better Health Foundation (PBH) commends USDA's Center for Nutrition Policy and Promotion's (CNPP's) Food Guide Pyramid Reassessment Team for their important work on the reassessment of the Food Guide Pyramid (FGP). We recognize the difficult task of adhering to the science while providing a tool that helps consumers make healthy food and beverage choices. PBH urges CNPP to continue to base the food guidance on sound science. We also strongly supports the need for the food guidance to convey important messages, including the need to consume a variety of fruits and vegetables, in an easy-to-understand format familiar to consumers.

PBH urges CNPP to consider the following areas relating to fruit and vegetable consumption as you deliberate the reassessment of the FGP.

**Quantity:** Fruit and vegetable servings should not go below 5 servings for any of the suggested calorie levels.

- Based on CSFII data (1994-1996), the average American eats 1.5 servings of fruits and 3.3 servings of vegetables per day (this includes french fries); french fries make up 17% of vegetable servings for adults 20 and older and 32% for children 2 to 19 years old. Without processed potatoes, Americans are only consuming 4.2 servings of fruits and vegetables daily – significantly less than the 5 to 9 servings currently recommended.
- According to BRFSS data for the year 2000, more than 75% of U.S. residents failed to meet the minimum recommendation of 5 daily servings of fruits and vegetables.
- The 5 A Day for Better Health Program continues to be one of the best examples of a program that is well recognized by many Americans and has been successful in establishing 5 as a minimum number of servings.



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The 5 A Day message must be maintained and strengthened in order for retailers, the fruit and vegetable industry, public health professionals, and many others to help consumers eat more fruits and vegetables.

- Thanks to important discoveries about the pivotal role played by fruits and vegetables in maintaining health, most public health officials now recognize that a diet rich in fruits and vegetables and limited in fat, saturated fat, sodium, and added sugars can greatly reduce the risk of many major chronic diseases, including cancer, coronary heart disease, and diabetes.

**Variety:** Food guidance must be strengthened to communicate the need for Americans to consume a wider variety of colorful fruits and vegetables.

- Year 2000 data from the Economic Research Service (ERS) found that only 3 vegetables (potatoes, iceberg lettuce, and canned tomatoes) accounted for almost half (48%) of vegetable consumption in the U.S. and only 3 fruits (oranges, apples, and bananas) contributed one half of the daily fruit servings.
- Supporting the variety message is critical for fruits and vegetables because each fruit and vegetable has a unique set of health-promoting nutrients that contribute to a healthy diet.
- NPD Group's recent two-week study of the eating habits in 2,000 American households found that people tend to eat a fairly limited variety of fruits and vegetables within each color group. This reduces the likelihood of obtaining a wide variety of essential and beneficial nutrients needed to promote health and protect against chronic disease (State of the Plate: Study on America's Consumption of Fruits and Vegetables, Produce for Better Health Foundation, 2003, attached).
- The Food and Agriculture Organization (FAO) recognizes the need for increased consumption of fruits and vegetables for health promotion and has made it a global priority. PBH urges CNPP to access the new section on FAO's website promoting fruit & vegetable consumption at <http://www.fao.org/english/newsroom/focus/2003/fruitveg1.htm>.

**Quality:** Food guidance should be strengthened to convey to consumers that most foods in each food grouping should be consumed in their lowest fat forms with minimal fat, sugar and sodium added.

- While this concept forms the basis for the FGP analysis, it is not communicated effectively via the graphic or supporting documents, making it easy for consumers to eat more calories than intended.
- Low-fat, low-sugar, and low-sodium choices should be emphasized in whatever graphic is chosen for the revised food guidance graphic.

**Promotion:** PBH urges USDA to make a stronger commitment to fund, monitor, and evaluate the promotion of the Food Guide Pyramid or whatever food guidance results from this reassessment.

- Regardless of the amount of effort and resources that are put into developing an updated Food Guide Pyramid or other food guidance tool, consumer behavior will not change unless USDA and others put forth more funding to promote and evaluate

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such food guidance advice. USDA must also put forth more effort to promote the fruit and vegetable message. A recent General Accounting Office Report confirmed the gap between funding of federal nutrition education interventions and efforts and federal guidelines on the consumption of fruits and vegetables. (Fruits and Vegetables: Enhanced Efforts to Increase Consumption Could Yield Health Benefits for Americans, GAO 2003; and PBH Foundation: The Fruit and Vegetable Consumption Challenge, Wilmington, DE, 2002.)

The comments below reflect PBH's recommendations in the areas outlined in the Federal Register Notice dated September 11, 2003 on the Food Guide Pyramid.

**1. Appropriateness of using sedentary, reference-sized individuals in assigning target calorie levels (Table 2) for assessing the nutritional adequacy and moderation of each food intake pattern.**

*PBH does not support the use of calorie levels based on sedentary lifestyles. We recommend that the food patterns be based on low-active lifestyles to make a stronger appeal for individuals to be physically active.*

As currently drafted, the calorie levels for the food patterns are for sedentary individuals in each age/gender group. Therefore there is no incentive for individuals to be active, nor does this depiction of the food patterns stress the importance of exercise. The result may actually serve as a disincentive for being physically active. PBH recommends that physical activity be an integral part of the revised food guidelines.

PBH suggests that the term "low active" be changed to "moderate" activity. "Low Active" is defined in CNPP's Table 2 Notes as the physical activity equivalent to walking 1.5 to 3 miles per day at 3 to 4 miles per hour. This translates into 22-1/2 to 60 minutes of walking every day, an amount that exceeds that of the average person. According to a survey by the National Center for Health Statistics, nearly 40 percent of Americans confessed that they never exercise and just 3 out of 10 people claimed to be engaged in regular physical activity. Regular activity for most people translates into 5 days a week, not daily.

Calorie levels should be promoted on the basis of moderately active, healthy people with some type of message that communicates to consumers that a reduction in activity is likely to cause weight gain.

*PBH supports the use of 12 calorie levels because this allows greater flexibility and specificity for individuals than the three levels used in the existing Food Guide Pyramid.*

Relatively small amounts of calories, eaten consistently over energy needs, may lead to substantial weight gain. Giving consumers a sense of caloric needs indexed to activity is an important step. It removes calories from the "diet/cure" concept, and moves it into the "health/prevention" arena.

PBH recognizes the challenge of communicating the varying calorie levels to consumers but feels this concept is an important one to convey. One suggestion to help reduce consumer confusion is to develop separate food guidance guidelines for

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certain age groups, such as one for children 2 to 6 years of age, 6 to 12, teens, adults, seniors, etc. (See question #5 for more details on this.)

## **2. Appropriateness of the selection of nutritional goals for the daily food intake patterns.**

### 5 Servings of Fruits and Vegetables a Day is the Minimum

*PBH does not support any dietary pattern that promotes less than 5 servings a day of fruits and vegetables.*

PBH is concerned about the number of fruits and vegetables servings suggested for the 1,000, 1200 and 1400 calorie levels and recommends that at least 5 servings should be proposed. This recommendation is based on a number of critical factors:

- The 5 A Day for Better health message is a widely recognized and easy to understand message that has broad-based support from many audiences, including government agencies and officials, the fruit and vegetable industry, and public health experts. In May of 2002, HHS, three mission areas of USDA, and the National Cancer Institute signed a Memorandum Of Understanding outlining their commitment to work together as part of the National 5 A Day Partnership to help Americans meet the recommendations to eat 5 or more daily servings of fruits and vegetables.

Any effort – such as that currently proposed by CNPP – to undermine the 5 A Day message will compromise the hard work and efforts of government agencies, public health organizations and individuals, and the fruit and vegetable industries that have dedicated many resources to promoting the 5 A Day message.

- The current Food Guide Pyramid for Young Children, developed by CNPP, specifies that children 4 to 6 years old need a minimum of 3 servings of vegetables and 2 servings of fruit each day, for a total of 5 servings a day. While we recognize that the serving sizes are smaller, the importance of the 5 A Day message is maintained and should also be maintained in any revision to the Food Guide Pyramid that CNPP undertakes.
- The nutritional goal for total fiber, as currently outlined in the Federal Register notice, falls short of the Institute of Medicine recommendations for the 1000, 1200, and 1400 calorie level. Increasing the servings of fruits and vegetables in those calorie levels to a minimum of 5 servings a day will solve this discrepancy and bring the total fiber to recommended IOM levels. (See information below.)
- Increased consumption of fruits and vegetables is particularly important for those who are limiting their food intake to control weight. Therefore, CNPP should not automatically reduce the servings of fruits and vegetables in the lower calorie ranges (1000, 1200, and 1400 calories). Because vegetables and fruits have a low energy density, it is important to include the highest number of servings of vegetables and fruit possible so that individuals can feel full without extra

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calories. A growing body of evidence indicates that substituting fruits and vegetables for fats and starches can help provide satiety with fewer calories. Further, advice to increase fruit and vegetable intake while at the same time restricting energy intake may assist consumers with the difficult task of weight management. (The Supersizing of America: Portion Size and the Obesity Epidemic, Barbara Rolls, Nutrition Today, 38(2): 42-53, 2003; attached.)

Servings per Calorie Level

Using 5 servings as a minimum, 2-1/2 servings of fruits and vegetables would need to be added to the 1000 calorie level (1/2 serving of fruit and 2 servings of vegetables), 1-1/2 servings to the 1200 calorie level (1/2 serving of fruit and 1 serving of vegetable), and 1 serving to the 1400 calorie level (1 serving of vegetable). See proposed Table A below. These additional servings of fruits and vegetables should replace at least a portion of the additional fats and added sugars listed in CNPP's Table 1. Due to the need for nutrient-dense foods in these growing stages of the life cycle, additional fruits and vegetables should take priority over the use of nutrient-poor calorie sources of added fat and sugar (48 to 60 grams added to the 1000 calorie and 1200/1400 calorie diets, respectively). Additionally, many adults may be on calorie-restricted diets providing only 1200 to 1400 calories a day; in which case it is even more critical that the added nutrients, fiber, and phytochemicals provided by additional servings of fruits and vegetables be included in those calorie levels.

| TABLE                    |           | 1000 calories | 1200 calories | 1400 calories |
|--------------------------|-----------|---------------|---------------|---------------|
| Current recommendation   | Fruit     | 1.5 svg       | 1.5 svg       | 2 svg         |
| Current recommendation   | Vegetable | 1 svg         | 2 svg         | 2 svg         |
|                          | Totals    | 2.5 svg       | 3.5 svg       | 4 svg         |
| Suggested recommendation | Fruit     | 2 svg         | 2 svg         | 2 svg         |
| Suggested recommendation | Vegetable | 3 svg         | 3 svg         | 3 svg         |
|                          | Totals    | 5 svg         | 5 svg         | 5 svg         |

Nutritional goal for total fiber

CNPP's Table 3 that lists the total fiber goals for each food pattern (calorie level) seems appropriate, based on the Institute of Medicine (IOM) goal of 14 grams total fiber per 1,000 calories.

Total Fiber for each of the food patterns is missing from CNPP's Table 5 that gives the nutrient composition of each of the proposed food intake patterns.

Checking the dietary patterns for 1000, 1200 and 1400 calories shows that these food patterns do not appear to meet the total fiber recommendations listed in CNPP's Table 3. This evaluation was done by multiplying the grams of dietary fiber listed in Table 4

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for each of the food groups and subgroups by the number of standard servings of each of those food groups found in CNPP's Table 1. (See Appendix A: Fiber Analysis).

- For example, at the 1000 calorie food intake pattern, the total fiber recommended amount is 14 grams (Table 3). The calculated total dietary fiber amount is 9.88 grams. According to the notes in the Federal Register, 2.5 grams should be added to the 9.88 grams of dietary fiber to estimate total fiber, or 12.38 grams. This does not meet the 14 grams that are recommended. Increasing the servings of fruits and vegetables at the 1000, 1200 and 1400 calorie levels to 2 servings of fruits and 3 servings of vegetables a day will make up the needed fiber to meet the current IOM recommendations. The Table PBH provided above is a way to increase fiber in the lower calorie levels.

#### More Emphasis on Variety

*PBH recommends that more emphasis be placed on getting consumers to eat a greater variety of fruits and vegetables within these two food groups. We recommend color as an effective mnemonic for helping consumers think variety. PBH's 5 A Day The Color Way campaign resonates well with adults and children, and is widely supported by the fruit and vegetable industry.*

- As noted earlier, USDA's ERS reports showed that only 3 vegetables (potatoes, iceberg lettuce, and canned tomatoes) and 3 fruits (oranges, apples, and bananas) accounted for about half (48%) of all vegetable and fruit consumption in the US in 2000.
- USDA's CNPP documented that due to poor choices, most children have diets that 'need improvement' or are frankly 'poor', particularly in fruits and vegetables, as judged by the Healthy Eating Index (HEI) (Carlson et al, 2001).

#### More Emphasis on Quality

*PBH urges CNPP to place more emphasis on the need for consumers to choose foods and beverages in their lowest fat/sugar/sodium form. The current FGP does not convey this important concept effectively.*

PBH is pleased that the proposed revisions include recommended daily intake amounts of monounsaturated fat. The revised Food Guide Pyramid and daily intake food patterns need to further distinguish between saturated fats and trans fats vs. heart-healthy monounsaturated fats. Today's nutrition science reveals three simple steps that consumers can take toward improved cardiovascular health: replacing most saturated and *trans* fats with unsaturated fats, increasing omega-3 fatty acid intake, and consuming a diet rich in fruits and vegetables.

Given that the Food Guide Pyramid analysis is based on food and beverages with minimal fat, sugar and sodium, it is important that this concept be better communicated to consumers and that CNPP provide more accurate information and guidance on foods and beverages to select within the food groupings.

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**3. Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

*PBH recommends that USDA develop all necessary supplementary documents and materials, including any web-based education tools, prior to the release of the official revised Food Guide Pyramid (or whatever food guidance results from the reassessment). Having the supplementary information will help to ensure that consumers are given the complete message and health care professionals have the necessary tools to educate consumers appropriately about the food guidance recommendations.*

PBH understands the complexity of the task of educating consumers in easy-to-understand terms with simple graphics, yet assuring that the graphics have a strong scientific underpinning. In order for any food guidance, including the current Food Guide Pyramid, to be effective for both consumer understanding and health care professional use, significant resources must be available to get the message out and make an impact.

*PBH also recommends that USDA issue "Guidelines for Use" to be used by any organization (food/beverage company, health professional organizations, etc.) that outlines the appropriate use of the resulting food guidance recommendations.*

While the current Food Guide Pyramid is a well recognized graphic and appears on practically every food item that is represented in the graphic, PBH questions whether this is an effective way to communicate key nutrition and health messages to consumers and urges USDA to reconsider the design of the graphic and develop guidelines for its use, with input from a wide range of potential users.

Such usage guidelines should also include direction on the types of foods and beverages to be depicted in the Food Guide Pyramid (or other food guidance graphic) in order to better educate consumers about the need to choose wisely within all categories.

**4. Appropriateness of using "cups" and "ounces" vs. "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup.**

*PBH supports using common household measures in conjunction with serving sizes. This approach may help consumers relate servings and portions without losing the variety message.*

PBH does not believe this would be confusing. Rather, it would help consumers relate servings and portions without losing the variety message.

**5. Selection of smaller subsets of food patterns for the development of various consumer information materials.**

*PBH proposes that CNPP investigate the feasibility of developing subsets of food patterns.*

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For example, food patterns can be based on life cycles, such as:

- Pre-school
- Elementary school
- Middle school
- High school
- Young adults
- Middle age adults
- Mature adults

PBH understands the complexity of the task to educate consumers in easy-to-understand terms with simple graphics, and we encourage CNPP to use the support materials to teach the essential and basic concepts of caloric density, nutrient density, calories as a unit of energy, and energy balance. These are the tools consumers need to make educated choices about the relationships between what they eat and the amount of physical activity they need for optimum health. Resources must be available and significant if these messages are to get out and make an impact.

### **Graphic & Testing Considerations**

While PBH realizes that CNPP will be soliciting comments on the food guidance graphic in a future Federal Register notice, we share the following initial comments with you for consideration. Also attaching are the Mayo Clinic Healthy Weight Pyramid and the Latin American Pyramid. PHB urges CNPP to consider these graphics as they are based on the concept of energy density and emphasize lower calorie foods.

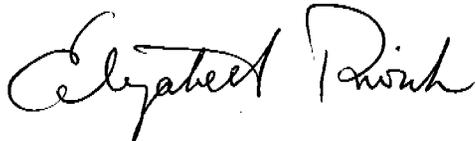
- Any graphic design developed to convey nutrition messages must promote a range of 5 to 12 servings of fruits and vegetables a day.
- The revised food guidance graphics need to do a better job of emphasizing the importance of eating a variety of colorful fruits and vegetables every day. The current graphic does not communicate well the need to consume a variety of fruits and vegetables, particularly deeply colored ones (such as deep yellow and dark green).
- Foods in each food group are represented in their lowest fat forms without added sugars and are the basis of serving sizes for the food groups that make up the Pyramid. This concept is not well communicated in the current Food Guide Pyramid, that may result in the consumption of excess calories by individuals. Low fat and low sugar choices need to be emphasized in whatever graphic is chosen.
- Use of the symbols for added sugars and fats on the current Pyramid is not well understood by consumers.
- Although PBH supports the use of 12 calorie levels, we recommend that the communication vehicles to convey diet messages needs to be far less complex. One suggestion is to develop separate food guidance graphics for certain age groups, such as one for children 2 to 6 years of age, 6 to 12, teens, adults, seniors, etc.
- PBH recommends that the new graphics and supporting materials be thoroughly tested with consumers, revised, and then retested as needed to ensure that they convey the desired key concepts. This should involve both qualitative and quantitative research. We also recommend government testing of the effectiveness

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of the revised dietary guidance graphics to change consumer eating behaviors, as well as consumers' awareness and understanding of them and the accompanying support materials.

Thank you again for your ongoing efforts to provide consumers with tools to help them make sound dietary choices. PBH stands ready to assist in these efforts and will continue to educate Americans about the importance of eating a variety of colorful fruits and vegetables every day.

Sincerely,



Elizabeth Pivonka, PhD, RD  
President  
Produce for Better Health Foundation

**Attachments:**

- Appendix A: Fiber Analysis
- GAO Report: Fruits and Vegetables: Enhanced Efforts to Increase Consumption Could Yield Health Benefits for Americans, GAO 2003
- PBH Gap Analysis: The Fruit and Vegetable Consumption Challenge 2002
- The Supersizing of America: Portion Size and the Obesity Epidemic, Barbara Rolls, Nutrition Today, 38(2): 42-53, 2003
- State of the Plate: Study on America's Consumption of Fruits and Vegetables, Produce for Better Health Foundation, 2003
- Mayo Clinic Pyramid and the Latin American Diet Pyramid

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**Appendix A: Fiber Analysis for the Food Guide Pyramid**

| food group                            | dietary fiber per serving (g)* | 1000 calories |                   |                      |               | 1200 calories |                   | 1400 calories |                   |
|---------------------------------------|--------------------------------|---------------|-------------------|----------------------|---------------|---------------|-------------------|---------------|-------------------|
|                                       |                                | # servings    | dietary fiber (g) | suggested # servings | dietary fiber | # servings    | dietary fiber (g) | # servings    | dietary fiber (g) |
| fruit                                 | 1.474                          | 1.5           | 2.211             | 2                    | 2.948         | 1.5           | 2.211             | 2             | 2.948             |
| <b>VEGETABLES</b>                     |                                |               |                   |                      |               |               |                   |               |                   |
| dark green                            | 2.154                          | 0.29          | 0.62466           | 1                    | 2.154         | 0.43          | 0.92622           | 0.43          | 0.92622           |
| deep yellow                           | 2.26                           | 0.14          | 0.3164            | 0.5                  | 1.13          | 0.29          | 0.6554            | 0.29          | 0.6554            |
| legumes                               | 5.991                          | 0.29          | 1.73739           | 0.5                  | 2.9955        | 0.43          | 2.57613           | 0.43          | 2.57613           |
| starchy                               | 1.788                          | 0.14          | 0.25032           | 0.5                  | 0.894         | 0.43          | 0.76884           | 0.43          | 0.76884           |
| other                                 | 1.153                          | 0.14          | 0.16142           | 0.5                  | 0.5765        | 0.43          | 0.49579           | 0.43          | 0.49579           |
| <b>GRAINS</b>                         |                                |               |                   |                      |               |               |                   |               |                   |
| whole grains                          | 2.274                          | 1             |                   | 3                    |               |               |                   |               |                   |
| other grains                          | 0.704                          | 1.5           | 3.411             | 1.5                  | 3.411         | 2             | 4.548             | 2.5           | 5.685             |
|                                       |                                | 1.5           | 1.056             | 1.5                  | 1.056         | 2             | 1.408             | 2.5           | 1.76              |
| meat                                  | 0.056                          | 2             | 0.112             | 2                    | 0.112         | 3             | 0.168             | 4             | 0.224             |
| milk                                  | 0                              | 2 cups        | 0                 | 2 cups               | 0             | 2 cups        | 0                 | 2 cups        | 0                 |
| fat                                   | 0                              | 28 g          | 0                 | 28 g                 | 0             | 30 g          | 0                 | 30 g          | 0                 |
| sugar                                 | 0                              | 20 g          | 0                 | 20 g                 | 0             | 20 g          | 0                 | 20 g          | 0                 |
| Subtotals calculation for total fiber |                                |               | 9.88019           |                      | 15.277        |               | 13.75738          |               | 16.0394           |
| Total Fiber                           |                                |               | 2.5               |                      | 2.5           |               | 3                 |               | 3.5               |
|                                       |                                |               | 12.38019          |                      | 17.777        |               | 16.75738          |               | 19.5394           |
| Recommend ed Amount                   |                                |               | 14                |                      | 14            |               | 17                |               | 20                |

\* from Table 4

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ALMONDS  
BRAZILS  
CASHEWS  
HAZELNUTS  
MACADAMIAS  
PECANS  
PINE NUTS  
PISTACHIOS  
WALNUTS

received  
10/21/03  
KT

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

The International Tree Nut Council Nutrition Research & Education Foundation (INC NREF) is a non-profit organization located in Davis, California, which represents nine tree nuts and supports nutrition research and education. INC NREF appreciates the opportunity to provide comments on proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid.

It is our view that the nutritional goals and daily food intake patterns that serve as the basis for the Food Guide Pyramid, should not just represent current consumption patterns, but rather, serve as a tool to improve food intake for optimal health and disease prevention. Therefore, we recommend considering a separate category for legumes, nuts and seeds. We have specifically addressed below, several of the topics of particular interest to CNPP:

***Appropriateness of the selection of nutritional goals.***

The emphasis on low-fat diets is now under scrutiny as a more moderate approach has currently been taken to dietary fat recommendations. While lowering saturated fat to lower heart disease risk is well accepted, the amount and type of fat for healthy eating has become more important. A "moderate" dietary recommendation approach to total fat, emphasizing unsaturated fat food choices, is included in the USDA Dietary Guidelines for Americans 2000 (1). The 2000 American Heart Association (AHA) Dietary Guidelines (2) recommendation to "limit foods high in saturated fat and cholesterol; and substitute unsaturated fat from vegetables, fish, legumes, and nuts" includes nuts in a more predominant role than in the past. In May 2001, the National Institutes of Health's National Cholesterol Education Program Report (3) formalized its recommendation to keep total fat in the diet between 25-35% of calories. The recommendation for polyunsaturated fat in the diet is up to 10% of calories, and up to 20% of calories for monounsaturated fat. This is the first time monounsaturated fat has been officially "increased" as part of a recommended healthy eating plan. This has a major implication for nuts, which contain significant amounts of unsaturated fatty acids.

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as part of a recommended healthy eating plan. This has a major implication for nuts, which contain significant amounts of unsaturated fatty acids.

Earlier this year, the Food and Drug Administration's (FDA) Task Force on Consumer Health Information for Better Nutrition released a report highlighting four key areas where FDA intends to focus its efforts on providing better nutrition information and health messages to consumers in the coming months. One such area includes, "The benefits of substituting nuts for other sources of saturated-fat-containing protein to help reduce the risk of heart disease (4)."

Shortly after FDA released its report, it also announced a new qualified health claim for nuts and heart disease. The claim is the result of a petition that was filed by INC NREF. As part of the supporting documentation in the petition, a review article by Penny Kris-Etherton, PhD, RD, provides a thorough overview of the five large epidemiological and 11 clinical studies that document "frequent consumption of nuts decreases the risk of coronary heart disease" (5). Current status of research on unsaturated fats in nuts demonstrates that nut consumption can play a role in lowering coronary heart disease risk by decreasing both total cholesterol and LDL cholesterol levels. Research studies on nuts, which contain relatively high amounts of unsaturated fatty acids, have shown similar results in reducing risk factors associated with heart disease.

Epidemiological evidence from major population studies, which began with observations in Seventh Day Adventists (6), have documented the association between frequent nut consumption and lowered coronary heart disease risk (7). Clinical research trials on consumption of specific nuts including, almonds (8), walnuts (9), pecans (10), macadamias (11), hazelnuts (12), pistachios (13) and peanuts (14), show significant decreases in total cholesterol and LDL cholesterol levels. Important observations from these clinical studies include: subjects with normal or high cholesterol levels can achieve significant total and LDL cholesterol lowering; dietary regimens with increased unsaturated fats from nuts can be based on low fat recommendations (30% calories from fat) or a traditional high fat American diet (35-39% calories from fat) and show significant lowering of total and LDL cholesterol; significant blood cholesterol reduction of 5-12% for total cholesterol and 10-15% for LDL cholesterol.

Meeting vitamin and mineral recommendations is also critical for an individual to maintain good health and meet nutritional goals. The National Academy of Sciences has set a new precedent, setting daily requirements for vitamin and minerals beyond eliminating nutrient deficiency, to preventative or optimal health (15). Nutrient density of foods may become more important in food choices in order to meet micronutrient needs through foods, while keeping caloric intake in check. Food choices that include multiple nutrient benefits may become an important concept for consumers. In the meantime, the USDA, with the assistance of the INC NREF, recently conducted a comprehensive nutrient profile for micronutrients in nuts. The results show that nuts are valuable sources of significant amounts of copper, magnesium, manganese, phosphorus, selenium, and vitamins like thiamin, B-6 and E (16).

*apple young dairy*

While formal recommendations are not yet in place, the potential role of phytochemicals in health represents the leading edge in emerging science. This area is driven by research on chemical components found in foods that might have measurable health benefits like plant sterols for lowering cholesterol, or polyphenols for prevention of cancer. Nuts, a complex plant food, contain a wide variety of phytochemicals like phytosterols (beta-sitosterol), polyphenols (flavonoids, ellagic acid), phytoestrogens (isoflavonoids) and tocotrienols, that may play a significant role in heart disease and/or cancer prevention (17). Beta-sitosterol, for example, is one of several plant sterols found in nuts. It is implicated in cholesterol lowering, but more recently, cancer prevention (18). A collaborative, comprehensive analysis of phytochemical compounds is underway with the USDA, the Produce for Better Health Foundation and a number of commodity groups, including the INC NREF, to characterize these compounds in fruits, vegetables and nuts.

***Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.***

Over the past few years, nutrition experts and Oldways Preservation and Exchange Trust have begun to recommend a Mediterranean-like diet characterized by abundant plant foods (fruit, vegetables, breads, other forms of cereals, beans, nuts and seeds), fresh fruit, olive oil, dairy products (principally cheese and yogurt), fish and poultry consumed in low to moderate amounts, zero to four eggs consumed weekly, red meat consumed in low amounts, and wine consumed in low to moderate amounts, normally with meals (19). In a recent study published in the *New England Journal of Medicine*, researchers studied the effects of a Mediterranean diet on mortality in a population-based, prospective investigation involving 22,043 adults in Greece. Greater adherence to the traditional Mediterranean diet was associated with a significant reduction in total mortality. According to the authors, "After adjusting for age, sex, education, smoking status, BMI, waist-to-hip ratio, energy expenditure score and total energy intake, the only individual measures that were predictive of total mortality were the intake of fruits and nuts and the ratio of monounsaturated fats to saturated fats (20)."

Dietary consumption patterns from the Mediterranean region have historically shown the lowest recorded rates of chronic diseases and the highest adult life expectancy. It has also been shown that apparent benefits of the Mediterranean diet seem to be transferable to population groups from different origins and dietary habits, i.e., Australians (21). The Mediterranean diet as a secondary prevention measure is also much less expensive compared to other diet or drug treatments (22).

Government food consumption and nutrient intake data over the last ten years indicate that consumers are in the process of changing eating patterns, though somewhat misguided in their approach. While it appears that the fat message has taken hold and percentage of calories from fat has decreased to 32% of calories, total caloric intakes have risen (23). This increase in caloric consumption, together with limited amount of physical activity has contributed to increased incidence of obesity in the US. When it comes to dietary fat intake, recent consumer surveys including the Food Marketing Institute Trends Report (24) and the *Better Homes and*

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*Gardens Consumer Survey 2000 (25)*, demonstrate a decreased consumer interest/awareness in fat. It is possible that consumers are already making food choices with fat in mind so it is less of an issue for them. Interestingly, more consumers are on reduced fat and cholesterol diets than weight loss diets.

Recent studies do not implicate unsaturated fat or nuts in the diet as a contributor to weight gain. According to a recent paper published in the *American Journal of Clinical Nutrition*, epidemiologic studies indicate an inverse association between frequency of nut consumption and body mass index. No body weight changes were seen in well-controlled nut-feeding trials; and some studies with free-living subjects in which no constraints on body weight were imposed, showed a nonsignificant tendency to lower weight while on the nut diets (26). A report in the 2001 *Journal of International Obesity* showed that an energy-restricted diet containing 35% calories from fat (the extra fat coming from unsaturated fat foods such as peanuts, peanut butter, tree nuts and olive oil) produced similar improvements in body weight to a low-fat diet. And, an extra serving of vegetables were consumed by the high-unsaturated fat diet. Participation rates were significantly higher over an 18-month period for the high-unsaturated fat diet (27).

Current consumption of monounsaturated fat in the US is 12.5% of calories and polyunsaturated fat is 6.4% of calories. Ironically, the three top contributors to monounsaturated fat in the US diet are beef, margarine and bakery goods, which do not contain significant amounts. Nuts are currently ranked 12<sup>th</sup> and oils are ranked 9<sup>th</sup>, although these foods contain primarily monounsaturated fat (23). To switch to an overall diet that contains close to 20% of total calories from monounsaturated fat, the inclusion of nuts is critical. However, there has also been a significant decline in consumers' awareness of unsaturated fat from over 40% in 1995 down to 25.5% in 2000 (25).

According to CSFII, in 1994-1996, 13 percent of U.S. consumers age 2 and over consumed tree nuts on any given day. Nuts are mostly consumed as snacks (51% of nuts consumed). Nut consumption is low compared to other protein sources. For example, nuts are eaten as a part of the evening meal only 14% of the time, demonstrating an opportunity to move nuts to the center of the plate (28).

It is critical to know where consumers are headed and whether they are ready to make changes in their eating habits for personal health, including eating nuts. Most surveys on consumer attitudes on nutrition and health show an overwhelmingly high interest in "ensuring good health." *Better Homes and Gardens (25)* reports that 85.5% of respondents work to prevent health problems, *HealthFocus (29)* reports 88% and *Prevention (30)* reports 79% of consumers want to ensure good health. In addition, according to *HealthFocus (29)*, most consumers see a connection between nutrition and their health and they believe foods can offer benefits that reach beyond basic nutrition to disease prevention.

According to *Better Homes and Gardens (25)*, 88% of consumers are serving more meatless meals for diet and health reasons. In a new report from Mintel Consumer Intelligence (31), research shows that the vegetarian food market will continue to grow for the next five years at a rate of 100% - 125%. While only 2.5% of American consumers are consistent vegetarians, it is

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Estimated that 25% of consumers replace meat with meat alternatives at least for some meals. These "occasional vegetarians" may be making the switch for health purposes and may never intend to change their diets completely. Nonetheless, they are a major force in the growing interest in vegetarianism. What these "semi-vegetarians" need is the option to access more meat-free prepared meals and education—something nuts can provide.

The Food Guide pyramid can and should be used as a tool to help educate consumers about an optimal diet for disease prevention. A separate category in the pyramid, focusing on legumes, nuts and seeds would help educate consumers on the benefits of these important foods. It's important to note that although tree nuts are not legumes, they have a similar nutrient profile to peanuts, which are legumes (16). We recommend that tree nuts and peanuts be grouped together to help consumers move in the direction of plant-based diets.

*Appropriateness of using "cups" and "ounces" vs. servings in consumer materials to suggest daily amounts to choose from each food group and sub-group.*

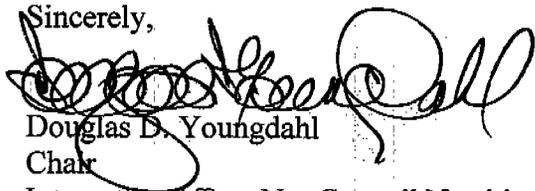
In recent months there has been much discussion by health professionals and the media about portion size and its impact on weight. Since portion sizes have grown dramatically over the last decade, it is important to put serving sizes into perspective. In its recent announcement of the qualified health claim for nuts, the FDA stated:

"Scientific evidence suggests but does not prove that eating **1.5 ounces per day** of most nuts as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. [See nutrition information for fat content.]"

Not surprisingly, most consumers do not know how much 1.5 ounces is, so INC NREF has been suggesting the equivalent of about 1/3 cup—which is the serving size used in the U.S. Dietary Guidelines.

Thank you for considering these comments, if I can provide you with additional information, please let me know.

Sincerely,



Douglas D. Youngdahl

Chair

International Tree Nut Council Nutrition Research & Education Foundation

Enclosures

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Jane Crowther  
Senior Director, Refined Oils

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October 23, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

RE: USDA Request for Public Comments on the Food Guide Pyramid –  
Long Chain Omega-3 Fatty Acids

Ladies and Gentlemen:

Omega Protein Corporation submits this letter in response to the request dated September 10, 2003 by the U.S. Department of Agriculture Center for Nutrition Policy and Promotion for public comment on proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid.

Health awareness campaigns, media messages and regulatory guideline communications over several decades have helped to educate consumers on the fat content in foods. Recent research overturned the simplistic approach to fat in favor of a more refined understanding of fats consumed. The new Food Guide Pyramid should enhance health awareness in the prevailing consumer trend of making healthier food choices to improve the quality of life.

Polyunsaturated fatty acids (PUFAs) are known to be needed in the diet for health. The body functions best when an optimum balance is maintained between omega-6 and omega-3 fatty acids. Imbalance between the two types has detrimental effects on health. The most physiologically beneficial omega-3 fatty acids are the long chain acids, EPA and DHA, found in fish and marine sources. These fatty acids regulate production of eicosanoids, or hormone-like substances, which regulate all body functions including eye, brain and heart function, inflammatory responses, nerve function, cognition and immunoregulation. The short chain omega-3 acid found in plant sources, alpha-linolenic, is metabolically converted via elongation and desaturation to the important long chain omega-3 in the body. The conversion is an inefficient process.

The typical American diet (and resulting body tissue) has much less omega-3 than omega-6 fatty acids due to low consumption of fish. Accordingly, the American Heart Association 2000 Dietary Guidelines for Healthy Americans recommends 2-3 fatty fish meals per week for heart health (approx. 900mg omega-3 per day). Recently, the American Heart Association 2002 Scientific Statement urges people with CHD risk to eat about 1 gram of EPA + DHA per day, preferably from oily fish. One of the authors noted elsewhere that "there has never been a cardiologic

J.B. Crowther

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
October 23, 2003  
Page 2

treatment that worked as a secondary prevention that didn't also work as primary prevention". Internationally, the British Nutrition Foundation recommends 1.2 grams of EPA+DHA, Health and Welfare Canada recommends 1-1.8g Omega-3/day, and ISSFAL recommends 650mg/day. The National Academy of Science, Institute of Medicine, noted that current intakes of omega-3 acids are much less than omega-6 intakes, and that current ingestion of long chain omega-3 EPA and DHA by Americans is very low.

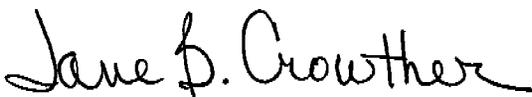
Omega Protein requests that the nutritional goals for proposed daily food intake patterns in Table #3 should be expanded to include EPA+DHA as Long Chain Omega-3. Also, an Acceptable Macronutrient Distribution Range (AMDR) for healthy diets with 1g per day for EPA+DHA for adults should be calculated across the Food Pattern and Target Age Groups. In addition, Omega Protein strongly suggests that the Pyramid categories of Meat, Poultry, Fish, Dry Beans, Eggs and Nuts Group should be divided into two groups. One of these groups should separately indicate Fish consumed. The Fats, Oils and Sweets category should separately give emphasis to oils rich in omega-3 fatty acids, which are far too low in current American foods.

Two additional references on Long Chain Omega-3 that you may find useful are:

Dietary Reference Intakes for Energy, Carbohydrates, Fiber, Fat, Protein and Amino Acids (Macronutrients) (2002) Institute of Medicine

AHA Scientific Statement, "Fish consumption, Fish Oil, Omega-3 Fatty Acids, and Cardiovascular Disease", Kris-Etherton, et al. Circulation 2002; 106 (21): 2747-2757.

Very truly yours,



Jane B. Crowther  
Senior Director, Refined Oils



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October 23, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: CAC Comments in response to Federal Register 53536, Vol. 68, No. 176

Dear Food Guide Pyramid Reassessment Team:

On behalf of the California Avocado Commission, which represents 6,000 California avocado growers, please accept these comments on the proposed Food Guide Pyramid and daily food intake patterns. We share your goal of helping consumers assess and improve their diets by offering them guidance on making healthy food choices. As you work to ensure that the new Food Guide is based on the latest scientific standards for healthful eating, we urge you to consider the latest scientific studies showing that avocados contain disease-fighting nutrients and phytonutrients. Regarding the Topics of Particular Interest to CNPP for Comments, we offer the following:

**Appropriateness of the selection of nutritional goals for the daily food intake patterns:**

We are pleased that you have included goals for vitamins, minerals, and macronutrients. It is important to emphasize that a diet that includes a variety of fruits and vegetables can help meet these nutritional goals. Avocados are among the 20 most commonly consumed fruits in America.<sup>1</sup> Ounce-per-ounce, avocados contain more of six minerals (potassium, magnesium, iron, zinc, phosphorus, and copper), seven vitamins (folate, Vitamin E, Vitamin K, riboflavin, niacin, pantothenic acid, and biotin), and three phytochemicals (lutein, beta-sitosterol, and lutathione) than any of the 20 most frequently consumed raw fruits.<sup>2,5</sup>

**Nutrition Goal for Vitamin E:** Ounce-per-ounce, avocados contain more vitamin E than the 20 most commonly consumed fruits (Per 100g raw, edible portion fruit, avocados contain 1.97 mg alpha-tocopherol)<sup>2</sup>. We recognize that most Americans do not meet the RDA for Vitamin E and avocados can help them meet this requirement.

We encourage USDA to add avocados along with other fruits and vegetables to the Food Guide.

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**Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

We are pleased that the proposed revisions include recommended daily intake amounts of monounsaturated fat. As you know, avocados are included as an example of unsaturated fat in the Dietary Guidelines for Americans 2000. The 2002 Dietary Reference Intakes (DRIs) also increased percentage of calories from fat acknowledging the benefits of consuming heart-healthy fat. In addition, avocados were recently fully included in the National Cancer Institute's 5 A Day for Better Health program.

Given the scientific support for healthy fats, it is important for the new Food Guide to distinguish between saturated fats and trans fats vs. heart healthy unsaturated fats. Today's nutrition science reveals three steps to a healthier heart: replacing "bad" fats with "good" fats, increasing omega-3 fatty acid intake and consuming a diet rich in fruits and vegetables. California avocados offer an important nutrient profile that meets all three.

Uniquely, avocados are one of few fruits that provide "good" fats. Unsaturated fats like monounsaturated fat found in avocados<sup>6</sup>, have been linked to a reduced risk of heart disease, cancer and diabetes.<sup>7-10</sup> In addition to monounsaturated fatty acids, avocados also contain linolenic acid (a polyunsaturated omega-3 fatty acid).

Per the Federal Register, we encourage you to recommend that consumers choose unsaturated fat over saturated fat. Practical examples that are easy for consumers to implement include adding avocado and balsamic vinegar to a salad instead of high-fat salad dressing or spreading avocado on whole-grain toast instead of margarine. Such simple, yet effective choices can save consumers unnecessary calories and unhealthy saturated fats, as noted in the chart below.

**Nutrient Profiles of California Avocado and Other "Bread Spreads & Dip Ingredients"**

| <b>Spreads<br/>(1 oz.)</b> | <b>Calories</b> | <b>Total Fat<br/>(g)</b> | <b>Saturated<br/>Fat (g)</b> | <b>Cholesterol<br/>(mg)</b> |
|----------------------------|-----------------|--------------------------|------------------------------|-----------------------------|
| <b>Avocado</b>             | <b>55</b>       | <b>5</b>                 | <b>1</b>                     | <b>0</b>                    |
| <b>Sour Cream</b>          | <b>60</b>       | <b>6</b>                 | <b>4</b>                     | <b>15</b>                   |
| <b>Cream Cheese</b>        | <b>99</b>       | <b>9.9</b>               | <b>6.2</b>                   | <b>31</b>                   |
| <b>Mayonnaise</b>          | <b>203</b>      | <b>22.5</b>              | <b>3.4</b>                   | <b>17</b>                   |
| <b>Margarine</b>           | <b>203</b>      | <b>22.8</b>              | <b>3.9</b>                   | <b>0</b>                    |

We share your goal of reducing the obesity rate in this country. Research conducted at Brigham and Woman's Hospital shows that monounsaturated fat can be more effective for weight loss/weight maintenance than low fat plans because fat provides greater satiety levels, thereby increasing sustainability of a healthy diet plan.<sup>11</sup>

Researchers from Pennsylvania State University<sup>12</sup> have recently published the concept of controlling weight by consuming foods with a "low energy density" – few calories per ounce. California avocados have a low energy density with only 48 calories per ounce, which is equivalent to the energy density of roasted chicken breast without skin.

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Affleck

### Appropriateness of using "cups" and "ounces" vs. "servings" in consumer materials

In order to avoid consumer confusion, we strongly encourage you to include serving size along with cups and ounces when suggesting daily amounts to choose from each food group. Per the FDA label, one serving size of avocados is equivalent to 30g or 1/5 avocado, or 2 tbsp. It is important to integrate volume measures from FDA's Nutrition Facts Labels with the revised USDA Food Guide graphic so that consumers receive clear, consistent information when making food choices.

Finally, we would like to point out that avocados are included in dietary programs from many of the world's leading nutrition organizations including: USDA's Dietary Guidelines for Americans, National Cancer Institute's 5 A Day Program, American Diabetes Association's Diabetes Food Pyramid, The Mediterranean Diet Pyramid and UCLA's California Cuisine Pyramid. We urge USDA to prominently display avocados in the new Food Guide and Dietary Guidelines for Americans to emphasize the importance of consuming a variety of health-promoting fruits and vegetables.

Thank you for your consideration.

Sincerely,

  
Mark E. Affleck  
President/CEO

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Dr., Room 1034  
Alexandria, VA 22302

October 23, 2003

Dear Food Guide Pyramid Reassessment Team:

Thank you for encouraging input from dietetic professionals regarding the newly proposed revisions to the U.S. Food Guide Pyramid. As a registered dietitian practicing out-patient preventive and therapeutic dietetic counseling for twenty five years at the Cooper-Clinic in Dallas, TX, I interact with consumers daily and experience consumer confusion regarding the Pyramid, and other government dietary guidelines. Here are my recommendations:

1. Use **cups** rather than servings, as proposed. It is easier to recall the simple message of eating "two cups of vegetables" daily than to recall "four servings" and wonder what a "serving" means. I've used "cups" for starches/cereals/grains/fruit/vegetables for years and "ounces" for protein foods ... consumers understand and prefer these measurements.
2. Use **ounces** for meat, ie 6 oz./day (or 4-8 oz. a day), and let the consumer know that 6-8 oz usually is a restaurant portion, and a quarterpounder meets half a day's protein group requirement.
3. Twenty-two pyramid options seem too complicated for health professionals and consumers. Instead, please consider one basic 2000 calorie pyramid, with guidelines to adjust it for weight loss or smaller women's weight maintenance at 1500 calories; and show adjustments for 2500 calories for larger men or athletes. Most Americans are overweight and sedentary, and require fewer calories than the 2200 and 2800 calorie referenced by the current pyramid.
4. Put "beans" in the meat/protein group to encourage non-saturated fat protein sources.
5. Put potatoes, corn, peas in the starch/grain group as "starchy vegetables" to educate consumers who typically choose potatoes and corn as their only "vegetables".
6. Indicate "2 small" or "1 large" fruit as equivalent, to help the consumer consume "4/day" as 2 large fruit (1 big apple, 1 banana). The typical consumer is overwhelmed at the idea of eating "4 fruit a day", where as 2 "large fruit" such as "1 large fruit and 1 cup orange juice" is an easier concept to apply and comply.
7. Put seeds/nuts/peanutbutter in the "healthy fats" category and indicate the limit as 1 - 2 tablespoons a day to avoid excessive calories, while benefiting from their valuable nutrient content!

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Kostas

8. Keep the proposed sugar goals of 6 – 13 % of calories, but tell the public 5-10% of daily calories (to make memorable).
9. Keep the proposed fiber goals, but educate the public as “25 – 35 grams of fiber daily”, since people find “14 gm fiber per 1000 calories” too complicated.
10. Yes, use “illustrative (pictorial) food patterns” for breakfast, lunch, dinner, snacks... this is how people eat... See attached idea. Show portions pictorially, as well as meals.
11. Be consistent with milk as “3 a day” for all ages... Ages 19-50 need more calcium to prevent osteoporosis. Extra calcium after age 50 is not as beneficial after bone density has been lost. Bone density is built, up to age 30-35 and calcium must be adequate in the 20's, 30's, 40's to prevent hypertension. The DASH program shows 3 calcium-rich servings are needed daily.
12. Use “whole servings” only, rather than “1/2” or “3/4” servings as proposed in the 12-calorie level food intake patterns.
13. Distinguish “additional fats” from “hidden fats”... to help make the consumer aware of all the hidden fat we consume, unaware.
14. Simplify the excellent “Table 2: Energy Levels for Proposed Food Intake Patterns” by simply stating: “The basic Pyramid assumes sedentary living. Add or subtract 250 calories a day based on body size and activity level. Smaller, older, or shorter Americans may need 250 calories less a day; more active individuals may need 250 calories more.”
15. Refer to fat portions as “tablespoons”. Use the words “healthy fats” for soft margarine, oils, nuts, seeds, peanutbutter.
16. Emphasize “fish – twice a week” and “3 wholegrains a day” to match the DGA 2000.
17. Split the Pyramid in four “stacks” with a little horizontal space between, to illustrate “complex carbohydrates”, “protein”, “fats”, and “extras” as separate nutrient categories. This visually helps the consumer understand the 50% calorie allotment for complex carbohydrates, etc.

Thank you for your comprehensive research and valuable contribution to consumer health education with your efforts to make the Pyramid a more user-friendly guide to healthful eating.

With highest regard,

*Georgia Kostas, M.P.H., R.D., L.D.*

Georgia Kostas, M.P.H., R.D., L.D.  
Director of Nutrition, Cooper Clinic



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InterAgency Nutrition Coordinating Council

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October 21, 2003

Eric Hentges, Executive Director  
Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Mr. Hentges:

On behalf of the Interagency Nutrition Coordinating Council (IANCC), I am pleased to submit our comments on the federal register section (Vol. 68, No. 176) related to proposed changes in the Food Guide Pyramid. In this letter, I summarize the main points related to the new nutrient goals and food patterns.

The IANCC is a group of Registered Dietitians and Nutritionists employed in a variety of departments and programs in service to California's state government. We meet quarterly to coordinate nutrition messages and joint projects in our state. Opinions expressed on the attached pages are those of IANCC members but not necessarily official state agency recommendations. In a separate letter, you will receive additional comments from one of our collaborative partners, the California Department of Health Services.

We are grateful for this opportunity to comment and look forward to participating in the next request for comment on the new Food Guide Pyramid.

Yours sincerely,  
*Lucia Kaiser*  
Lucia Kaiser, PhD RD  
Food Pyramid Committee Lead  
Community Nutrition Specialist  
University of California Cooperative Extension

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California Interagency Nutrition Coordinating Council (IANCC)  
Comments on the Food Guide Pyramid (FGP)  
October 23, 2003

1) Is it appropriate to use sedentary, reference-sized individuals in assigning target calorie levels?

- Generally, yes. Although the current FGP has three energy levels and ranges, people commonly view the 1600 minimum level as the target. Therefore, to use the lowest calorie levels as a reference would seem to be consistent. However, to enhance the public's understanding, the Center for Nutrition Policy and Promotion (CNPP) could develop additional materials describing a few cases where the food pattern deviates from the minimum (for example, a teenager actively engaged in sports or a pregnant woman).
- The one exception where using a sedentary reference group may not be appropriate is for the youngest age group, children one to three years. IANCC nutritionists are concerned that very restrictive child feeding practices may negatively impact a child's growth. Furthermore, the definition of what constitutes sedentary behavior in very young children is not clear.

2) Are the nutritional goals appropriate?

- Nutrient needs during pregnancy should be identified in the Tables and incorporated into the patterns. While iron supplements are routinely recommended, folic acid is obtained either through supplements or fortified foods. Table 5 food patterns indicate energy level patterns (>2400) would meet the RDA of 600 for folate equivalents, but pregnancy needs are not specifically addressed. Even if CNPP decides to develop and release later a separate Pyramid for child-bearing women, the initial analysis of needs for these women should be explicitly considered now.
- Some of our IANCC nutritionists expressed the concern that the calorie goals at the highest end of the range may be misleading to the public. How many men are truly active enough to need 3200 calories vs. how many men will put themselves in that category incorrectly? A suggestion was made not to include the very highest calorie level that may encourage excess intakes.
- Fluid needs should be included in the FGP. Specifically, water should be encouraged and a recommended amount provided. It would also be beneficial to mention why water is important. If people knew why water versus other beverages is important, they might make more effort to include it on a daily basis.

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- IANCC nutritionists agree with CNPP about including a discussion on limiting trans fat intake, especially since trans fat will soon be appearing on the Nutrition Facts label. There should be a brief but clear explanation that not all fats are equal, and while overall fat intake should be moderately low, certain fats are healthy in moderation. Others (saturated and trans) should be kept to a minimum. IANCC also thinks the recommendation that more than half of the added fat come from oils/soft margarines is appropriate.
- Physical activity goals should be included in the FGP.

**3) Are the proposed food patterns appropriate for educating Americans about healthful eating patterns?**

- To move Americans toward improved food choices, recommended amounts of whole grains, dark-green vegetables, legumes and fruits, higher than current intakes seems appropriate. The FGP should motivate people to make positive changes. Professionals should have little difficulty using these patterns as an educational tool. Furthermore, assumptions underlying development of a nutrient profile for each group need to be translated into *explicit recommendations* for the public. For examples, whole grains and high-fiber whole grain products should be distinguished from other grain products, with a recommendation that *at least half of the grains consumed daily be whole grains*. Similarly, many people should aim to consume legumes at least three times a week. CNPP may also want to encourage greater consumption of nuts. People should be encouraged to include a serving several times a week from a variety of plant-based protein sources, including legumes, nuts, seeds, and tofu.
- Will glycemic index be introduced and discussed in CNPP educational materials? Consumers are zeroing in on this concept.
- At least some consideration of how nutrient needs can be met through nondairy sources, *in addition to calcium-containing soy beverages*, should be considered in developing the nutrient profile for this group and recommended servings. Maybe the milk group should be renamed "Milk and milk alternative group".
- IANCC agrees with CNPP that *low fat and nonfat* dairy products should be recommended for daily intake for most people. An emphasis on lower fat cheeses may be helpful, too.
- Fish and other seafood should be recommended at least once per week.

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Kaiser

- All grain products that are high in fat and/or sugar should be classified in the pyramid tip. Criteria for this placement should be provided, so that consumers can classify new products, based on food labels.

**4) Is the use of cups and ounces better than servings?**

- IANCC nutritionist think this change would generally be an improvement at least for fruit, vegetables, many grains, and milk/soy beverages. For many people, ounces may not be well-understood. Some other concepts, such as meat the size of a deck of cards, cheese the size of your thumb, peanut butter the size of a ping-pong ball, etc. may be helpful.

**5) The current Pyramid has three calorie level patterns: 1600, 2200, and 2800 kcal. Based on the latest DRIs, USDA now presents 12 patterns. How many different patterns are feasible to use? How should some of the 12 different levels be combined? By what criteria? Which subset groups would be most useful for various audiences?**

- Although the current Pyramid has 3 food patterns, even that level of complexity is probably lost on most of the public. Most people teach the pattern that goes with 1600 calories. We may need to stick with one level for a sedentary general public. If option is chosen, then we would recommend that CNPP produce and market additional versions according to a life cycle approach, i.e., separate Pyramids for young children; very active teenage/ young men; women in their reproductive years; older adults. Each of these should be targeted to a single age, gender, and/ or life cycle group. Some of these are already available.

**6) Other: graphics**

- The pyramid graphic should have appealing, accurate photos of actual foods, including foods commonly eaten by diverse ethnic and cultural groups. A circular graphic with different sizes of pie-shaped pieces might be easier to understand than the pyramid shape. Actual foods should be included in the pyramid tip.
- The pyramid should address activity. Mayo Clinic has developed a weight management pyramid with a small circle featuring walking feet in the center. The Children's pyramid with active children surrounding the pyramid is another concept the adult pyramid could incorporate.

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October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

**Re: Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data**

**Comments of the Center for Science in the Public Interest**

The Center for Science in the Public Interest (CSPI) commends the U.S. Department of Agriculture's Center for Nutrition Policy and Promotion for its excellent and thorough development of the Food Guide Pyramid Daily Food Intake Patterns. Overall, we believe CNPP's analysis is well done and reasonable. Our comments answer several questions asked in USDA's September 11, 2003 notice. We also point out one important aspect of the Pyramid - how to advise Americans regarding choices within food groups -- that USDA failed to address in that notice that we urge USDA to carefully consider.

**I. Responses to USDA's Proposed Food Intake Patterns**

- **Recommended calorie levels and food intake patterns should be based on the calorie needs of sedentary individuals.** Obesity is one of the most pressing health problems facing the nation and the majority of Americans are sedentary. USDA should choose calorie levels that do not overestimate calorie needs or encourage over-consumption. We also support using median heights and ideal weights as the reference weights and heights.
- **Use the Pyramid to reduce trans fat intake.** Based on the review of the evidence by and the strength of the advice from the Institute of Medicine, National Cholesterol Education Program, and the Food and Drug Administration, we agree that the Pyramid should be revised to encourage Americans to consume less trans fat.
- **CNPP's recommended intakes of added sugars are appropriate and much needed.** CNPP has used the most sensible, science-based approach for setting recommended levels of intakes of added sugars. The key dietary problems caused by added sugars are that they either add extra calories to the diet or crowd out more nutritious foods. Thus, recommended intakes of added sugars should be based on the amount that can fit into a diet that contains the recommended number of servings from each food group, while being moderate in fat. However, USDA should note that

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the amounts recommended for added sugars intake are overestimates of what most Americans can eat, since most Americans consume more than 30% of their calories from fat.

- **Revise the Pyramid to reflect the DASH diet.** The DASH (Dietary Approaches to Stop Hypertension) Trial has demonstrated that a diet rich in fruits, vegetables, and low-fat dairy foods but limited in saturated fat, cholesterol, and total fat can lower blood pressure and LDL ("bad") cholesterol. Sodium limits result in further declines in blood pressure. CSPI has converted the DASH diet into a pyramid similar to the one currently used by USDA (see enclosed). We urge you to consider adopting all or some of the features of the DASH pyramid. Unlike other pyramids, a DASH pyramid would be based on clinical studies on hundreds of people who are at risk for heart disease and stroke, the first and third leading causes of death in the U.S.

At the very least, we urge USDA to explore the possibility of inverting the positions of the grains and the fruit and vegetable groups in the Pyramid. The grains group is more fraught with potential dietary pitfalls than the fruit and vegetable group. Sweet baked goods (in the grains group) are major sources of saturated and trans fat and added sugars in Americans' diets. Also, Americans are generally meeting the grains recommendation, but are under-consuming fruits and vegetables.

- **Recommend servings of foods in standard household measures.** We agree with USDA that serving sizes are difficult for consumers to understand and for health professionals to communicate. CSPI believes that providing clearer advice about serving sizes is a key issue for the Pyramid revision, given the growing portion sizes of foods in the U.S. and their contribution to obesity. USDA also should make those measures more understandable to consumers by comparing them to everyday items, like a cup is about the size of your fist, a tablespoon is about the size of your thumb, a 3-ounce serving of meat is the size of a deck of cards, etc.
- **Use two to three target caloric and food pattern recommendations for most Food Guide Pyramid materials.** While twelve food intake patterns might be useful to health professionals, on a website, or with an interactive nutrition education tool, it is too many for the Pyramid graphic or the back of a food package. When space is limited, USDA could use two to three caloric and food pattern recommendations. USDA should choose targets appropriate for sedentary individuals (since most Americans are) and that reduce the chances of encouraging a large number of Americans to over-consume calories. Two of the levels should be for a reference adult man and woman: 2,200 calories for men (the midpoint of 2,000 to 2,400 calories, which are the energy needs for reference adult, sedentary men) and 1,800 calories for women (the midpoint of 1,600 and 2,000, which are the energy needs for reference adult, sedentary women).

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## **II. Food Choices within Food Groups**

The most important defect of the Food Guide Pyramid graphic is that it does not give people advice about how to make healthy food choices within food groups. While the text of the educational materials supporting the Pyramid provide good advice about how to make healthier choices within food groups, few people actually see those materials. It is the Pyramid graphic that is most visible and accessible to consumers.

The use of circles for added or naturally occurring fat and triangles to signify added sugars is incomprehensible. Even if those symbols were understandable, knowing that some food groups might provide high amounts of fat or sugars is not helpful. Consumers need to know which foods are likely sources.

Without providing clear advice about how to make healthier choices within food groups, following the Pyramid could result in either a very healthful or very unhealthful diet. With the current Pyramid, a person might choose either a doughnut or a slice of whole wheat bread as a grain choice. Those two choices are quite different in the calories and saturated plus trans fat that they provide. The current Pyramid graphic does not distinguish between cheddar cheese and skim milk, even though those choices differ significantly in their saturated fat content.

USDA should test approaches to give consumers clearer advice about how to make healthier food choices within food groups. CSPI's modification of USDA's pyramid provides one model (see enclosed CSPI pyramid). That approach could be adapted to a two-dimensional format (see the rough sketch enclosed).

USDA could set criteria for saturated plus trans fat, sodium, added sugars, and nutrient density (for example, greater than 10% of the Daily Value for a key nutrient) and rank the foods that Americans most commonly consume. Based on those criteria, USDA could stratify foods within food groups into subgroups such as anytime foods (foods that should make up most of a healthy diet), sometimes foods (from which people could choose several of these somewhat less nutritious foods each day), and seldom foods (from which people could choose several of these least nutritious foods each week). CSPI would be happy to discuss such possibilities further with USDA.

Submitted by,



Margo G. Wootan, D.Sc.  
Director of Nutrition Policy

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10/21/03  
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FOOD GUIDE PYRAMID REASSESSMENT TEAM  
USDA CENTER FOR NUTRITIONAL POLICY AND PROMOTION  
3101 PARK CENTER DRIVE, ROOM 1034  
ALEXANDRIA, VA. 22302

Dear Sirs:

I write to you because after 20 years of working with my husband Dr. D. Frank Johnson M.D., F.A.C.P., a board certified Internist and Bariatrician in three weight loss clinics, there are some ideas I would like to pass on to you. We have treated thousands of patients with a very refined bariatrics program which includes weekly behavioral/nutrition classes as well as one year of maintenance classes.

What I would like to suggest to you is to think outside the box!!! The pyramid concept is impossible to teach or live by. I have seen five different versions. I have met several female internists who gained 20# by faithfully using the original version.

When our patients are on weight loss or weight maintenance, we use what I call a visual totem pole concept. The amount of protein is divided from a.m. to p.m. Their protein is based in weight loss on 1.2 to 1.6 grams per kilog. of Ideal wt. The proein for maintenance is 20 to 25% of calories based on their goal weight. The majority of our patients are high risk, BMI 30 and higher. We have many who maintain there weight.

|              |  |
|--------------|--|
| AM CHO       | protein -number of grams restricted for I R and Dbts.  |
| MID AM       | protein and cho if necessary   |
| NOON         | protein with small salad and or fruit  |
| MID P.M.     | same as mid a.m.   |
| Evening MEAL | 28 to 42 grams protein or as needed depending on size<br>2-3 cups vegetables<br>1-2 servings fruit<br>1-2 servings starch if desired |
| LATE P.M.    | protein/fruit snack  |

I have not had time to tell you how I teach this. It is all based on spreading their protein allotment for the day throughout the meals of the day.

All I can tell you is that I have great success with this concept.

Yours truly,  
JEANNE K. JOHNSON M.N. YALE UNIVERSITY DEGREE

Forgive the typing!  
Hurry

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October 27, 2003

Food Guide Pyramid (FGP) Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Members of the FGP Reassessment Team:

Congratulations on all your achievements to date in revising the technical basis of the FGP, and thank you for the opportunity to provide comments on this important document. I appreciate the painstaking work that went into completing this exercise. The thoughts reflected in this letter represent my personal views; formal comments from NCI will be coming through the Departmental response.

The discussions within the Department of HHS have highlighted some major concerns and questions among the nutrition community here. Hearing these has caused an evolution in my thinking about some of these issues since we last talked, so some of my comments may seem to run counter to those I've made in the past. I would be happy to discuss any of these ideas further with you.

*Use of "sedentary reference-sized individuals" in assigning target calorie levels*

- Patterns based on lower energy levels associated with sedentary reference individuals seem to be appropriate for assessing nutrient adequacy for several reasons: the population tends toward overweight/obesity; the population is generally sedentary or low active; and, if nutrient adequacy is achieved with a lower energy level, then higher levels would also be adequate.
- It is not clear whether this "target" level, beyond representing the pattern tested for adequacy and moderation, will also be the one highlighted in the new consumer materials; if that is the case, the basis for it must be clear and it must be differentiated from the "suggested" patterns for low activity and high activity.
- There is a question about whether these target calorie levels, especially at the lower end of the range, would be adequate for sex-age groups other than the ones you tested. For example, while the energy levels below 1600 calories were only tested for small children, adult women also often restrict their diets to lower levels. Would those patterns be adequate for them? And a subtle corollary to that: would they be *optimum* for them? If an adult woman were restricting her calories to 1000 per day, would 2.5 servings of fruits and vegetables be sufficient? Should discretionary calories even be suggested at such a low energy level? This would be a weight reduction diet, I understand, which brings me to my next point...
- There has been a tradition in federal guidance to include the caveat that it is directed at healthy individuals only, presumably to avoid any conflicts with therapeutic diet that individuals might be on. Because of this, the FGP has not been aimed at weight reduction. However, I think this should be reconsidered in light of the current overweight/obesity epidemic. The FGP demonstrates how to avoid other types of

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excesses, so why not those of calories? Unlike some other types of therapeutic diets that involve more drastic shift in the composition of the diet, a weight reduction diet includes the same foods as a diet for healthy individuals and is just lower in energy.

- Appropriate patterns should be tested regarding their adequacy for pregnant and lactating women.

#### *Selection of nutritional goals*

- I now think that the nutritional goal for added sugars should be removed from Table 5, as it is unrealistically high (even though it says *less than 25%* of kcal). The DRI macronutrients report suggested that value in the text, but did not consider it had the same weight of evidence as the other macronutrient distribution ranges. Putting it in a table with other nutritional goals suggests a level approaching 25% is reasonable. In fact, as your analysis shows, food patterns cannot meet the other nutritional constraints without added sugars being closer to 10% of energy (range of 6% to 13%). If a value closer to 13% cannot be included in this table (because you are sticking to published standards from external sources), then remove it because it is misleading and was never considered, even by the DRI committee, to be a goal to strive for.
- Related to the idea of a goal for added sugars is the concern that, by singling it out and quantifying it, you are somehow recommending some added sugars everyday (as though they were essential). I know this is not the intent, but I have heard this question raised. Combined with the criticism from industry and elsewhere that “the body can’t tell the difference” between added and naturally occurring sugars, this suggests that perhaps the whole idea of the pyramid tip should be reconsidered. According to the DRI Macronutrient Report, an acceptable amount of total fat is anywhere from 20 to 35 percent of energy. So maybe you could identify the number of servings from all the other food groups that are needed for nutrient adequacy and macronutrient balance, and have an amount of “discretionary calories” left over that could be used for added sugars or added fats or even an additional serving from one of the other groups. Of course, it would have to be made clear how small that calorie allowance would be.
- Considering the DRI reports on applications in dietary assessment and dietary planning, is the RDA or the EAR a more appropriate standard for the FGP to use?
- Beyond the DRIs and the Dietary Guidelines, did you consider recommendations from other sources, such as the results of recent epidemiological studies? Do you think you should?
- The arguments for the Vitamin E recommendation not being met do not seem convincing. Stating, “This is not consistent with the philosophical goal of being realistic and practical” suggests that philosophical goal overrides the goal of nutrient adequacy. Stating, “meeting recommendation requires substantial changes from typical intakes and would require the use of foods not commonly consumed” raises the question whether the changes would be more drastic than, say, the increases in dark green vegetables and legumes. Similarly, it is not clear that a nut profile would have to include peanuts. Nonetheless, there might be reasons that the Vitamin E RDA cannot practically be achieved or is not even necessary to achieve. If evidence suggests that the Vitamin E RDA is unnecessarily high (e.g., lack of any recognized public health problem in spite of intakes well below the recommendation), then that should be stated and would make a

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better argument. Or, if achieving the Vitamin E recommendation is not compatible with the other nutritional goals (energy and fat moderation), that too would be much more convincing.

*Appropriateness of food intake patterns for educating Americans about healthful eating patterns*

- The total diet vs. foundation diet concept is very advantageous, but must be reinforced. In the previous version, some major points related to this concept were lost in the graphic presentation. For example, it is essential that the upcoming graphic presentation be very clear regarding quantification of the tip of pyramid by specifying amounts of discretionary fats and added sugars in common household measures. In addition, it must be very clear that if the consumer chooses something other than the leanest choice within a food group—whole milk or a fattier cut of meat—that fewer “additional fats” can be chosen. The total diet concept is negated, of course, if the *total* diet is not accounted for.
- The switch in proportions oils/soft margarines to solid fats seems beneficial and consistent with current recommendations for balance among the fatty acids. The critical factor will be how well this is explained to consumers: this concept should be tested. Also, will the consumer guide explain that, if fattier choices are made within the meat and milk group, the “additional fats” should nearly all be oils/soft margarines?
- Should you decide to keep specific guidance regarding “added sugars,” the debate might be tempered somewhat if the term were changed to something like “added caloric sweeteners.” “Sugars” has a connotation of table sugar and seems to create unnecessary defensiveness by that industry since the source of most of the added caloric sweeteners is high fructose corn syrup, not table sugar. Furthermore, the term “sugars” is also on the Nutrition Facts label but, in that case, refers to something else (all simple carbohydrates, including those naturally occurring in fruit and milk.)
- Fortified cereals are now part of grain composite “because of widespread use.” This represents a huge philosophical shift from the idea that food guides should demonstrate how an adequate diet can be achieved through foods alone (rather than supplementation/fortification). Of course, when food intake is restricted in quantity or quality, supplements may be needed, but this exercise—demonstrating the efficacy of food intake pattern—should show how adequacy *could* be achieved without supplements/fortification. In addition, it raises the question of whether the adequacy of the patterns *depends* on this fortification. It would seem very important to test the patterns without the inclusion of fortified foods to determine how adequate they are in case such foods are not selected. Then, because they are ubiquitous, if you want to know the potential effect of fortified foods (even beyond grains), you could do a sensitivity analysis to determine the effect on nutrient levels with various selections. [The DRI reports suggest that, for some groups, certain nutrients are best obtained by supplements (e.g., B12). In these instances, you would be right to defer to the DRI report and recommend a supplement, but that should be explicit.]
- Some of the materials seem to suggest that USDA views these patterns as recommendations of what Americans *should* eat rather than sample patterns of what they *could* eat to meet nutritional recommendations. There are a number of combinations of foods that could meet these nutritional goals; this is one that was designed to be as small a departure as possible from the way the general public currently eats. Others patterns

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could include meat-free diets, or milk-free diets for subsets of the population who eat that way.

- The nutritional adequacy was tested with a mix of foods in each food group profile representing what most Americans eat. How dependent is adequacy on that mix? For example, if vegetarians followed these patterns, choosing only legumes and seeds from meat group, what would the nutritional profile look like? How adequate are the patterns for populations for whom rice is the staple grain? Sensitivity analyses could answer these questions.

#### *Use of "cups" and "ounces" vs. "servings"*

- Providing recommendations for the total amount of food in terms of household measures, rather than number of servings of a particular size, may eliminate a lot of confusion surrounding what constitutes a serving of each group. It would also be consistent with the food label information that provides quantities in terms of household measures (cups, etc). However, this is a concept that would have to be tested with consumers to see if they understand it.
- If you decide to keep some number of servings of a particular size, you might consider switching the terminology from "servings" to something that doesn't imply the portion consumed at an eating occasion, such as "exchanges" or "units" or "samples" (the latter is used by Australia).

#### *Selection of appropriate illustrative food patterns*

- At least one of the illustrative patterns should represent the 2000 kcal level, because that is the basis for the food label, and consumers would undoubtedly appreciate the consistency. You could then choose another energy level on either side of that level, say 1600 and 2400 kcal, which would span the energy levels of most groups in the population.
- Additional illustrative food patterns could be featured in materials designed for targeted audiences. For example, materials aimed at small children or the elderly could feature the lower energy patterns and those aimed at adolescent athletes could feature the higher energy patterns.

Sincerely,



Susan Krebs-Smith, PhD

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Tipton & Matto



International Dairy Foods Association  
Milk Industry Foundation  
National Cheese Institute  
International Ice Cream Association

received  
10/27/03

KT

October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

**RE: FR Doc. 03-22763, Notice of Availability of Proposed Food Guide Pyramid Daily Good Intake Patterns and Technical Support Data and Announcement of Public Comment Period, September 11, 2003.**

Dear Sir or Madam:

The International Dairy Foods Association (IDFA) appreciates the opportunity to comment on the proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data. As the federal government's official recommendations on what to eat, along with the Dietary Guidelines, it is vital that the Food Guide Pyramid reflect current nutrition research and the very best nutrition information that can be used to educate the American public.

IDFA, which represents the nation's dairy processing and manufacturing industries and their suppliers, is composed of three constituent organizations: the Milk Industry Foundation (MIF), the National Cheese Institute (NCI), and the International Ice Cream Association (IICA). Its 500-plus members range from large multinational corporations to single-plant operations, representing more than 85% of the volume of milk, cultured products, cheese and ice cream and frozen desserts produced and marketed in the United States-- an estimated \$70 billion a year industry.

Milk and dairy products' role in a nutritious diet has been established by the nutrition and medical community, including the National Institute of Child Health and Human Development, the American Academy of Pediatrics, the National Osteoporosis Foundation, the American Academy of Orthopedic Surgeons, and many other health organizations.

IDFA believes that milk and other dairy foods should retain their own group on the Food Guide Pyramid -- no other product, with or without calcium fortification, can provide the same mix of important nutrients in one package that dairy foods do. Milk is a naturally rich source of calcium and is also an important source of Vitamin D, protein, riboflavin,

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Matto

Vitamin A, magnesium and potassium in the American diet. For those for which lactose intolerance is a problem, studies have shown that they are still able to get 3 servings a day through cheese, yogurt, or smaller portions of milk.

It is also important that the Food Guide Pyramid recommend at least 2-3 servings daily from the milk and dairy group. Since the last revision of the Food Guide Pyramid, the RDI for calcium was increased to between 1000 mg and 1300 mg per day for the majority of the population. In order for people to consume these levels of nutrients, it is important that they are encouraged to eat enough dairy, the richest natural source of calcium. Emerging evidence suggests that dairy is an important component of a healthy eating pattern that can protect against excess body fat gain and enhance weight loss.<sup>1,2,3,4,5,6</sup> The Dietary Approaches to Stop Hypertension (DASH) diet includes low fat dairy and makes positive changes in blood pressure, blood lipids and blood homocysteine levels.<sup>7</sup>

In response to the specific request in the Federal Register Notice, we submit the following comments.

**Issue #1: Appropriateness of using sedentary, reference-sized individuals in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.**

Target calorie levels should not be based on sedentary individuals. Public health recommendations, including the Food Guide Pyramid, should continue to stress the importance of exercise and physical activity, not ignore it. Nutrition and health experts agree that the best way to lose weight or maintain a healthy weight is with both a sensible eating plan and exercise. The National Weight Control Registry has noted that the majority of its registrants, who have all lost 30 pounds or more and maintained the weight loss for at least 1 year, have used both physical activity and diet as a part of their weight loss plan.<sup>8</sup> If the Pyramid's dietary recommendations were based upon sedentary individuals and therefore allowed for fewer calories, Americans would be forced into a diet with very little room to accommodate a special treat or occasional splurge. People do not stick with such restricted eating patterns for long and may just come to ignore the Food Guide Pyramid's recommendations.

Instead of basing the Pyramid on sedentary individuals and assuming that Americans will not be physically active, the Pyramid should actively encourage activity by including it as part of the Pyramid. IDFA would recommend that physical activities, such as walking, bike riding, dancing and yard work be added alongside the Pyramid. Activities at the base of the pyramid should reflect those activities people should do everyday, moving up the side of the Pyramid to those activities that people should participate in at least 3 times a week or once a week. This would enforce the importance of both physical activity and healthy eating that are important to balance a person's weight and their overall health.

**Issue #2: Appropriateness of the selection of nutrition goals for the daily food intake pattern.**

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Using the RDA or Adequate Intake (AI) for nutrients as nutrition goals for the Food Guide Pyramid is appropriate in order to ensure that all individuals are getting the nutrients that they need.

However, we do have concerns that certain age and gender groups are not getting the full AI of calcium under the Pyramid's recommendations. This shortfall is particularly dangerous for the females 9 to 13 years group. This age group faces an important time for both fast growth and calcium deposition in bones to ward off future osteoporosis. If the recommendations for this group provide only 93% of the Adequate Intake for calcium, there are many girls that aren't getting the calcium they need for their current growth and future bone health. Females 31 to 50 years, males 9 to 13 years and females 14 to 18 years are also not meeting their Adequate Intake level. While their shortfalls are smaller than the females 9 to 13 years group, these groups are still experiencing growth (males 9 to 13 years, females 14 to 18 years) and need adequate calcium intake in order to deposit calcium in bones or keep bones strong (females 14 to 18 years, females 31 to 50 years).

**Issue #3: Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

Although it was stated above, the fact that the Food Guide Pyramid should recommend at least 2 to 3 servings of milk and other dairy foods is important enough to repeat. No other product, with or without calcium fortification, can provide the same mix of important nutrients in one package that dairy foods do. Milk provides significant amounts of calcium, Vitamin D, protein, riboflavin, Vitamin A, magnesium and potassium to the American diet. Studies have demonstrated that people with lactose intolerance are still able to get 3 servings a day through cheese, yogurt, or smaller portions of milk.

Since the last revision of the Food Guide Pyramid, the RDI for calcium was increased to between 1000 mg and 1300 mg per day for the majority of the population. In order for people to consume these levels of nutrients, it is important that they are encouraged to eat enough dairy, the richest natural source of calcium. As mentioned above, studies are showing that dairy can be part of a solution for overweight, high blood pressure and dyslipidemia.

With the wide variety of dairy foods that are good or excellent sources of calcium, this level of intake is reasonable. IDFA shares the concerns of the National Dairy Council regarding the bioavailability of calcium in vegetables, the extraordinarily high estimates of how many servings of dark green leafy and green leafy vegetables people will consume, and therefore, the potential for overestimating the amount of calcium that Americans will get from vegetable sources.

**Issue #4: Appropriateness of using "cups" and "ounces" versus "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup.**

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Tipton & Matto

IDFA recommends that servings of foods in the Food Guide Pyramid be harmonized with the Reference Amount Customarily Consumed used by FDA for food labeling. This will make it easier for people to determine if they are consuming one serving according to the Food Guide Pyramid and will minimize consumer confusion over servings as labeled on their food products and servings as recommended by the Pyramid. This step could reduce the instances of people eating a portion of food and believing it is one serving, while it may have been 2 servings or 0.5 serving according to the Pyramid. With these changes, the Food Guide Pyramid should continue to make recommendations in terms of servings. For the Dairy Group, it would be much easier for a consumer to identify that they should consume 3 servings of dairy a day rather than 1 cup of milk, 1.5 oz of natural cheese and 8 ounces of yogurt.

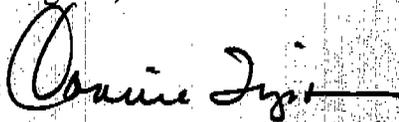
**Issue #5: Selection of appropriate illustrative food patterns for various consumer materials.**

While different Food Guide Pyramids targeted toward different populations would be useful for certain groups under certain conditions, there would still be a need for one general Pyramid to use with the general population. As you know, many food companies use the Food Guide Pyramid on packages and informational materials. With some exceptions, such as baby food, these companies are targeting a wide range of consumers. If there are different Pyramids for seniors, teenagers, or adult women, food processors would have to pick one of these to use. Often all of these groups of consumers would use the same product, even the same package of a product. In order to avoid this confusion, food processors may choose not to use a Pyramid at all. This would cause a loss of a great deal of consumer information.

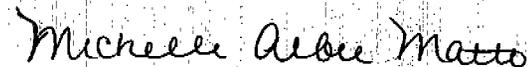
In addition to IDFA's comments, we are aware that the National Dairy Council has submitted comments concerning the importance of dairy in the Food Guide Pyramid. We fully support these comments and would like to emphasize the importance of the research the National Dairy Council reviews in depth.

IDFA is pleased to provide input to USDA and the Center for Nutrition Policy and Promotion during this process. Please feel free to contact me if IDFA can provide you with any further assistance or information.

Regards,



Connie Tipton  
Executive Vice President



Michelle Albee Matto, MPH, RD

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Tipton & Matto

Regulatory Affairs Manager

<sup>1</sup> Zemel, MB et al. Regulation of adiposity by dietary calcium. *FASEB J.* 2000; 14:1132.

<sup>2</sup> Zemel, Mb et al. Calcium modulation of hypertension and obesity: mechanisms and implications. *J Am Col Nutr.* 2001; 20:428S.

<sup>3</sup> Chan, GM et al. *ACN*, 2001.

<sup>4</sup> Carruth, BR and Skinner, JD. The role of dietary calcium and other nutrients in moderating body fat in preschool children. *Inter J of Obesity.* 2001; 25:559.

<sup>5</sup> Teegarden, D et al. Calcium related to change in body weight in young women. *FASEB J.* 1999; 13:A873.

<sup>6</sup> Davies, KM et al. Calcium intake and body weight. *J Clinical Endocrinology & Metabolism.* 2000; 85:4635.

<sup>7</sup> Appel LJ, Moore TJ, Obarzanek E, Vollmer WM, Svetkey LP, Sacks FM, Bray GA, Vogt TM, Cutler JA, Windhauser MM, Lin PH, Karanja N, *A clinical trial of the effects of dietary patterns on blood pressure. DASH Collaborative Research Group.*, *N Engl J Med* 336: 16, 1117-24, Apr 17, 1997.

<sup>8</sup> Klem, M.L., Wing, R.R., McGuire, M.T., Seagle, H.M., & Hill, J.O. A descriptive study of individuals successful at long-term maintenance of substantial weight loss. *American Journal of Clinical Nutrition*, 1997, 66, 239-246.



*Cooper Clinic*<sup>®</sup>  
at THE COOPER AEROBICS CENTER  
NUTRITION SERVICES

received  
10/29/03

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Addendum to Previous Letter

Monday, October 27, 2003

**To:**

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Dr., Room 1034  
Alexandria, VA 22302

**From:**

Georgia Kostas, M.P.H., R.D., L.D.  
Director of Nutrition  
Cooper Clinic  
12200 Preston Rd.  
Dallas, TX 75230

**Re:**

Letter to Food Guide Pyramid Reassessment Team  
Submitted October 23, 2003.

Please note correction to # 11 as follows:

Be consistent with milk as "3 a day" for all ages... Ages 19-50 need more calcium to prevent osteoporosis. Extra calcium after age 50 is not as beneficial after bone density has been lost. Bone density is built, up to age 30-35 and calcium must be adequate in the 20's, 30's, 40's to prevent **osteoporosis**. Also, the DASH program shows 3 calcium-rich servings are needed daily to **prevent hypertension**.

Please accept the corrected copy, and my apology for the error. Enclosed you will find a complete copy which includes the correction.

Thank you,

*Georgia Kostas, M.P.H., R.D., L.D.*

Georgia Kostas, M.P.H., R.D., L.D.  
Director of Nutrition, Cooper Clinic

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Dr., Room 1034  
Alexandria, VA 22302

October 23, 2003

Dear Food Guide Pyramid Reassessment Team:

Thank you for encouraging input from dietetic professionals regarding the newly proposed revisions to the U.S. Food Guide Pyramid. As a registered dietitian practicing out-patient preventive and therapeutic dietetic counseling for twenty five years at the Cooper-Clinic in Dallas, TX, I interact with consumers daily and experience consumer confusion regarding the Pyramid, and other government dietary guidelines. Here are my recommendations:

1. Use **cups** rather than servings, as proposed. It is easier to recall the simple message of eating "two cups of vegetables" daily than to recall "four servings" and wonder what a "serving" means. I've used "cups" for starches/cereals/grains/fruit/vegetables for years and "ounces" for protein foods ... consumers understand and prefer these measurements.
2. Use **ounces** for meat, ie. 6 oz./day (or 4-8 oz. a day), and let the consumer know that 6-8 oz usually is a restaurant portion, and a quarterpounder meets half a day's protein group requirement.
3. Twenty-two pyramid options seem too complicated for health professionals and consumers. Instead, please consider one basic 2000 calorie pyramid, with guidelines to adjust it for weight loss or smaller women's weight maintenance at 1500 calories; and show adjustments for 2500 calories for larger men or athletes. Most Americans are overweight and sedentary, and require fewer calories than the 2200 and 2800 calorie referenced by the current pyramid.
4. Put "beans" in the meat/protein group to encourage non-saturated fat protein sources.
5. Put potatoes, corn, peas in the starch/grain group as "starchy vegetables" to educate consumers who typically choose potatoes and corn as their only "vegetables".
6. Indicate "2 small" or "1 large" fruit as equivalent, to help the consumer consume "4/day" as 2 large fruit (1 big apple, 1 banana). The typical consumer is overwhelmed at the idea of eating "4 fruit a day", where as 2 "large fruit" such as "1 large fruit and 1 cup orange juice" is an easier concept to apply and comply.
7. Put seeds/nuts/peanutbutter in the "healthy fats" category and indicate the limit as 1 - 2 tablespoons a day to avoid excessive calories, while benefiting from their valuable nutrient content!

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Kostas

8. Keep the proposed sugar goals of 6 – 13 % of calories, but tell the public 5-10% of daily calories (to make memorable).
9. Keep the proposed fiber goals, but educate the public as “25 – 35 grams of fiber daily”, since people find “14 gm fiber per 1000 calories” too complicated.
10. Yes, use “illustrative (pictorial) food patterns” for breakfast, lunch, dinner, snacks... this is how people eat... See attached idea. Show portions pictorially, as well as meals.
11. Be consistent with milk as “3 a day” for all ages... Ages 19-50 need more calcium to prevent osteoporosis. Extra calcium after age 50 is not as beneficial after bone density has been lost. Bone density is built, up to age 30-35 and calcium must be adequate in the 20's, 30's, 40's to prevent osteoporosis. Also, the DASH program shows 3 calcium-rich servings are needed daily to prevent hypertension.
12. Use “whole servings” only, rather than “1/2” or “3/4” servings as proposed in the 12-calorie level food intake patterns.
13. Distinguish “additional fats” from “hidden fats”... to help make the consumer aware of all the hidden fat we consume, unaware.
14. Simplify the excellent “Table 2: Energy Levels for Proposed Food Intake Patterns” by simply stating: “The basic Pyramid assumes sedentary living. Add or subtract 250 calories a day based on body size and activity level. Smaller, older, or shorter Americans may need 250 calories less a day; more active individuals may need 250 calories more.”
15. Refer to fat portions as “tablespoons”. Use the words “healthy fats” for soft margarine, oils, nuts, seeds, peanutbutter.
16. Emphasize “fish – twice a week” and “3 wholegrains a day” to match the DGA 2000.
17. Split the Pyramid in four “stacks” with a little horizontal space between, to illustrate “complex carbohydrates”, “protein”, “fats”, and “extras” as separate nutrient categories. This visually helps the consumer understand the 50% calorie allotment for complex carbohydrates, etc.

Thank you for your comprehensive research and valuable contribution to consumer health education with your efforts to make the Pyramid a more user-friendly guide to healthful eating.

With highest regard,

*Georgia Kostas, M.P.H., R.D., L.D.*

Georgia Kostas, M.P.H., R.D., L.D.  
Director of Nutrition, Cooper Clinic



United States Department of Agriculture  
Research, Education, and Economics  
Agricultural Research Service

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October 27, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

Dear FGP Reassessment Team Members:

Attached are comments on the September 11, 2003 Federal Register Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data. Most comments focus on Section IV (Daily Food Intake Patterns and Tables 1-5) and on Section V (Topics of Particular Interest to CNPP for Comments).

The comments include technical concerns that may arise when information from the revised food intake patterns are applied to update the USDA FoodLink Pyramid Servings Database. This update will include the number of Food Guide Pyramid Servings per 100 grams of food reported in NHANES and in other surveys that use food code data from the USDA survey technical database. The update will add servings data for the USDA Nutrient Database for Standard Reference food items, nutrient data per 100 grams of food by Pyramid Servings food groups, including additional fat and added sugar, and serving weights by Pyramid food and serving units. The serving weights include those used to determine servings from each ingredient in foods that were aggregated to determine the total number of servings in 100 grams of food mixtures. Clarification on technical questions presented in this review will facilitate the update so that values from the FoodLink Pyramid Servings Database remain consistent with the data decisions specific to the revised Food Guide Pyramid daily intake patterns.

Sincerely,

*Annetta Cook*

ANNETTA COOK  
FoodLink Project Leader

attachment

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Comments on Federal Register Notice of  
Availability of Proposed Food Guide Pyramid  
Daily Food Intake Patterns and Technical Support Data

**Summary** Line 6 states that the existing patterns were "reviewed and updated". Is data used in this review available, especially for the 1600, 2200, and 2800 calorie patterns, that compare differences between the proposed food intake patterns with the patterns used for the development of the 1992 Food Guide Pyramid (FGP)?

**Section IV Daily Food Intake Patterns – Technical Support Data Tables 1-5**

The notes to each table are helpful but not explicit enough to fully understand the data presented and how or what information will be incorporated into a revised FGP. Specific comments (given below) on the notes for each table identify where additional supporting information would be helpful or where information from one table is not sufficiently supported in another table. Identification of the foods used to develop the nutrient profiles (Section III) would enhance understanding of information presented in the tables.

**Table 1**

Note 1 – Whole grains: Are the foods included in the whole grain subgroup based on the higher proportion or on the exclusive use of whole grain ingredients as determined by food labels or formulations? Is there a minimum amount of fiber, vitamins, and minerals for each food item in the whole grain group that was used to develop the meal patterns, nutrient profiles (Table 4), and the nutritional goals (Table 5)? Are bran and high fiber foods considered whole grain or other grain? Are high fiber breads and ready-to-eat cereals including those "with fiber added" used in the nutrient profiles for whole grains?

Are corn tortillas always made from stone ground corn or can they be made using refined corn flour?

Since wheat bread and cracked wheat bread are often incorrectly considered as whole grain foods, could these breads be listed among the examples for other grains?

Inclusion of frozen yogurt and dairy desserts in the Milk group is contradictory to the concept that "foods in each food group are represented in their lowest fat forms" (note 5) and are unsweetened (note 6). To avoid confusion, include only the same foods in Note 1 and Note 2. Otherwise, one might assume that a cup of dairy dessert (ice cream?) would meet the goal of 302 mg calcium per serving of milk.

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**Section IV Daily Food Intake Patterns – Technical Support Data Tables 1-5 (continued)**

The 1992 FGP servings of meat and meat alternate servings were expressed as “lean meat equivalents”. Can one assume that the lower fat forms used in the meat and bean group do not exceed 2.543 grams total fat per ounce as shown in Table 4? Fat limits for “lean or low fat” should be included in the descriptions for meat and beans in Notes 1 and 2.

Note 2 – The concept of *Quantity equivalents* is confusing. Is the intent to show examples of label amounts (measure amounts or portions) and corresponding number of Pyramid servings? The unit measures and servings shown are not those used in the Table 4 nutrient profiles by food groups and subgroups or those used in the 1992 FGP.

Do the quantity equivalents apply to *dried* fruit and *dried* vegetables?

Note 5 – Sentence 1: “Foods in each food group...”: Does this refer only to the five core food groups? Or, is there a composite for additional fats used for the fat subgroups in the nutrient profiles in Table 4? (Additional comments are given below on Table 4.)

Please clarify: “These additional fats are separated into solid fats and oils/soft margarine [line 4] ... the *amounts of each type of fat* in the food intake patterns were based on 40% of *the additional fat* as solid fat [or hard margarine] and 60% as oils or soft margarine” (line 6).

Since there is a goal for the proportion of fatty acids from the additional fats subgroups, is there also a goal on the types of fatty acids provided by all food groups including additional fat? For example, per the nutrient profile (Table 4), the milk group provides 0.441 grams total fat. Although that fat is not considered “additional fat”, is this milk fat classified as a solid fat for purposes of determining the proportions of total saturated fat to total unsaturated fatty acids and the proportion of calories from all sources of saturated fat?

How were additional fat amounts and types from processed and prepared foods determined?

What is the reference for the statement that 58% of the additional fats consumed were as solid fats and 42% as oils and soft margarine?

There is not enough information to conceptualize the quantities and types of foods that could be consumed to provide the amounts and types of additional fat (and teaspoons added sugar) shown in Table 1.

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**Section IV Daily Food Intake Patterns – Technical Support Data Tables 1-5 (continued)**

Note 6 – Are “teaspoons added sugars” measured as teaspoon-equivalents of sucrose (table sugar)? For example is a serving of maple syrup or honey the weight of 1 teaspoon or the weight of syrup or honey that provides 4 grams carbohydrate? See also comments on Table 4 (carbohydrate provided by added sugar, note 1, and note 2).

**Tables 2 and 3 notes:** Provide citations for references included in the notes or include those references in the additional information document “Published Materials on the Development and Reassessment of the Food Guide Pyramid”.

The lowest age represented in Table 2 (2 years) is not consistent to the lowest age in Tables 3 and 5 (1 year).

**Table 3:**

Note 5 – Added sugars: How do calories from alcohol affect the balance of calories from additional fat and added sugar? Are adjustments needed when measuring actual intakes against the food intake patterns? For example, since the patterns do not include calories from alcohol, should alcohol calories be subtracted from total calories before assessing Pyramid servings intake by the recommendations from the appropriate pattern for each individual by age, gender, and activity level?

**Table 4:**

Page 3 – Additional fats: What proportion and type of fats are included in each additional fat subgroup to achieve 85 grams fat from solid fat and 95 grams fat from oil/soft margarine. How were those proportions determined?

Added Sugars: Four grams of sugar /1tsp is shown as providing 4.196 g carbohydrate. Per the USDA Nutrient Database for Standard Reference, four grams of sugar provides 3.996 grams carbohydrate, and 1 teaspoon weighs 4.2 grams. If weight for 1 teaspoon of sugar is rounded, shouldn't the weight of carbohydrate also be rounded?

Notes 1,2 – These notes are somewhat confusing: The statement: “standardized amounts of food ... based on a weighted average of all foods in the group or subgroup eaten by Americans” (Note 1) suggests that portions (i.e., the amounts commonly eaten) rather than (Pyramid) servings were determined. See Smiciklas-Wright, H., D.C. Mitchell, S.J. Mickle, A.J.Cook, and J.D. Goldman. 2002. Foods Commonly Eaten in the United States: Quantities Consumed Per Eating Occasion and in a Day, 1994-1996. U.S. Department of Agriculture NFS Report No. 96-5, pre-publication version, 252 pp. Available online at [www.barc.usda.gov/bhnrc/foodsurvey/Products9496.html](http://www.barc.usda.gov/bhnrc/foodsurvey/Products9496.html).

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**Section IV Daily Food Intake Patterns – Technical Support Data Tables 1-5 (continued)**

However, the statement “Standard Amount .. represents the amount in one Pyramid serving” (Note 2) suggests a different meaning than the “standardized amounts” described in Note 1.

Note 3 – Unit expressions for Vitamin A are in RE (not RAE) and vitamin E in ATE (not AT). This correction is also needed in Table 5, page 1.

Note 4 – see comment for Table 1, Note 1- Grains group

**Table 5:**

Page 2 – Do the food intake patterns include foods representing the lowest sodium foods as well as foods in the lowest fat forms? For example, were regular canned vegetables and processed meats in the composites or were only lower sodium forms selected for the composites ?

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Cook

**Section V. Topics of Particular Interest to CNPP for Comments:**

1. *Appropriateness of using sedentary, reference-sized individuals in assigning target calorie levels.*

- This approach seems reasonable for the nutrition professional if adequate caveats and guidance for interpreting and monitoring intakes are provided.

For example, based on actual intakes, if caloric intakes exceed the recommendations for the referenced-sized, sedentary person, should the number of Pyramid servings consumed be compared to the appropriate (lowest) calorie level for a sedentary individual of their age/gender or to the servings specified in the meal pattern that corresponds to actual calories consumed?

- It would be challenging to translate the sedentary pattern into information that consumers could apply to their diets for assessing their diets and determining where changes are required to meet the recommended number of servings for their age/gender and activity level.

Will activities other than running time and rate (Table 2, Note 1) be provided in the revised FGP?

2. *Appropriateness of the selection of nutritional goals for the daily food intake patterns.*

- For completeness in assessing the patterns, consider including upper limits (Section V, part 2, line 17) in the supporting technical tables, perhaps in Table 5. This would be useful since many nutrients provided by the patterns shown in Table 5 exceed the goal by 100 % or more.

- Define "small deviations below the target of 100% RDA" that were used as the basis for acceptable (Section V, part 2, lines 21-22 ).

- For monitoring purposes, should additional patterns be developed using nutritional goals (EAR) for group (population) intakes?

- *Nutritional goals for total fiber*

Why not adjust the nutritional goal based on the IOM AI recommendation of 14 grams total fiber per 1000 calories down by 2.5 grams rather than increase the estimated intakes of dietary fiber to intakes of total fiber? Adjusting total fiber recommendations to dietary fiber would also allow the goals for fiber to be compared with dietary fiber amounts on food labels and food-fiber tables provided to consumers by their health care provider.

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**Section V. Topics of Particular Interest to CNPP for Comments: (continued)**

– *Nutritional goal for added sugars*

The limit that sugar provide 6-13% of calories rather than no more than 25% of calories (DRI macronutrient report), suggests that the number of Pyramid servings may be excessive, a concern that has been expressed by nutritionists and consumers about the current FGP. Data in Table 5 supports this observation: as the number of calories increase for a pattern, the nutrients provided by the pattern is 50 to 250% or higher than the goal. It would seem that the percentages over goal would be even higher in the nutrient profiles of the patterns for the low active and active individuals.

3. *Appropriateness of the proposed food intake patterns for educating Americans about healthy eating patterns.*

– Translating the fat and fatty acid goals into tools for educating Americans about healthy eating patterns will be challenging and problematic unless educators are given detailed information to identify the amounts and types of additional fat in each food (e.g., low fat ground beef vs regular ground beef). See also comments on Table 1 and Table 4 regarding fatty acid goals for the food intake patterns.

– The recommendation to limit saturated fats would be difficult for consumers to put into practice since they will not know the types of fats in prepared commercial and restaurant foods or how to determine the amount of additional meat fat from cuts that are higher than the “lower fat forms” upon which meat servings are based.

– Consumption in terms of number of Pyramid servings of whole grains, dark-green vegetables, legumes, and fruits (CSFII 1994-96) are already less than recommended. (See U.S. Department of Agriculture, Agriculture Research Service. 2000. Pyramid Servings Intakes by U.S. Children and Adults: 1994-96, 1998. *Online*. ARS Community Nutrition Research Group Web site available at <http://www.barc.usda.gov/bhnrc/cnrg> [accessed year, month, day]. Extensive nutrition educational efforts will be required to produce changes in eating practices to meet the nutrient goals prescribed by the Pyramid food intake patterns for these 4 groups as well as the two additional fat subgroups.

4. *Appropriateness of using “cups” and “ounces” vs. “servings” :*

– Use of both cups and ounces along with equivalent number of servings will be confusing since servings within the context of the FGP are often inconsistent with labeling serving weights and units. Also, the number of servings and amounts often vary from manufacturer to manufacturer. Has the research to support a equivalent amounts for servings with labeling units been conducted?

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**Section V. Topics of Particular Interest to CNPP for Comments: (continued)**

Weights per serving unit (½ cup, 1 slice, 8 fl oz) on a food-by-food basis may be the most direct and least confusing approach for consumers. FoodLink reference weights being developed from USDA weight measures data from the survey technical support database and the Nutrient Database for Standard Reference could be incorporated into a companion publication for use with the revised FGP. This would provide more specific guidance for counting Pyramid servings by food. The FoodLink reference database will contain amounts of additional fat and added sugar for each food code.

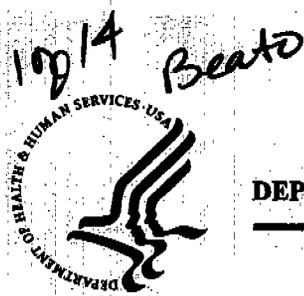
- The equivalents listed in Table 1, note 2 are very restrictive. For example, 2 cups of ready-to-eat cereal flakes is not applicable to puffed cereals, wheat biscuits (whole grain), or nuggets since they have different densities and shapes. What is the number of cups to provide 1 cup (2 servings) of grain from these cereals? What was the basis that 2 cups ready-to-eat flake cereal is equivalent to 1 cup grain (2 Pyramid servings): labeling guidelines, a standard for the amount of grain in a cereal, nutrients comparable to other grains servings (e.g., bread, rice, pasta, cooked cereal), etc.?
- The number of servings per 1 cup measure is not consistent with the serving sizes in the 1992 FGP or the units in Table 2, column 2.
- No definition has been provided on how the proposed 2- to-7 oz equivalent servings of meat and beans are defined in terms of lean. The meat item consumed may include "additional fat" but the point of excess/additional has not been assigned. For example, confusion will arise for the person who consumes a 3-ounce steak but does not understand or cannot determine the amount of additional fat over what's in the lower fat form that was used as the standard for the meat group.
- Efforts to guide consumers so they can determine the number of servings *they need* from each food group are already challenging. Delivery of an educational message using cups and ounces and servings equivalents would present new challenges requiring interpretation of both Pyramid servings and labeling servings. The difference is very subtle and will likely be missed by many consumers. Stay with units used in the 1992 FGP and add text to explain the differences between Pyramid servings and labeling servings. Perhaps, a table showing differences and similarities between Pyramid units for servings and those used for labeling could be provided.

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**Section V. Topics of Particular Interest to CNPP for Comments: (continued)**

5. *Selection of appropriate illustrative food patterns for various consumer materials.*

- Individuals need to understand which pattern is appropriate for them. Therefore, use of "the most common overall estimated calorie needs for the population, by estimates of actual activity levels" might be limiting since individual needs for calories and nutrients vary by gender, age, and activity level.
- Limiting the number of patterns for consumer materials is essential. Minimally, there should be four patterns: one pattern for young children, and three caloric-ranges for older children and adults. These ranges would have to be determined based on merging overlapping servings by food groups from the 12 proposed food intake patterns. Consideration should be given to the low active and active individuals in addition to the sedentary, reference-sized individuals.
- Consumers need to understand the concept of balancing intake with caloric expenditures. The easiest way to present this may be through a matrix identifying calorie levels and serving recommendations by gender, age, and activity level. Otherwise, the tendency to consume the high end for recommended number of servings will occur without regard to the excesses of calories, especially from additional fat and added sugar. It must be clear that the higher ends of the recommendations are appropriate for an active individual.
- Perhaps the 12 patterns could be a professional companion publication while keeping the number of sample patterns in the consumer version to three as presented in the 1992 FGP and continuing to issue a separate guide for children. The concept of three sample patterns by calorie levels is not readily apparent and results in misunderstanding of the intended reason for serving ranges.



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Office of the Secretary

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Assistant Secretary for Health  
Office of Public Health and Science

OCT 27 2003

Eric J. Hentges, Ph.D.  
Executive Director  
Center for Nutrition Policy and Promotion  
U.S. Department of Agriculture  
3101 Park Center Drive, Room 1034  
Alexandria, Virginia 22302

Dear Dr. Hentges:

The Department of Health and Human Services (HHS) appreciates the opportunity to comment on the USDA *Federal Register* Notice on the technical basis of the Food Guide Pyramid. Our detailed comments are enclosed.

As you know, HHS is committed to helping consumers adopt healthful eating and physical activity behaviors. The reassessment of the Food Guide Pyramid provides an excellent opportunity for collaboration across agencies in meeting this goal. Several key steps may improve the utility of this consumer tool to help Americans make healthy food choices:

- **Clear and consistent basis for the Food Guide Pyramid.** Recommendations should promote good health and lower risk of chronic disease. Nutrient adequacy and reduced risk of chronic disease should take precedence over basing diets on what consumers are currently eating.
- **Coordinated reassessment of the Food Guide Pyramid with the Dietary Guidelines revision.** It is important that the two products do not have conflicting information or messages and reflect the most current nutrition and health science.
- **Harmonization between the Food Guide Pyramid and the Nutrition Facts label.** Both of these are important educational tools for consumers to use when making food choices in the context of a healthful diet. Agreement in serving sizes should help to increase consumer understanding and ability to choose a healthful diet.

Thank you for the opportunity to provide comments. We look forward to coordinating the reassessment of the Food Guide Pyramid and revision of the Dietary Guidelines efforts with you. My staff and I would be happy to discuss further any questions you may have on these comments.

Sincerely yours,

*Cristina V. Beato M.D.*

Cristina V. Beato, M.D.  
Acting Assistant Secretary for Health

Enclosure

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HHS Comments in Response to USDA's Federal Register Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data

**General Comments.**

The Department of Health and Human Services (HHS) appreciates the opportunity to comment on the USDA *Federal Register* Notice on the technical basis of the Food Guide Pyramid.

HHS believes that both the Food Guide Pyramid and the Nutrition Facts label are important educational tools for consumers to use when making food choices in the context of a healthful diet. The reassessment of the Food Guide Pyramid offers an excellent opportunity for harmonization between the Food Guide Pyramid and the Nutrition Facts label. Harmonization should help to decrease consumer confusion.

One underlying issue is the basis for developing the Food Guide Pyramid. It is a graphic representation of science-based daily food intake patterns. One goal in 1992 was, "original food intake patterns were based on foods commonly consumed by Americans, as determined from national food consumption surveys, to make the recommendations realistic and practical." These patterns were then used to assign foods to food groups and subgroups. This brings up several important questions that are reflected in several of the following specific comments. Should fortified foods be included, since consumers regularly consume fortified foods? If fortified foods are included, should common patterns of dietary supplement use also be included since many fortified foods are, in essence, dietary supplements in food form (e.g., breakfast cereals, calcium-fortified orange juice)? Isn't the Food Guide Pyramid designed to reflect what individual Americans should eat, not what they are currently eating? What is a typical American diet? Does the variability among American diets null the term 'typical American diet'? Should the food groups and subgroups be reevaluated?

We believe that the philosophy, or goal, of the Food Guide Pyramid is fundamental to how decisions are made in re-designing the Pyramid. For example, if the philosophy is that the Food Guide Pyramid is to provide guidance on recommended food patterns from unprocessed foods, then the Pyramid will likely place heavy emphasis on fruits and vegetables, whole grain cereals and flours, and plant sources of oils and protein. That is, it will be similar to the DASH diets and other diets based on food patterns that have been tested and been shown to be both nutritionally adequate and useful in reducing the risk of chronic diseases. Conversely, if the philosophy is that the Food Guide Pyramid is to provide guidance on meeting Dietary Reference Intakes for nutrients using commonly consumed foods, then the Pyramid will likely emphasize highly fortified foods such as breakfast cereals, with less emphasis on fruits and vegetables and whole grains. In the latter case, the inclusion of commonly used dietary supplements may also need to be considered because there is no rational basis to argue that supplemental nutrients in food form are preferable to supplemental nutrients in pill form. We believe that the question of purpose of the Food Guide Pyramid is absolutely fundamental to the decisions that will be involved in this revision. Therefore, we strongly urge that a clear statement of the purpose be explicitly stated at the beginning of the document. All decisions should be justifiable in the context of the stated goal. HHS would be glad to have further discussions with USDA on this very basic and critical issue.

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Overall, it is not clear from the *Federal Register* Notice if the attached tables, once approved, will be presented to the public along with the Food Guide Pyramid or if the tables will only be used as a resource in developing the Food Guide Pyramid and other additional information. If the tables will in some way be presented to the public, in their present form they are difficult to understand and may prove to be more confusing than helpful. Some of the HHS comments deal with consumer readability.

The Food Guide Pyramid should be coordinated with the Dietary Guidelines effort so that the two products do not have conflicting information or messages and reflect the most current nutrition and health science. The emphasis on energy balance, intake of dark green and orange vegetables, whole grains, and limiting saturated fat are consistent with the national health promotion and disease prevention goals set by Healthy People 2010. We look forward to coordination of these efforts.

### Specific Comments.

**1. Appropriateness of using sedentary reference-sized individuals in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.**

Consistent with the HHS endeavor to fight the obesity epidemic, we concur with the effort to select energy levels that will not overestimate energy needs and encourage overconsumption of calories.

Patterns based on lower energy levels associated with sedentary reference-sized individuals seem to be appropriate for assessing nutrient adequacy for several reasons: the U.S. population tends toward overweight/obesity; the population is generally sedentary or low active; and, if nutrient adequacy is achieved with a lower energy level, then higher energy levels would also be adequate. It is unclear how three physical activity levels are going to be translated into useful information in the Food Guide Pyramid. While the expansive table (Table 2) is nice for the health care and scientific communities, it is less clear how this makes the Pyramid more user-friendly for consumers. It is not yet clear whether this "target" level, beyond representing the pattern tested for adequacy and moderation, will also be the one highlighted in the new consumer materials. If that is the case, the basis for it must be clear and it must be differentiated from the "suggested" patterns for low activity and high activity.

It will be difficult to explain 12 calorie levels to consumers and perhaps even to nutritional professionals (Table 1). We suggest if this table is shared with consumers and health professionals that activities of independent living be explained. It might be best to use one or two reference values and highlight that these are for sedentary lifestyles. To help synchronize across the various agencies we suggest utilizing 1500 and 2000 calories. It is especially important to make sure that people who should consume few calories (<1600) are able to meet the Recommended Dietary Allowance (RDA) for most nutrients. The upper calorie levels (2600, 2800, 3000, and 3200) are quite high and unlikely to be reached by sedentary persons. In addition, the high fat intakes associated with the high calorie levels are of concern with respect to serum cholesterol levels.

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2. **Appropriateness of the selection of nutritional goals for the daily food intake patterns.**

Please see additional comments regarding individual tables at the end of this document.

**a. Adequacy goal.**

It is appropriate to use the Recommended Dietary Allowance (RDA) or the Adequate Intake (AI), when the RDA's are not available, for nutrient adequacy goals. However, sodium and potassium recommendations should reflect the newest science and consider the deliberations of the 2005 Dietary Guidelines advisory committee and the soon to be published Institute of Medicine (IOM) Dietary Reference Intake (DRI) report on electrolytes and water.

**b. Moderation goals.**

It is appropriate for moderation goals to use the acceptable macronutrient distribution ranges (AMDR) adopted by the Food and Nutrition Board. However, the intent to provide no information about limiting consumption of *trans* fat except in consumer materials is not consistent with guidance from multiple authoritative groups, including the 2000 *Dietary Guidelines*, IOM, and the National Cholesterol Education Program Adult Treatment Panel III (ATP III) guidelines. These reports conclude *trans* fat raises blood cholesterol levels. The IOM report and the ATP III guidelines stated that *trans* fat intake should be kept low, and the 2000 Dietary Guidelines state that reducing fat intake should be accomplished by reducing saturated fat and *trans* fat.

The recently announced U.S. Food and Drug Administration (FDA) final rule published July 11, 2003 requiring food products to display the *trans* fat content on the Nutrition Facts label will increasingly make *trans* fat information available to the public. We concur that in addition to the Pyramid, the consumer materials of the Food Guide Pyramid should advise consumers that, as with saturated fat and dietary cholesterol, *trans* fat raises blood cholesterol levels, and that, as with saturated fat and dietary cholesterol, the intake of *trans* fat should be kept low. *Trans* fat should not be emphasized more than saturated fat and cholesterol, but even in the absence of a recommended intake goal, it is necessary and feasible to advise limited *trans* fat intake.

Added sugars, saturated fat and cholesterol should not be considered as nutritional goals. Please see the discussion under the added sugars response.

**c. Nutritional goal for total fiber.**

The nutritional goal stated for total fiber is 14 gm/1000 KCalories. Because of the various definitions of dietary fiber, it would be helpful to provide the exact definition of total fiber that is being used in the calculations for developing the Food Guide Pyramid.

Dietary fiber calculations should be derived in the same way as calculations for other nutrients. If commonly consumed foods are the basis for the Pyramid decisions, then total fiber will be the mixture of dietary and functional fiber that is commonly found in foods, and therefore total fiber. That is, it will include naturally occurring fibers in fruits and vegetables as well as the added gums and other added fibers found in

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processed foods. Food composition table values for fiber in commonly consumed foods will be based on analyzed values, which do not discriminate between dietary and functional fibers. Importantly, the DRI is based on total fiber, and total fiber should be the goal to be achieved. The intention of the 5.1/2000 KCalories correction factor was not intended to be used as a correction factor in developing food composition, nutrient tables or dietary guidance materials.

*d. Nutritional goal for vitamin E.*

Vitamin E had been identified by USDA as a nutrient for which the RDA cannot be met easily from food sources. The arguments provided for the Vitamin E recommendation not being met do not seem convincing. Stating, "This is not consistent with the philosophical goal of being realistic and practical," suggests that the philosophical goal overrides the goal of nutrient adequacy. Stating, "meeting the recommendation requires substantial changes from typical intakes and would require the use of foods not commonly consumed," raises the question of whether the changes would be more drastic than the increases in dark green vegetables and legumes from current consumption levels. Why should consumption of vitamin E from food sources be treated differently?

Nonetheless, there may be reasons why the vitamin E RDA cannot practically be achieved, or is not even necessary to achieve. If evidence suggests that the Vitamin E RDA is unnecessarily high (e.g., lack of any recognized public health problem in spite of intakes well below the recommendation), then that should be stated and would make a better argument. Or, if achieving the vitamin E recommendation is not compatible with the other nutritional goals (energy and fat moderation), that too would be much more convincing than the current rationale.

The recognition that the vitamin E RDA is difficult to achieve through food raises the issue of the possible use of fortified foods or dietary supplements to meet nutrient requirements not provided by diet. If the supplement issue is to be considered, it raises numerous issues about the purpose of the Pyramid and what should and should not be indicated about supplement use. If enriched and fortified foods are being considered within the Pyramid framework to meet needs, then one can logically argue that supplements should likewise be considered.

Since the Pyramid is designed for the general population, it needs to be flexible enough to meet the nutrient needs of the diverse U.S. population. It may be appropriate in situations when nutrient needs cannot be met by specific populations (e.g. vitamin B12 and the elderly) that footnotes or other types of notation be included in consumer guidance materials. It also should be clear what food sources are considered (e.g. best sources of naturally-occurring foods and those for which nutrients are under mandatory fortification). The patterns should be tested to see if those types of foods meet nutrient requirements for individuals and the same criteria should be used for all nutrients/foods. The intake patterns would also need to be tested against the nutrient tolerable upper intake level (UL).

There is also a need to clarify if the form of vitamin E calculated is bioavailable (i.e. what form of vitamin E should be consumed to meet the RDA). Sunflower and safflower oils and some nuts are good food sources of vitamin E and their consumption should be promoted for meeting vitamin E requirements. It is not clear that a nut profile would have to include peanuts. However, it should be made clear that consumption of these vitamin E rich oils and nuts should remain within the

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bounds of the caloric and fat allowance. The added emphasis on increasing vitamin E rich legumes and vegetables will help avoid the potential for inadvertently encouraging an increase in intake of cholesterol-raising fats. There is a need for guidance to the public as to how to achieve the RDA for this nutrient.

In addition to vitamin E, there may be other nutrients that are problematic; namely the bioavailability of vitamin B 12 for the elderly, vitamin D, and iodine. Iodine and Vitamin D are not shown in Table 5. Is there a reason these were not examined? Is there any way to determine whether these patterns might fall short for these nutrients, even if the precision of USDA's estimates is constrained by database limitations?

*e. Nutritional goal for added sugars.*

Although we agree with limitation of added sugars, listing added sugars in Table 3 gives the appearance that consumption of added sugar is a nutritional goal (this also holds true for cholesterol and saturated fat). It is unclear why one needs to establish a goal for added sugar. Scientifically there is no evidence that once nutrient requirements are met that providing energy as sugar or other sources of calories makes any difference. Thus, to set a goal seems illogical and not scientifically sound.

If there is to be a "nutritional goal" for added sugars, the proposed goal seems unrealistically high (even though it says *less than 25%* of kcal). The DRI macronutrients report suggested that value in the text, but did not give it the same weight of evidence as the other macronutrient distribution ranges. It also is not a goal for intake, but a maximum intake based on the decreased intake of some micronutrients by American subpopulations exceeding that level. Putting it in a table with other nutritional goals may suggest that an intake level approaching 25% is reasonable. In fact, as the analysis shows, food patterns cannot meet the other nutritional constraints without added sugars being closer to a range of 6% to 13% of energy. We suggest removing it (along with cholesterol and saturated fat) because it is misleading and was never considered, even by the DRI committee, to be a goal to strive for.

However, since added sugars is a major source of calories for Americans, it should be highlighted in consumer materials. Saturated fat and cholesterol also should be highlighted because higher intakes of these nutrients can be associated with increased risk of chronic diseases.

There should also be some discussion about the difference between "added sugars" and added caloric sweeteners. Fruit juice concentrate that is used to sweeten products is not included in the current definition of "added sugars." However, it is an added caloric sweetener. It may make sense to change the terminology from added sugars to caloric sweeteners and consideration should be given to including added fruit juice concentrate that is used to sweeten a product.

Another consideration is removing the terminology "added." Many consumers interpret the term to mean something the consumer adds to the product (for example sugar to coffee) rather than what a food producer may add to the product premarket. An alternative to the term "added sugars" may be caloric sweeteners.

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### 3. Appropriateness of proposed food intake patterns for educating Americans about healthful eating patterns.

Although the twelve calorie levels seem to reflect current dietary intakes, how will the information be conveyed to the appropriate target audience? Although sedentary, reference-sized individuals are considered for assigning calorie levels, how will this be communicated to the public so that they can correctly determine their physical activity level and incorporate dietary pattern recommendations accordingly? If this table will be available to the public, Table 1 may have too many columns (12) and it may be harder to disseminate and implement in practice compared to a modified table with one-half or one-third as many columns.

It is not clear how the different energy levels and their corresponding dietary patterns will be represented on the Food Guide Pyramid. This issue needs to be clarified due to the numbers of people in the U.S. who are already overweight or obese. The Pyramid needs to help consumers assess and improve their diets, including the prevention of further weight gain. We agree it is appropriate to include "sedentary" as an option given the number of inactive adults, and defining the terms sedentary and active lifestyles is useful. It is important that this communication opportunity to the public imparts a message that can be easily understood and is helpful to the consumer who wants to achieve and maintain a healthy weight and healthful eating pattern. We have concerns about nutrient adequacy in certain age/gender groups such as children under age 2 (see table 3), and adults consuming diets of less than 1400 calories for weight control or other purposes.

#### a. Are proposed patterns reasonable intakes to expect for age/gender groups?

##### Dietary Patterns

The Food Guide Pyramid is a general icon used to illustrate the quality and proportion of dietary intake that is recommended. It was not designed to be used alone, and must be accompanied by other materials in a "user's manual" or additional consumer information that will go with the Pyramid to translate all of this material into meal and dietary patterns.

The patterns as suggested need to provide for the richness of the "typical diet" in meeting needs. It is important that multiple food items are presented so that consumers do not believe that one source can meet all requirements. It is also clear that considerable variability exists in the content of nutrients in specific foods. It is less clear how this variability can be demonstrated so that consumers understand how to achieve each of the components of the Pyramid.

Some of the materials seem to suggest that these patterns are viewed as recommendations of what Americans *should* eat rather than sample patterns of what they *could* eat to meet nutritional recommendations. There are a number of combinations of foods that could meet these nutritional goals; this is one that was designed to be as small a departure as possible from the way the general public currently eats. However, the Pyramid needs to be flexible enough to be inclusive of the food preferences of the diverse U.S. population.

Nutritional adequacy was tested with a mix of foods in each food group profile representing what most Americans eat. How dependent is adequacy on that mix? For example, if vegetarians followed these patterns, choosing only legumes and seeds from the meat group, what would the nutritional profile look like? How adequate are the patterns for populations for whom rice is the staple grain?

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### Total Diet Approach

The total diet vs. foundation diet concept is very advantageous, but must be reinforced. In the previous version, some major points related to this concept were lost in the graphic presentation. For example, it is essential that the upcoming graphic presentation be very clear regarding quantification of the tip of Pyramid by specifying amounts of discretionary fats and added sugars in common household measures. In addition, it must be very clear that if the consumer chooses something other than the leanest choice within a food group—whole milk or a fattier cut of meat—that fewer “additional fats” can be chosen. The total diet concept is negated, of course, if the *total* diet is not accounted for.

### Fortified Foods

Fortified cereals are now part of the grain composite “because of widespread use.” This represents a huge philosophical shift from the idea that food guides should demonstrate how an adequate diet can be achieved through foods alone (rather than supplementation/fortification). (Note: Please see similar discussion under vitamin E comments and general comments.) Of course, when food intake is restricted in quantity or quality, supplements may be needed, but this exercise—demonstrating the efficacy of food intake patterns—should show how adequacy *could* be achieved without supplements/fortification. In addition, it raises the question of whether the adequacy of the patterns *depends* on this fortification. It would seem very important to test the patterns without the inclusion of fortified foods to determine how adequate they are in case such foods are not selected. Then, because they are ubiquitous, to understand the potential effect of fortified foods (even beyond grains), an analysis to determine the effect on nutrient levels with various selections could be performed.

#### **b. Are proposed intakes of some food groups or subgroups feasible?**

Although it is not clear how the food groups and subgroups will appear in the revised Pyramid, the proposed groupings in Table 1 raise several questions:

- Why are there no subgroups for fruits such as citrus fruit (for vitamin C), deep orange fruits like cantaloupe (for carotenes), and red/blue berries (for various bioactive components)?
- The vegetable subgroup called “dark-green” should be “dark green leafy and broccoli” to more clearly indicate the foods grouped here (broccoli, spinach, romaine, collards, turnip greens, mustard greens). All are leaves except broccoli which is a stem, stalk, and flower vegetable. Without the term “leafy” added to the description, consumers may assume that other dark green vegetables (e.g., acorn squash, cucumber, okra, green beans, peas) belong to this group.
- The vegetable subgroup called “deep-yellow” should be “deep-orange” because the examples provided (carrots, sweet potatoes, winter squash, pumpkin) are orange, not yellow. Also, not all winter squashes are orange.
- Legumes (beans and peas) are listed in two groups – as a vegetable subgroup and with the meat group. It is confusing for consumers to have legumes in two food groups and to call them by two different names (i.e., “legumes” in the vegetable group and “beans” in the meat group).

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Legumes have a unique nutrient profile that is different from other vegetables (legumes are high in protein, zinc) and different from meat (legumes contain folacin, dietary fiber, starch, and isoflavones). Legumes would do better as a separate grouping apart from both vegetables and meats to account for their varied uses (main dishes, side dishes, mixed dishes) in mainstream US cuisine as well as in vegetarian and ethnic cuisines. If legumes are not a separate group, consider including legumes as an option within the meat group only.

- Nuts and seeds are missing from the food groups. These foods contribute important nutrients as well as calories to the diet and are widely consumed. They could be listed as a subgroup of the meat group (along with the legume subgroup). They should specify whether they are raw or cooked, and salted or unsalted.
- Table 1 seems to imply a certain rigidity to diets. Better diets could be selected by having higher intakes of dark green leafy vegetables and lower intakes of starchy vegetables and/or by having higher intakes of whole grain products and lower intakes of "other" grains, but this flexibility does not seem to be indicated.
- The "Milk" group should also include yogurts and cheeses, but this is not indicated.
- With research over the past 10-20 years of the beneficial bioactive components in various fruits and vegetables, it would be useful to have a "cruciferous" vegetable subgroup and a "berry" subgroup for fruits to encourage consumption of these foods. Also, the benefits of the allium vegetables (garlic, onion, scallions) and the lycopene vegetables (tomatoes, watermelon) could be included with subgroups.
- In the "Notes for Table 1" on page 2, corn tortillas are listed as examples of whole grains. This is only true if the corn tortillas are made from whole ground cornmeal. Also, there is inconsistency in the use of the term "enriched" when providing examples of "Other grains." It is not clear if products must be enriched to qualify for the "other" category or if both enriched and unenriched are included.
- In the "Notes for Table 1" on page 3 (section called "Quantity equivalents for each food group"), there is inconsistency in the expression of the number of servings per quantity of food. Examples for grains, fruits, and vegetables are provided as 2 servings; those for meat and beans are provided as 1/3 to 1/2 serving; and those for milk are provided as 1 serving.
- The proposed food groupings do not provide for some commonly consumed foods that are high in fat and/or sugar such as French fries, potato chips, pastries, doughnuts, cookies, cakes, pies, and ice cream. How are consumers to understand how these foods fit into a daily food pattern if they are not included in the food guide? Consumers may group French fries and potato chips with starchy vegetables, but will likely not understand that they also need to include the fat in the fat group. They may group grain-based desserts in the grain group, but not understand that they need to include fat and sugar in the "additional fats" and "added

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sugars" groups. It should be explained how these foods fit into the Pyramid.

**c. Additional fats**

Constructing a food pattern with lean food choices is a good idea. The switch in proportions of oils/soft margarines to solid fats seems beneficial and consistent with current recommendations for balance among the fatty acids. However, creating a separate category for additional fats is confusing and does not convey the health benefits of limiting cholesterol-raising fats in order to reduce cardiovascular disease. Also, it reflects fat that may be present in food selections from the milk and meat food groups as the proposed Pyramid assumes all milk products are nonfat and all meat selections are lean or low fat. An option may be to recalculate foods in the milk and meat groups to reflect current (perhaps median) consumption of products from these two groups. With that done, the "additional fat" group will also need to be recalculated.

The critical factor will be how well fats and the tip of the Pyramid are explained to consumers: this concept should be tested. Also, will the consumer guide explain that, if fattier choices are made within the meat and milk group, the "additional fats" should nearly all be oils/soft margarines? Fat intake will be recommended at a 60:40 ratio of unsaturates to saturates. Was a different ratio recommended in the past? If so, it is not reflected in the public documents. There is concern that this recommendation will not be clarified for the public. Also, there was some concern about the higher levels of fat intake recommended for people at high caloric intake levels. Many people believe that these extra calories should come from non- or low-fat sources (fruits and vegetables, whole grains, and lean protein sources). This leaves Americans confused about how much fat and sugar is acceptable. Including a recommendation for the tip of the Pyramid should be considered when that piece is revised. It should be considered that fats, oils and sugars possibly not be included as a separate group in the tip of the Pyramid.

In addition in Table 4, Nutrient Profiles of Food Guide Pyramid Food Groups and Subgroups, the second column lists "Standard Amounts," which are said to be the amount in one Pyramid serving. The amounts listed for "Additional Fats" are clearly too high (they are 100 grams). They should be listed as 15 grams (about 1 tablespoon). All the other foods are listed as one serving. The contribution of the nutrients for the 100 grams of fats is thus too high. The milk group should specify fat-free milk for all except children up to the age of about 2 years. Additionally, note 5, Explanation of "additional fats," should offer 1% milk rather than whole milk as an alternative to fat-free milk for adults and children older than 2 years.

**d. Will professionals be able to use these proposed new patterns to help educate Americans about healthful eating patterns?**

It is unclear what is being proposed and therefore undeterminable if professionals will be able to use these proposed new patterns.

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e. **Will individuals or families be able to use these patterns in making food choices?**

It is not clear for whom the revised Food Guide Pyramid is intended and what supporting materials will be provided. How will the target audience know where they fit? How will the information provided in this notice be translated to the public, especially in relation to the obesity crisis?

**4. Appropriateness of using “cups” and “ounces” vs “servings.”**

Serving sizes

We strongly encourage harmonization between the serving sizes used for the Food Guide Pyramid and the Nutrition Facts label. The Nutrition Labeling and Education Act of 1992, which set the parameters for nutrition labeling, specified that FDA was to use “amounts customarily consumed and which [are] expressed in common household measures that [are] appropriate to the food.” With this statutory directive and using the results of USDA’s food consumption surveys, FDA established reference amounts of foods customarily consumed per eating occasion that are the basis for serving sizes declared on food labels. The use of cups and ounces, i.e., common household measures, in the Food Guide Pyramid would greatly assist in harmonization of these two educational tools. There is no basis on which to assume that use of cups and ounces would suggest to consumers that choosing a variety of foods within the group is not important. The Pyramid will be delivering a message of the importance of variety in all food groups. That message will inform consumers that the total amount should represent several choices from each group. In addition, accompanying information can readily inform consumers of the equivalence of specified amounts of differing foods, e.g., 2 small slices of bread being equivalent to 1 cup of grains. This is nothing new compared to the current Pyramid that relies on consumers understanding equivalent “servings” within food groups.

Providing information on the Food Guide Pyramid in household measures (cups and ounces) and metric equivalents (grams and milliliters) will allow for easy comparison with amounts on Nutrition Facts panels. For example, if the Pyramid suggests 6 fluid ounces for juice, consumers will be able to easily compare that with the amount on a food label, be it a 4-, 6-, 8- or 10-ounce container, to determine how much the product contributes to recommended daily intake patterns. This would greatly reduce the confusion caused by differing descriptions of what a serving is. It also prevents consumer misunderstanding of the number of recommended servings (e.g., consumer belief that they can eat 6-11 servings of grains, with a “serving” being whatever portion they put on their plate, such as 1-2 cups of pasta) since consumer-based research (Dietary Guidelines Alliance, August 2002) reveals that consumers use the terms “servings” and “portions” interchangeably. Revisions to the terminology in the Food Guide Pyramid would eliminate confusion and provide USDA with the opportunity to enhance consumer education and understanding.

In addition, the *Federal Register* states on page 53539, “The serving sizes used on labels are not necessarily equivalent within a food group in terms of calories or nutrients, while Pyramid serving sizes within a group must be approximately equivalent in both calories and nutrients.” Pyramid serving sizes within groups are not always equivalent in calories and nutrients, depending on the foods and the group. In fact, there can be a wide range of nutrients in just one kind of food, no less between foods within a group. For example, an

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8 oz. serving of yogurt can vary in calcium from 20%DV - 45%DV and from 110-240 in calories. It is precisely because of these differences in nutrients and calories that nutrition labels on packaged foods become a valuable tool in helping consumers determine which foods are higher or lower in calories and nutrients within and among food groups. Also, the serving size for meat, poultry, or fish of 2-3 ounces in the current Food Guide Pyramid is confusing. We recommend that it be either 2 ounces or 3 ounces.

Therefore, providing recommendations for the total amount of food in terms of household measures, rather than number of servings of a particular size, may eliminate a lot of confusion surrounding what constitutes a serving of each group. It would also be consistent with the food label information that provides quantities in terms of household measures (cups, etc). In addition, providing amounts in whole numbers (in cups) could help to clarify current confusion about high numbers (e.g. 6-11 servings) of small servings (1/2 cup). However, this is a concept that would have to be tested with consumers to see if they understand it.

If it is decided to keep some number of servings of a particular size, consideration should be given to switching the terminology from "servings" to something that doesn't imply the portion consumed at an eating occasion, such as "exchanges" or "units" or "samples" (the latter is used by Australia).

Another consideration could be to provide one reference "serving size" point. All consumers would eat the same number of servings. However, the size of that serving would vary based upon the consumer's caloric needs.

#### Food Groups

If a food source can be counted in two groups on the Pyramid, it should also be emphasized to consumers. For example, if beans will be included as vegetables and as a protein source, consideration should be made to allow for them to contribute to the requirements of both food groups. There is also concern that the term 'legume' may be more accurate than 'bean' and legumes may be more commonly consumed as an alternative protein source, but that the American public does not know what a legume is. This point should be considered when changes are made to the educational piece.

Is there consideration of rearranging food groups? It is inconsistent that Pyramid servings within a group must be approximately equivalent in both calories and nutrients (*Federal Register*, page 53539). This has not been the case in the past. For example, 2 cups of sweet potatoes and 2 cups of celery are both one serving in the vegetable group but are very different in nutrient and calorie content. The same is true for one orange and one banana or one egg and 2 tablespoons of peanut butter. We recommend identifying serving sizes and not using equivalents. For example, consumers already understand that 1 cup of grains is a serving and that 2 small slices of bread are a serving.

#### **5. Selection of appropriate illustrative food patterns for various consumer materials.**

We agree that obesity is a problem for the country, but it is unclear if the use of 12 caloric intakes can solve this problem. Specifying energy levels and trying to integrate all of them into eating patterns for each energy level group results in a very complex document. It is not clear how these would be integrated into the Pyramid concept or icon. Mixing caloric intakes with nutrient requirements is difficult to do. The rationale for 12 different calorie intake patterns is a problem with respect to nutrient adequacy, especially for those

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persons consuming less than 1400 Calories. The eating patterns would not be adequate in micronutrients for adults consuming a low calorie diet. The rationale for so many calorie levels is not apparent in some cases.

However, it would be appropriate to have at least one of the illustrative patterns represent the 2000 calorie level, because that is the basis for the food label, and consumers would undoubtedly appreciate the consistency. We recognize that this does not mean that other calorie levels for men and women of varying activity levels not be included in the text, but that the standard measurement used be consistent with the Nutrition Facts panel to avoid confusion and to promote understanding, usage, and educational efforts. Perhaps one of the other levels could be based on 1500 calories (appropriate for sedentary women and some children). Thus, the use of the 2000 calorie level will allow consumers to have two nutrition tools (the FGP and the nutrition label) that are consistent.

Additional illustrative food patterns could be featured in materials designed for targeted audiences. For example, materials aimed at small children or the elderly could feature the lower energy patterns and those aimed at adolescent athletes could feature the higher energy patterns. Consumers often identify with age related groups and not groups based on common overall estimated calorie needs. Older Americans have a negative reaction to the current grouping of children age 2-6, women, and some older adults. A frequent comment is, "I need more food than a 2 year old."

Another issue is that it's logical to assume that as calories increase so should the percentage intake of fat, etcetera. It is unclear if the science really points to increased proportional need for all food groups as calories increase. Also, it is unwise to assume that all fats are equivalent. There are unsaturated fats that are more solid and some saturated fats that are more liquid. Thus, the issue again, as with other aspects of the Pyramid, is to minimize confusion and to be scientifically correct.

The Pyramid is a national icon that is exceedingly important for portraying proposed eating behaviors and health. It should be harmonized with other documents and used to facilitate and augment the Dietary Guidelines and vice versa.

#### Specific table notes:

#### Table 2:

- Under "Notes for Table 2," note 1: give examples of what the "activity of independent living" includes. Cleaning house? Climbing stairs occasionally?
- The information presented in Table 2 is based on food consumption information from the 1994-96 CSFII and may not reflect current food consumption patterns or current food composition data (e.g., there have been changes in fortification practices). We support the comparison of 1994-96 CSFII data with the most current NHANES food consumption/composition data to be sure they are comparable.
- Energy Levels for proposed Food Intake Patterns. It is not clear what the term "Pattern(s)" means. The definition on the next page states "energy levels assigned to each age/gender group..." It may be helpful to readers to place the term "calories" after "Pattern" as in Table 3 or in the foot note.

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**Table 3:**

- Most of the document starts with 2 year-old children (this is appropriate), but other parts of the document include children 1 year-old and up. One year-olds should still be in the weaning stage and should not be included here. The tables should be checked for consistency with regard to age groups for recommendations.
- Food Patterns for 2400, 2600, 2800, 3000 and 3200 calories are confusing. Since these patterns are only for the active, is it necessary to have this many patterns? Could they be combined to 2400, 2800, and 3200?
- Iodine and Vitamin D are not shown; is there a reason these were not examined?

**Table 5:**

- Should include an examination of how adequate a few of the patterns would be for pregnant and lactating women.
- Most of the document starts with 2 year-old children (this is appropriate), but other parts of the document include children 1 year-old and up. One year-olds should still be in the weaning stage and should not be included here. The tables should be checked for consistency with regard to age groups for recommendations.
- Iodine and Vitamin D are not shown; is there a reason these were not examined?

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Bell

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**received**  
10/27/03

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Richard E. Bell  
President

October 27, 2003

TO: Food Guide Pyramid Reassessment Team  
USDA Center for Nutritional Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Comments on Proposed Healthy Eating Pyramid

Riceland Foods, Inc., is a farmer-owned cooperative with 9,000 farmer members in Arkansas, Missouri, Mississippi, Louisiana and Texas. Riceland mills and markets about a fourth of the U.S. rice production annually.

We believe the Food Guide Pyramid has been a useful tool in communicating dietary guidelines for good nutrition. The current illustration is easy to understand by children and adults, and it is simple to implement to ensure balanced nutrition.

We were surprised to find that the proposed Healthy Eating Pyramid divides the grain-foods category, placing more emphasis on whole grains while placing white rice in the "use sparingly" category with products such as butter and sweets.

We believe subdividing the grain-foods category will not only serve to confuse the American people, but mislead the public regarding the nutritional value of rice.

I would remind the Reassessment Team that rice is a unique cereal grain. Rice is a complex carbohydrate and a good energy source. It provides more vitamins, minerals and fiber than simple carbohydrate foods. A one half-cup serving of rice provides these nutritional benefits with only 103 calories. The protein in rice is balanced with all eight amino acids present in proper proportion. Additionally, rice is cholesterol-free, fat-free, sodium-free, gluten-free and non-allergenic, and easy to digest.

Rice clearly should not be included with foods providing empty calories in the "use sparingly" category of the proposed Healthy Eating Pyramid.

I urge the Reassessment Team to re-evaluate the nutritional benefits of rice and restore rice to its proper position with other grains as part of the foundation of a healthy diet.

*Richard E. Bell*

Richard E. Bell  
President and  
Chief Executive Officer

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I have been concerned for some time about the current Food Pyramid guide. It currently recommends that 'cereals' make up a substantial portion of one's daily diet.

The usage of the word 'cereals' meaning 'grains' has become obsolete and is therefore terribly misleading, resulting in certain malnourishment should the guidelines be followed as currently suggested.

I strongly urge you to change the word 'cereals' to 'whole grains' - to update our Food Pyramid Guide so that it can again become a responsibly reliable and effective nutritional tool.

Sincerely,  
Cecilia Murray



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October 27, 2003

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&  
Wilkinson

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

FR Doc. 03-22763 Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period. 68 Federal Register 53536, September 11, 2003

### FOOD GUIDE PYRAMID REASSESSMENT COMMENTS

The National Cattlemen's Beef Association (NCBA) appreciates the opportunity to provide comments on the U.S. Department of Agriculture (USDA), Center for Nutrition Policy and Promotion's (CNPP) proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data. Producer-driven and consumer-focused, NCBA is the trade association of America's cattle farmers and ranchers, and the marketing organization for the largest segment of the nation's food and fiber industry.

NCBA commends USDA's leadership in reassessing and updating the Food Guide Pyramid—the nation's primary educational tool to help Americans make daily food choices to promote health and prevent disease. This is a significant undertaking for CNPP and we applaud the agency for conducting the review in a science-based manner.

NCBA concurs that this reassessment is timely given changes in scientific and medical knowledge, changes in nutritional standards and goals established by the IOM Dietary Reference Intakes released between 1997 and 2002 and the *2000 Dietary Guidelines for Americans*. Other recent information such as changes in food consumption reported in the USDA Continuing Survey of Food Intakes by Individuals (CSFII) 1994-1996 and updates in the nutrient composition of the U.S. food supply signify further the need for such a scientific review.

Due to the significance of this notice, the limited time to review and prepare comments, and the lack of pre-cursor data used by CNPP, NCBA requested an extension of the comment period and that CNPP make available the data that was used to make their assumptions. The request for extension of the comment period was denied. Therefore, we are submitting today the most detailed comments as possible under the time limitations. However, no comment has been received from CNPP regarding our request for additional data. We believe that this data should have been made available per the Freedom of Information Act, Data Quality Act and subsequent guidelines issued by the Office of Management and Budget in 2002 and we urge CNPP to disclose the data now and similar data in the future.

CNPP solicited comments on all aspects of the proposed Daily Food Intake Patterns and the accompanying technical support data tables. In addition, CNPP expressed interest in receiving

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Wilkinson

comments on several specific issues and questions. NCBA offers the following overarching comments and then will address specific issues and questions in turn.

### **CNPP's Proposed Daily Food Patterns and Technical Support Data May Contain Incomplete, Outdated and Inaccurate Information on Beef Products**

CNPP's proposed revisions to the daily food intake patterns may not comply with CNPP's own stated philosophical goals for the Food Guide Pyramid and the technical support data may not accurately and fairly depict the nutrient composition of beef products that are currently available in the marketplace today. Our concerns stem from the fact that CNPP may not have used the most recent beef nutritional data and/or the leanest beef products in calculating the nutrient profiles for the meat group. Failure to use the lowest fat content of beef products would produce significant errors in the nutrient profiles for the group and result in corresponding implications to other food groups as well as additional fat. It would also inject unjustifiable prejudice against beef products in the resulting food guide and impair the scientific credibility and integrity of the nation's premier nutrition educational tool.

We are, however, unable to ascertain with certainty the validity of CNPP's calculations of the nutrient profile for the meat group due to lack of sufficient documentation and substantiation in the data available electronically or in hard copy as outlined in its notice of September 11, 2003 [68FR53536-53539]. As mentioned above, our request for access to supplemental data has not been addressed by CNPP.

CNPP states that "Proposed revisions to the daily food intake patterns are based on the same philosophical goals that were used in developing the original Pyramid." One of the eight philosophical goals underpinning USDA's food guidance has been to "...allow maximum flexibility for consumers to eat in a way that suits their taste and lifestyle while meeting nutritional criteria. The goal of allowing maximum flexibility was one reason that CNPP established nutrient profiles for food groups using foods in their forms that are lowest in fat and that have no added sugars."<sup>1</sup> USDA stated that

*"Once vitamin, mineral, and protein needs are met, theoretically, the balance in calories could be made up by fat and added sugars. Total fat intake is limited by the goal of keeping it below a specified percentage of calorie intake. This approach allows consumers to decide which foods they prefer as sources of fat and added sugars. A food guide that rigidly proscribes certain foods is not likely to be followed consistently."<sup>2</sup>*

CNPP states that it used foods in their lowest fat forms without added sugars to develop the nutrient profiles for each food group. These nutrient profiles form a cornerstone in CNPP's development of the daily food intake patterns. If there are errors in the nutrient profiles, then these errors could result in inaccurate, misleading and incorrect daily food intake patterns.

If CNPP's proposed nutrient profile for the meat group did not use beef products in their lowest fat form, then this would adversely affect CNPP's development of food patterns that would

<sup>1</sup> USDA's Food Guide: Background and Development, USDA/HNIS, Misc. Pub. 1514, September 1993, p. 6.

<sup>2</sup> IBID.

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provide maximum flexibility for consumers in choosing sources of protein foods within the fat and calorie limits specified.

We have two reasons to believe that CNPP did not use the lowest fat content of beef products to develop its proposed daily food intake patterns:

- CNPP may not have used Standard Reference, Release 16 (SR 16)—the most accurate and current nutrient data now available—to derive the lowest fat content of beef products, and
- CNPP may not have used the leanest version of the beef products profiled.

### ***Most Current Beef Data May Not Have Been Considered***

SR 16—USDA's National Nutrient Database, was updated on July 30, 2003, likely after CNPP initially conducted its reassessment analysis.<sup>3</sup> CNPP needs to use the nutrient data for beef products from SR 16 to ensure that the future food guide is the most up to date scientifically. According to USDA's administrative report for SR 16, "Several major changes were made to the database since the last release."<sup>4</sup> Among the major changes listed was a change in trimmed retail beef cuts. Specifically the report states

*"In past releases, data representing beef retail cuts trimmed to 1/8" external fat were derived by regression equations using values from beef retail cuts trimmed to 1/4" external fat and 0" external fat. This release will include new analytical data for many retail cuts trimmed to 1/8" external fat as well as updated values for many cuts trimmed to 0" external fat. Data for beef retail cuts trimmed to 1/4" external fat will be phased out as new corresponding 1/8" fat trim data becomes available."<sup>5</sup>*

In addition, previous Standard Reference releases included 1/8" trim data on cuts analyzed as "lean and fat." SR 16, for the first time, lists 1/8" trim cuts as "separable lean only."

These changes are meaningful and dramatic and reflect the beef industry's considerable efforts to meet consumer demand and expectations for lean beef. The changes also accurately reflect what is available to consumers in the marketplace. In fact, SR 16 documented seven additional lean cuts of beef above the previous release. There are now at least 19 cuts of lean beef—many of which are the most popular cuts among consumers. (USDA defines lean as less than 10 g of total fat, 4.5 g of saturated fat and 95 mg of cholesterol per serving and per 100 g.) While it may surprise some to learn the extent to which lean beef has become widely available and consumed in the marketplace, it reflects the hard work and resources that America's cattle farmers and ranchers have invested to respond to governmental recommendations and consumer demand. CNPP needs to accurately account for these substantial changes that have already occurred in the marketplace.

<sup>3</sup> U.S. Department of Agriculture, Agricultural Research Service. 2003. USDA National Nutrient Database for Standard Reference, Release 16. Nutrient Data Laboratory Home Page, <http://www.nal.usda.gov/fnic/foodcomp>

<sup>4</sup> Composition of Foods Raw, Processed, Prepared. USDA National Nutrient Database for Standard Reference, Release 16, July 2003, p. 1.

<sup>5</sup> IBID., p. 2.

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Our analysis of nutrient database (NDB) codes for ground beef and beef cuts in the CSFII Primary Dataset for Survey Foods and the corresponding NDB in SR 16 showed at least 15 beef products that were newly released in SR 16 that were leaner—in many cases dramatically leaner—than previously reported data. Appendix I contains the results of this analysis.

The following example illustrates the magnitude of the difference. CSFII Primary Dataset for Survey Foods code 13204 (beef, round, tip round, select, separable lean only, 1/4" fat, cooked, roasted) was 30 percent higher in saturated fat and 32 percent higher in total fat than SR-16 NDB 13426 (beef, round, tip round, select, separable lean only, 0" fat, cooked, roasted).

### ***Leanest Form of Beef Products May Not Have Been Considered***

In addition to possibly not using the most current nutrient data on beef products, CNPP may not have used the leanest form of beef products (ground beef and cuts) in calculating the nutrient profile for the meat group. This is because CNPP may have used *separable lean and fat* rather than the leaner form which is *separable lean only*. The difference between the two categories is substantial. "Separable lean and fat" by definition includes the trimmable outside fat (the 1/4" fat) and seam fat—in essence, the visible fat. "Separable lean only" data are taken from cuts that have had all the "trimmable" fat removed prior to analysis. That is, all the trimmable outside and seam fat have been removed, and the data reported on the remaining lean muscle portion only. Thus, "lean and fat" will have a higher total fat and saturated fat content than the "lean only" data. (In both cases the data are reported on cooked product.)

In our analysis of nutrient database (NDB) codes for ground beef and beef cuts in the CSFII Primary Dataset for Survey Foods compared with the corresponding NDB in SR 16 we identified 54 cases where beef products—again, many of the most popular cuts among consumers—for which the "lean only" had significantly lower fat and saturated fat content than the "lean and fat" version. Again, in many cases the "lean only" version is dramatically leaner than the "lean and fat" version. (See Appendix I.)

Table 1 below shows the percent difference in total fat and saturated fat for 10 of the top 21 most popular beef cuts between using the leanest version of the relevant beef product and the version listed in the CSFII Primary Dataset. These 10 cuts represent over 21 percent of the total retail beef cut pounds. These cuts, on average, are 56% leaner in total fat and 58% leaner in saturated fat. Taken together, these cuts represent a significant amount of beef products currently in the marketplace. Thus, failure to use the leanest version of beef products would significantly affect the nutrient profile of the meat group.

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Table 1 Percent Change in Total and Saturated Fat Using Lean Form of 10 of 21 Most Popular Beef Cuts Listed in CSFII Primary Dataset

| NDB code <sup>1</sup> | Description  | Calories per 3 oz. avg | Fat (g) per 3 oz. | Fat % decrease if use leanest | Sat. Fat (g) per 3 oz. | Sat Fat % decrease if use leanest | % pounds sold at retail <sup>2</sup> |
|-----------------------|--|------------------------|-------------------|-------------------------------|------------------------|-----------------------------------|--------------------------------------|
| 13127                 | Beef, rib, small end (rib 10-12), all grades, separable lean and fat, 1/4" fat, cooked, broiled  | 286                    | 22.083            |                               | 8.942                  |                                   |                                      |
| 13184                 | Beef, rib, small end (rib 10-12), all grades, separable lean only, 0" fat, cooked, broiled       | 181                    | 8.755             | 60.4%                         | 3.536                  | 60.5%                             | 3.76%                                |
| 13282                 | Beef, short loin, top loin, all grades, separable lean and fat, 1/4" fat, cooked, broiled        | 244                    | 16.796            |                               | 6.647                  |                                   |                                      |
| 13448                 | Beef, short loin, top loin, all grades, separable lean only 0" fat, cooked, broiled              | 168                    | 7.140             | 57.5%                         | 2.720                  | 59.1%                             | 3.41%                                |
| 13127                 | Beef, round, top round, all grades, separable lean and fat, 1/4" fat, cooked, braised            | 211                    | 9.715             |                               | 3.672                  |                                   |                                      |
| 13184                 | Beef, round, top round, all grades, separable lean only, 0" fat, cooked, braised                 | 169                    | 4.260             | 56.5%                         | 1.462                  | 60.2%                             | 3.38%                                |
| 13278                 | Beef, short loin, top sirloin, all grades, separable lean and fat, 1/4" fat, cooked, broiled     | 219                    | 13.098            |                               | 5.219                  |                                   |                                      |
| 13454                 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled          | 162                    | 5.780             | 55.9%                         | 2.252                  | 56.8%                             | 2.37%                                |
| 13182                 | Beef, round, bottom round, choice, separable lean and fat, 1/4" fat, cooked, braised             | 211                    | 16.210            |                               | 5.712                  |                                   |                                      |
| 23522                 | Beef, round, bottom round, choice, separable lean only, 0" fat, cooked, braised                  | 194                    | 7.671             | 49.7%                         | 2.643                  | 53.7%                             | 2.01%                                |
| 13152                 | Beef, round, full cut, choice, separable lean and fat, 1/4" fat, cooked, broiled                 | 204                    | 11.577            |                               | 4.386                  |                                   |                                      |
| 13156                 | Beef, round, full cut, choice, separable lean only, 1/4" fat, cooked, broiled                    | 162                    | 6.213             | 46.3%                         | 2.176                  | 50.4%                             | 1.62%                                |
| 13022                 | Beef, retail cuts, brisket, whole, all grades, separable lean and fat, 1/4" fat, cooked, braised | 327                    | 26.826            |                               | 10.523                 |                                   |                                      |
| 23585                 | Brisket, retail, separable lean only, 1/8" fat, all grades, braised                              | 167                    | 5.103             | 81.0%                         | 1.956                  | 81.6%                             | 1.58%                                |
| 13192                 | Beef, round, tip round, all grades, separable lean and fat, 1/4" fat, cooked, roasted            | 199                    | 11.254            |                               | 4.267                  |                                   |                                      |
| 13424                 | Beef, round, tip round, all grades, separable lean only, 0" fat, cooked, roasted                 | 150                    | 5.015             | 55.4%                         | 1.751                  | 59.0%                             | 1.17%                                |
| 13184                 | Beef, round, eye of round, all grades, separable lean only, 1/4" fat, cooked, roasted            | 143                    | 4.165             |                               | 1.513                  |                                   |                                      |
| 13418                 | Beef, round, eye of round, all grades, separable lean only, 0" fat, cooked, roasted              | 141                    | 3.995             | 4.1%                          | 1.445                  | 4.5%                              | 1.04%                                |
| 13439                 | Beef, tenderloin, all grades, separable lean and fat, 0" fat, cooked, broiled                    | 200                    | 11.178            |                               | 4.293                  |                                   |                                      |
| 13442                 | Beef, tenderloin, all grades, separable lean only, 0" fat, cooked, broiled                       | 175                    | 8.075             | 27.8%                         | 3.018                  | 29.7%                             | 1.04%                                |
|                       | <b>Average 10 of Top 21 Cuts Sold at Retail</b>  | <b>227</b>             | <b>14.193</b>     | <b>56.3%</b>                  | <b>5.517</b>           | <b>58.4%</b>                      | <b>21.38%</b>                        |
|                       | <b>Average if Leanest</b>  | <b>167</b>             | <b>6.200</b>      |                               | <b>2.294</b>           |                                   |                                      |

<sup>1</sup> First line of entry is Nutrient Database (NDB) codes, description from CSFII Primary Dataset. Second line of entry is corresponding NDB in SR 16.  
<sup>2</sup> Data from Freshlook Marketing, June 2003.

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The following example illustrates the magnitude of the difference. CSFII Primary Dataset for Survey Foods code 13278 (beef, short loin, top sirloin, all grades, separable lean and fat, ¼" fat, cooked, broiled) was 57 percent higher in saturated fat and 56 percent higher in total fat than SR 16 NDB 13454 (beef, short loin, top sirloin, all grades, separable lean only 0" fat, cooked, broiled).

Using the "lean only" version not only better fulfills CNPP's established philosophical goal of flexibility and better ensures accurate nutrient profiles for determining the daily food intake patterns, it also fulfills CNPP's goals of being useful for consumers and being realistic in the development of a food guide that is based on commonly used foods.<sup>6</sup> The vast majority of beef eaters trim beef cuts of visible fat before they eat. In a nationally representative survey of 950 consumers conducted by Ipsos-Reid in August 2003, 80 percent of beef eaters said they prefer the fat trimmed from beef before they eat.<sup>7</sup> Moreover, 66 percent of beef steak eaters and 70 percent of beef roast eaters said they trim off all visible fat before eating. Thus, "lean only" more closely matches consumer behavior and is the leanest form of beef products.

Taken individually or collectively, using the most current data (SR 16) and/or the leanest form of beef products could have dramatic impact on CNPP's analysis of total fat, saturated fat and energy intakes from beef products. CNPP needs to use the updated SR 16 data as well as the data on the leanest form of beef product—namely "lean only"—to calculate the correct nutrient profile for the meat group and thus daily food patterns. CNPP also needs to disclose to the public its complete and exact methods, procedures and analyses to document all the steps inherent in calculating the nutrient profiles of the proposed daily food pattern before it finalizes the daily food patterns. Such documentation and disclosure is in the best interest of the public given the importance of the food guide in assisting consumers in building healthy diets.

NCBA recognizes that this is not a trivial undertaking. However, because CNPP announced that it is presently analyzing data from the 1999-2000 National Health and Nutritional Examination Survey (NHANES), released in August 2002 by the Department of Health and Human Services, to corroborate the adequacy of the proposed food intake patterns, NCBA believes that the request is not only timely, but the right thing to do in the public interest.<sup>8</sup>

CNPP expressed interest in receiving comments on specific issues and questions. The following are NCBA's comments on those questions.

**1. Appropriateness of using *sedentary, reference-sized individuals* in assigning target calorie levels for assessing the nutritional adequacy and moderate of each food intake pattern.**

NCBA believes that it is highly inappropriate and counter to the public health interest of the nation to use sedentary energy intake levels of individuals to determine the target calorie level for each food intake pattern. As multiple authoritative governmental and health organizations have declared, increasing the physical activity of the population is a clear public health priority. From *Healthy People 2010* to the IOM macro-ingredient report, to the Surgeon General's Report on Physical Activity, to the *2000 Dietary Guidelines for Americans*, the message has been clear

<sup>6</sup> USDA's Food Guide: Background and Development, p. 6.

<sup>7</sup> Ipsos-Reid U.S. Public Affairs research August 2003 (margin of error ±3.1)

<sup>8</sup> 68FR53536-53539

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for individuals to be more active. In fact, the 2000 Dietary Guidelines specifically advises individuals to "Be physically active each day" and the IOM recommended that individuals adopt an active lifestyle to decrease the risk of chronic disease and to maintain ideal body weight.

To the extent that the Food Guide Pyramid is intended to help individuals put the Dietary Guidelines into practice, the reassessed food guide should incorporate physical activity goals similar to nutritional goals. In essence the food guide should show Americans how to achieve energy balance at various levels of activity, not just how few calories a sedentary person needs to achieve a nutritionally adequate diet.

CNPP stated it used the sedentary energy level because "...it does not require the assumption that a person needs to be active in order to meet nutrient needs," and "...it was considered better not to assume any specific level of physical activity." CNPP's use of the sedentary energy level does not help educate Americans on the more important dietary component—namely energy balance. A food guide that does not help teach consumers how to balance overall energy will not help to prevent overweight and obesity in the U.S. CNPP's rationale addresses the historical issue of adequacy for only one energy level, but not moderation. Using only the sedentary energy level without educating consumers on energy balance is likely to have the reverse effect that CNPP intends. Telling consumers they can get a nutritionally adequate diet if they're sedentary with fewer calories does nothing to promote increased activity and skills in appropriately balancing calories eaten with those expended. It also does not educate consumers on achieving a nutritionally adequate diet if they are more physically active.

CNPP states that it does plan to encourage physical activity in materials designed for consumers. However, this is a superficial approach to dealing with what is arguably the number one public health issue in the nation—reducing and preventing obesity. While it may require additional work and may be inconvenient for the government's schedule, CNPP should undertake appropriate consumer research through experimental design using principles of child and adult learning and behavior change to incorporate the concept of energy balance into the food guide. Alternatively, CNPP could consider developing daily food patterns at different activity levels or using the IOM recommended physical activity level of  $\geq 1.6$  and  $< 1.9$ , which equates to walking at 4 miles/hour for 1 hour a day. In short, CNPP needs to incorporate physical activity and energy balance into the core components of the food guide.

**2. Appropriateness of the *selection of nutritional goals for the daily food intake patterns.***

As noted above, NCBA believes CNPP should specifically include physical activity goals similar to nutritional goals in developing the daily food patterns.

**3. Appropriateness of the proposed *food intake patterns for educating Americans about healthful eating patterns.***

NCBA believes that consumer education tools, such as the food guide, should be based on naturally nutrient rich foods, such as lean beef. In fact, given the public health epidemic of overweight and obesity it becomes even more important that consumers choose their calories by

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the company they keep – choosing naturally nutrient rich foods first with additional fats and added sugars as energy needs allow.

NCBA questions whether CNPP has sufficient knowledge and understanding of consumer eating behavior and preferences to determine the appropriateness of the proposed food intake patterns. In particular, CNPP does not provide any research or the results of any consumer testing to show that the proposed food intake patterns are useful, practical, and relevant to consumers today. Developing food patterns to meet nutritional goals and standards is an academic exercise unless CNPP also determines that the food patterns are attractive to consumers, can be successfully implemented by consumers and can be sufficiently flexible to accommodate wide variations in consumer preferences and needs.

It is our observation that when reassessing the Food Guide Pyramid, the primary issue of public health lies mainly in achieving consistent compliance with the Food Guide Pyramid. Yet, consumer compliance is inadequate. According to survey data, about 80 percent of adults recognize the Food Guide Pyramid as the cornerstone of a healthy diet. However, CNPP's own Healthy Eating Index report for 1999-2000 documented that only 10 percent of Americans had a "good" diet and that Americans' eating patterns had not changed from 1996 to 1999-2000.<sup>9</sup> The issue of lack of compliance is seen clearly when looking at NHANES 3, NHANES 4 and CSFII 94-96 data which indicate that less than one percent of the population actually consumes the recommended number of servings from all food groups. CNPP needs to understand fully the basis of the gap between recommendation and compliance to understand best how to improve food guidance.

Furthermore, to have any possibility of having a measurable impact on public health, the food guide should be designed in a manner that consumers can and will want to adopt. While it is true the government has not promoted the food guide as it needs, no amount of promotion will compensate for inherently unacceptable, unpalatable, impractical food patterns. For example, CNPP notes that the proposed daily food intake patterns include higher levels of dark green vegetables, legumes and oils and soft margarines than the original Pyramid. Yet, CNPP does not provide any consumer data to show that these levels are feasible, practical or desirable. In regard to legumes, based on CSFII 94-96, 98 data, it is possible that CNPP is not being practical or realistic as it considers adding more legumes to the food pattern for the Food Guide Pyramid. According to CSFII, very few Americans currently eat meaningful levels of legumes. In fact, 74% do not have any in two days of intake. This is compared to meat (beef, pork, lamb) where only 17% of people consumed none during the same time frame. While NCBA believes increasing legume consumption is laudable, that increase has to be within reasonable attainment of consumers to be feasible and practical.

Furthermore, CNPP needs to address calorie equivalency as it develops the food intake patterns. Given the current concern over caloric intake relative to obesity, it is important to note that when comparing protein equivalence, meat provides significantly fewer calories than do legumes. In fact, it takes 1.7 times more calories to get the same amount of protein from legumes than from meat. According to SR 16 data, beef (using a ground beef composite) has 65 calories per ounce and legumes contain 119 calories per ½ cup, which is the same protein equivalent.

<sup>9</sup> The Healthy Eating Index: 1999-2000. USDA, CNPP-12. Dec. 2002. p. 13.

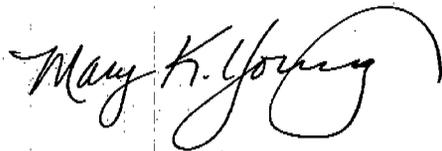
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4. Appropriateness of using "cups" and "ounces" vs. "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup.

NCBA believes that the answer to this question depends on the basis of more extensive consumer research than CNPP has conducted to date. Ultimately, improving the utility and practicality of the food guide will aid in its increased usage and application. Thus, it is important to understand consumer practice and behavior in designing the food guide. CNPP's qualitative Consumer Food Guide Pyramid Study provided insights into consumer thinking about servings and serving sizes. However, the study does not and cannot by its very design, show the fundamentally superior approach in consumer implementation. NCBA does support, however, the core concept of using common household measurements as a major line of inquiry in additional research.

NCBA appreciates the opportunity to provide comment on this very important consumer education tool.

Sincerely,



Mary K. Young, M.S., R.D.  
Executive Director, Nutrition



Leah Wilkinson  
Associate Director, Food Policy

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# APPENDIX I

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Nutrient Database (NDB) codes for ground beef and beef cuts in the Primary Dataset for survey foods, and the corresponding NDB in the Standard Nutrient Database, Release 16

| NDB code           | Description - all 3 ounces                           | calories | Fat (g) | Fat % decrease if use leanest | Sat. Fat (g) | Sat Fat % decrease if use leanest |
|--------------------|--|----------|---------|-------------------------------|--------------|-----------------------------------|
| <b>GROUND BEEF</b> |  |          |         |                               |              |                                   |
| 13295              | Beef, ground, extra lean, raw                        | 199      | 14.511  |                               | 5.793        |                                   |
| 23557              | Beef, ground, 95% lean, raw                          | 116      | 4.250   | 70.7%                         | 1.886        | 67.4%                             |
| 13298              | Beef, ground, extra lean, cooked, broiled, medium    | 218      | 13.880  |                               | 5.257        |                                   |
| 23558              | Beef, ground, 95% lean, cooked, broiled              | 145      | 5.568   | 59.9%                         | 2.614        | 52.1%                             |
| 13299              | Beef, ground, extra lean, cooked, broiled, well done | 225      | 13.430  |                               | 5.279        |                                   |
| 23558              | Beef, ground, 95% lean, broiled                      | 145      | 5.568   | 58.5%                         | 2.614        | 50.5%                             |
| 13300              | Beef, ground, extra lean, cooked, pan-fried, medium  | 217      | 13.957  |                               | 5.489        |                                   |
| 23559              | Beef, ground, 95% lean, pan-broiled                  | 139      | 5.049   | 63.8%                         | 2.369        | 56.6%                             |
| 13302              | Beef, ground, lean, raw                              | 225      | 17.580  |                               | 7.068        |                                   |
| 23557              | Beef, ground, 95% lean, raw                          | 116      | 4.250   | 75.8%                         | 1.886        | 73.3%                             |
| 13305              | Beef, ground, lean, cooked, broiled, medium          | 231      | 15.691  |                               | 6.162        |                                   |
| 23558              | Beef, ground, 95% lean, broiled                      | 145      | 5.568   | 84.5%                         | 2.614        | 87.6%                             |
| 13306              | Beef, ground, lean, cooked, broiled, well done       | 238      | 14.994  |                               | 5.890        |                                   |
| 23558              | Beef, ground, 95% lean, broiled                      | 145      | 5.568   | 62.9%                         | 2.614        | 55.6%                             |
| 13309              | Beef, ground, regular, raw                           | 264      | 22.581  |                               | 9.168        |                                   |
| 23557              | Beef, ground, 95% lean, raw                          | 116      | 4.250   | 81.2%                         | 1.886        | 79.4%                             |
| 13312              | Beef, ground, regular, cooked, broiled, medium       | 240      | 16.702  |                               | 6.562        |                                   |
| 23558              | Beef, ground, 95% lean, broiled                      | 145      | 5.568   | 66.7%                         | 2.614        | 60.2%                             |
| 13313              | Beef, ground, regular, cooked, broiled, well done    | 269      | 18.249  |                               | 7.689        |                                   |
| 23558              | Beef, ground, 95% lean, broiled                      | 145      | 5.568   | 68.6%                         | 2.614        | 65.9%                             |
| 13314              | Beef, ground, regular, cooked, pan-fried, medium     | n/a      | n/a     |                               | n/a          |                                   |
| 23559              | Beef, ground, 95% lean, pan-broiled                  | 139      | 5.049   |                               | 2.369        | n/a                               |

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| BEEF CUTS |  |     |        |        |       |  |  |  |  |
|-----------|--|-----|--------|--------|-------|--|--|--|--|
| 13004     | Beef, composite of trimmed retail cuts, all grades, separable lean and fat, 1/4" fat, cooked     | 259 | 18,309 | 7,259  | 58.5% |  |  |  |  |
| 13364     | Beef, composite of trimmed retail cuts, separable lean only, 0" trim, all grades, cooked         | 179 | 7,888  | 3,009  | 58.5% |  |  |  |  |
| 13012     | Beef, composite of trimmed retail cuts, all grades, separable lean only, 1/4" fat, cooked        | 184 | 8,424  | 3,221  | 61.6% |  |  |  |  |
| 13064     | Beef, composite of trimmed retail cuts, separable lean only, 0" trim, all grades, cooked         | 179 | 7,888  | 3,009  | 61.6% |  |  |  |  |
| 13022     | Beef, retail cuts, brisket, whole, all grades, separable lean and fat, 1/4" fat, cooked, braised | 327 | 26,826 | 10,523 |       |  |  |  |  |
| 23595     | Brisket, flat half, separable lean only, 1/8" trim, all grades, braised                          | 167 | 5,103  | 1,935  | 81.6% |  |  |  |  |
| 13024     | Beef, retail cuts, brisket, whole, all grades, separable lean only, 1/4" fat, cooked, braised    | 206 | 10,526 | 6,876  | 81.6% |  |  |  |  |
| 23596     | Brisket, flat half, separable lean only, 1/8" trim, all grades, braised                          | 167 | 5,103  | 1,935  | 81.6% |  |  |  |  |
| 13034     | Beef, chuck, arm pot roast, all grades, separable lean and fat, 1/4" fat, cooked, braised        | 282 | 20,238 | 7,973  |       |  |  |  |  |
| 13376     | Chuck, arm pot roast, separable lean only, 0" trim, all grades, braised                          | 179 | 6,460  | 2,346  | 70.6% |  |  |  |  |
| 13036     | Beef, chuck, arm pot roast, choice, separable lean and fat, 1/4" fat, cooked, braised            | 296 | 21,918 | 8,666  |       |  |  |  |  |
| 13377     | Chuck, arm pot roast, choice, separable lean only, 0" trim, braised                              | 180 | 6,820  | 2,498  | 71.4% |  |  |  |  |
| 13038     | Beef, chuck, arm pot roast, select, separable lean and fat, 1/4" fat, cooked, braised            | 268 | 18,462 | 7,285  |       |  |  |  |  |
| 13378     | Chuck, arm pot roast, select, separable lean only, 0" trim, braised                              | 166 | 4,930  | 1,865  | 74.4% |  |  |  |  |
| 13042     | Beef, chuck, arm pot roast, all grades, separable lean only, 1/4" fat, cooked, braised           | 184 | 7,056  | 2,558  |       |  |  |  |  |
| 13376     | Chuck, arm pot roast, separable lean only, 0" trim, all grades, braised                          | 179 | 6,460  | 2,346  | 83.9% |  |  |  |  |
| 13044     | Beef, chuck, arm pot roast, choice, separable lean only, 1/4" fat, cooked, braised               | 191 | 7,905  | 2,865  |       |  |  |  |  |
| 13377     | Chuck, arm pot roast, choice, separable lean only, 0" trim, braised                              | 180 | 6,520  | 2,468  | 13.9% |  |  |  |  |
| 13046     | Beef, chuck, arm pot roast, select, separable lean only, 1/4" fat, cooked, braised               | 176 | 6,120  | 2,219  |       |  |  |  |  |
| 13378     | Chuck, arm pot roast, select, separable lean only, 0" trim, braised                              | 166 | 4,930  | 1,865  | 16.9% |  |  |  |  |
| 13050     | Beef, chuck, blade roast, all grades, separable lean and fat, 1/4" fat, cooked, braised          | 293 | 21,837 | 8,696  |       |  |  |  |  |
| 13058     | Beef, chuck, blade roast, all grades, separable lean only, 1/4" fat, cooked, braised             | 213 | 11,135 | 4,318  | 50.3% |  |  |  |  |
| 13052     | Beef, chuck, blade roast, choice, separable lean and fat, 1/4" fat, cooked, braised              | 309 | 23,647 | 9,416  |       |  |  |  |  |
| 13060     | Beef, chuck, blade roast, choice, separable lean only, 1/4" fat, cooked, braised                 | 224 | 12,240 | 4,743  | 49.8% |  |  |  |  |
| 13072     | Beef, rib, whole (ribs 6-12), all grades, separable lean and fat, 1/4" fat, cooked, broiled      | 291 | 23,316 | 9,461  |       |  |  |  |  |
| 13084     | Beef, rib, whole (ribs 6-12), all grades, separable lean and fat, 0" fat, cooked, broiled        | 190 | 10,387 | 4,224  | 55.4% |  |  |  |  |
| 13110     | Beef, rib, large end (ribs 6-9), all grades, separable lean and fat, 1/4" fat, roasted           | 310 | 25,604 | 10,209 |       |  |  |  |  |
| 13116     | Beef, rib, large end (ribs 6-9), all grades, separable lean only, 1/4" fat, cooked, broiled      | 201 | 11,220 | 4,479  | 66.1% |  |  |  |  |
| 13124     | Beef, rib, small end (ribs 10-12), all grades, separable lean and fat, 1/4" fat, cooked, broiled | 286 | 22,083 | 8,942  |       |  |  |  |  |
| 13394     | Beef, rib, small end (ribs 10-12), all grades, separable lean only, 0" fat, cooked, broiled      | 181 | 8,755  | 3,536  | 60.5% |  |  |  |  |

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|       |   |     |         |        |       |       |
|-------|---|-----|---------|--------|-------|-------|
| 13180 | Beef, rib, small end (ribs 10-12), all grades, separable lean only, 1/4" fat, cooked, broiled | 188 | 3,957.0 | 3,942  | 8.0%  | 8.0%  |
| 13181 | Beef, rib, small end (ribs 10-12), all grades, separable lean only, 0" fat, cooked, broiled   | 181 | 3,755   | 3,536  | 8.0%  | 8.0%  |
| 13148 | Beef, rib, short ribs, choice, separable lean and fat, cooked, braised                        | 400 | 35,683  | 15,130 |       |       |
| 13150 | Beef, rib, short ribs, choice, separable lean only, cooked, braised                           | 251 | 15,410  | 6,579  | 56.8% | 56.5% |
| 13182 | Beef, round, top round, choice, separable lean and fat, 1/4" fat, cooked, broiled             | 204 | 11,577  | 4,386  |       |       |
| 13146 | Beef, round, top round, choice, separable lean only, 1/4" fat, cooked, broiled                | 162 | 6,218   | 2,776  | 46.3% | 60.4% |
| 13160 | Beef, round, bottom round, all grades, separable lean and fat, 1/4" fat, cooked, braised      | 234 | 14,365  | 5,415  |       |       |
| 13407 | Beef, round, bottom round, all grades, separable lean only, 0" fat, cooked, braised           | 173 | 6,460   | 2,184  | 55.0% | 59.7% |
| 13192 | Beef, round, bottom round, choice, separable lean and fat, 1/4" fat, cooked, braised          | 241 | 15,240  | 5,712  |       |       |
| 23322 | Beef, round, bottom round, choice, separable lean only, 1/8" fat, cooked, braised             | 194 | 7,671   | 2,843  | 49.7% | 56.7% |
| 13176 | Beef, round, eye of round, all grades, separable lean and fat, 1/4" fat, cooked, roasted      | 195 | 10,838  | 4,233  |       |       |
| 13418 | Beef, round, eye of round, all grades, separable lean only, 0" fat, cooked, roasted           | 141 | 3,995   | 1,445  | 63.1% | 65.9% |
| 13184 | Beef, round, eye of round, all grades, separable lean only, 1/2" fat, cooked, roasted         | 145 | 4,163   | 1,513  |       |       |
| 13419 | Beef, round, eye of round, all grades, separable lean only, 0" fat, cooked, roasted           | 141 | 3,995   | 1,445  | 4.1%  | 4.5%  |
| 13192 | Beef, round, lip round, all grades, separable lean and fat, 1/4" fat, cooked, roasted         | 199 | 11,254  | 4,267  |       |       |
| 13424 | Beef, round, lip round, all grades, separable lean only, 0" fat, cooked, roasted              | 150 | 5,015   | 1,751  | 55.4% | 59.0% |
| 13194 | Beef, round, lip round, choice, separable lean and fat, 1/4" fat, cooked, roasted             | 210 | 12,681  | 4,619  |       |       |
| 13426 | Beef, round, lip round, choice, separable lean only, 0" fat, cooked, roasted                  | 150 | 5,157   | 1,945  | 56.8% | 59.6% |
| 13196 | Beef, round, tip round, select, separable lean and fat, 1/4" fat, cooked, roasted             | 191 | 10,328  | 3,910  |       |       |
| 13426 | Beef, round, tip round, select, separable lean only, 0" fat, cooked, roasted                  | 127 | 3,723   | 1,329  | 64.0% | 66.0% |
| 13200 | Beef, round, lip round, all grades, separable lean only, 1/4" fat, cooked, roasted            | 157 | 5,865   | 2,049  |       |       |
| 13424 | Beef, round, lip round, all grades, separable lean only, 0" fat, cooked, roasted              | 150 | 5,015   | 1,751  | 14.5% | 14.5% |
| 13202 | Beef, round, tip round, choice, separable lean only, 1/4" fat, cooked, roasted                | 160 | 6,205   | 2,167  |       |       |
| 13425 | Beef, round, tip round, choice, separable lean only, 0" fat, cooked, roasted                  | 150 | 5,457   | 1,945  | 12.1% | 10.2% |
| 13204 | Beef, round, lip round, select, separable lean only, 1/4" fat, cooked, roasted                | 153 | 5,440   | 1,904  |       |       |
| 13426 | Beef, round, lip round, select, separable lean only, 0" fat, cooked, roasted                  | 127 | 3,723   | 1,329  | 31.6% | 30.2% |
| 13208 | Beef, round, top round, all grades, separable lean and fat, 1/4" fat, cooked, broiled         | 184 | 8,177   | 3,077  |       |       |
| 13217 | Beef, round, top round, all grades, separable lean only, 1/4" fat, cooked, broiled            | 153 | 4,165   | 1,428  | 49.1% | 53.6% |
| 13211 | Beef, round, top round, choice, separable lean and fat, cooked, panined, 1/4" fat             | 235 | 13,065  | 4,197  |       |       |
| 13436 | Beef, round, top round, choice, separable lean only, cooked, braised, 0" fat                  | 176 | 21,930  | 11,692 | 62.3% | 62.4% |

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|-------|--|-----|--------|-------|-------|-------|
| 13220 | Beef, round, top round, choice, separable lean only, 1/4" fat, cooked, pan-fried                 | 193 | 7,293  | 32.4% | 2,057 | 17.7% |
| 13436 | Beef, round, top round, choice, separable lean only, cooked, braised, 0" fat                     | 176 | 4,930  | 58.1% | 1,892 | 55.3% |
| 13238 | Beef, short loin, tenderloin, all grades, separable lean and fat, 1/4" fat, cooked, broiled      | 247 | 17,224 | 59.1% | 6,758 | 17.7% |
| 13442 | Beef, short loin, tenderloin, all grades, separable lean only, 0" fat, cooked, broiled           | 175 | 8,075  | 57.6% | 3,018 | 59.1% |
| 13250 | Beef, short loin, tenderloin, all grades, separable lean only, 1/4" fat, cooked, broiled         | 179 | 8,500  | 5.0%  | 3,179 | 5.1%  |
| 13442 | Beef, short loin, tenderloin, all grades, separable lean only, 0" fat, cooked, broiled           | 175 | 8,075  | 5.0%  | 3,018 | 5.1%  |
| 13262 | Beef, short loin, top sirloin, all grades, separable lean and fat, 1/4" fat, cooked, broiled     | 244 | 16,788 | 56.9% | 6,647 | 56.8% |
| 13448 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled          | 168 | 7,140  | 52.0% | 2,720 | 54.9% |
| 13270 | Beef, short loin, top sirloin, all grades, separable lean only, 1/4" fat, cooked, broiled        | 176 | 7,990  | 52.5% | 3,051 | 52.9% |
| 13448 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled          | 168 | 7,140  | 52.5% | 2,720 | 52.9% |
| 13270 | Beef, short loin, top sirloin, all grades, separable lean and fat, 1/4" fat, cooked, broiled     | 219 | 18,098 | 52.0% | 6,219 | 54.9% |
| 13454 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled          | 162 | 5,780  | 53.6% | 2,252 | 5.4%  |
| 13281 | Beef, short loin, top sirloin, choice, separable lean and fat, 1/4" fat, cooked, pan-fried       | 277 | 19,414 | 18.1% | 7,574 | 19.8% |
| 13290 | Beef, short loin, top sirloin, choice, separable lean only, 1/4" fat, cooked, pan-fried          | 202 | 9,325  | 15.9% | 3,417 | 20.5% |
| 13287 | Beef, short loin, top sirloin, all grades, separable lean only, 1/4" fat, cooked, broiled        | 166 | 6,120  | 18.1% | 2,252 | 5.4%  |
| 13454 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled          | 162 | 5,780  | 18.1% | 2,252 | 5.4%  |
| 13289 | Beef, short loin, top sirloin, choice, separable lean only, 1/4" fat, cooked, broiled            | 172 | 6,800  | 46.6% | 2,643 | 48.3% |
| 13455 | Beef, short loin, top sirloin, choice, separable lean only, 0" fat, cooked, broiled              | 160 | 5,567  | 46.6% | 2,121 | 48.3% |
| 13292 | Beef, short loin, top sirloin, select, separable lean only, 1/4" fat, cooked, broiled            | 158 | 6,270  | 46.6% | 2,049 | 48.3% |
| 13450 | Beef, short loin, top sirloin, select, separable lean only, 0" fat, cooked, broiled              | 150 | 4,276  | 46.6% | 1,628 | 46.2% |
| 13361 | Beef, composite of trimmed retail cuts, all grades, separable lean and fat, 0" fat               | 232 | 14,764 | 52.5% | 5,822 | 52.9% |
| 13364 | Beef, composite of trimmed retail cuts, all grades, separable lean only, 0" fat, cooked, braised | 179 | 7,888  | 55.3% | 3,009 | 58.3% |
| 13367 | Beef, retail cuts, brisket, whole, all grades, separable lean and fat, 0" fat, cooked, braised   | 247 | 16,592 | 46.6% | 6,401 | 46.2% |
| 13368 | Beef, retail cuts, brisket, whole, all grades, separable lean only, 0" fat, cooked, braised      | 185 | 8,568  | 46.6% | 3,086 | 51.6% |
| 13373 | Beef, chuck, arm pot roast, all grades, separable lean and fat, 0" fat, cooked, braised          | 238 | 14,459 | 55.3% | 5,627 | 58.3% |
| 13376 | Beef, chuck, arm pot roast, all grades, separable lean only, 0" fat, cooked, braised             | 179 | 6,460  | 46.6% | 2,346 | 46.2% |
| 13379 | Beef, chuck, blade roast, all grades, separable lean and fat, 0" fat, cooked, braised            | 284 | 20,579 | 46.6% | 8,152 | 46.2% |
| 13382 | Beef, chuck, blade roast, all grades, separable lean only, 0" fat, cooked, braised               | 216 | 14,305 | 46.6% | 4,386 | 46.2% |
| 13385 | Beef, rib, large end (ribs 6-9), all grades, separable lean and fat, 0" fat, roasted             | 300 | 23,970 | 52.5% | 9,664 | 52.9% |
| 13388 | Beef, rib, large end (ribs 6-9), all grades, separable lean only, 0" fat, roasted                | 202 | 11,390 | 52.5% | 4,547 | 52.9% |

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Yang &  
Wilkinson

|       |  |     |        |       |       |       |
|-------|--|-----|--------|-------|-------|-------|
| 13391 | Beef, rib, small end (ribs 10-12), all grades, separable lean and fat, 0" fat, cooked, broiled | 252 | 17,944 | 7,269 | 51.2% | 31.3% |
| 13394 | Beef, rib, small end (ribs 10-12), all grades, separable lean only, 0" fat, cooked, broiled    | 181 | 8,735  | 2,618 | 14.1% | 16.6% |
| 13398 | Beef, round, bottom round, all grades, separable lean and fat, 0" fat, cooked, braised         | 173 | 6,460  | 1,674 | 12.3% | 13.7% |
| 13407 | Beef, round, bottom round, all grades, separable lean only, 0" fat, cooked, braised            | 145 | 4,556  | 1,475 | 24.6% | 28.0% |
| 13415 | Beef, round, eye of round, all grades, separable lean and fat, 0" fat, cooked, broiled         | 141 | 3,995  | 1,462 | 56.3% | 60.2% |
| 13418 | Beef, round, eye of round, all grades, separable lean only, 0" fat, cooked, broiled            | 162 | 6,655  | 2,431 | 20.8% | 23.6% |
| 13421 | Beef, round, tip round, all grades, separable lean and fat, 0" fat, cooked, roasted            | 150 | 5,015  | 1,751 | 10.7% | 10.7% |
| 13424 | Beef, round, tip round, all grades, separable lean only, 0" fat, cooked, roasted               | 211 | 9,715  | 1,632 | 10.7% | 10.7% |
| 13427 | Beef, round, top round, all grades, separable lean and fat, 1/4" fat, cooked, braised          | 169 | 4,250  | 1,462 | 27.8% | 29.7% |
| 13434 | Beef, round, top round, all grades, separable lean and fat, 0" fat, cooked, braised            | 178 | 5,364  | 1,913 | 18.1% | 19.2% |
| 13434 | Beef, round, top round, all grades, separable lean only, 0" fat, cooked, braised               | 169 | 4,250  | 1,462 | 31.9% | 32.8% |
| 13438 | Beef, round, top round, all grades, separable lean only, 1/4" fat, cooked, braised             | 200 | 11,178 | 4,293 |       |       |
| 13438 | Beef, round, top round, all grades, separable lean and fat, 0" fat, cooked, broiled            | 175 | 8,075  | 3,018 |       |       |
| 13445 | Beef, tenderloin, all grades, separable lean and fat, 0" fat, cooked, broiled                  | 160 | 5,221  | 3,349 |       |       |
| 13448 | Beef, tenderloin, all grades, separable lean only, 0" fat, cooked, broiled                     | 168 | 7,140  | 2,720 |       |       |
| 13451 | Beef, short loin, top sirloin, all grades, separable lean and fat, 0" fat, cooked, broiled     | 183 | 8,483  | 3,349 |       |       |
| 13454 | Beef, short loin, top sirloin, all grades, separable lean only, 0" fat, cooked, broiled        | 162 | 5,780  | 2,252 |       |       |

10/21/03 Parnell

SCHOOL FOOD & NUTRITION SERVICES  
OF NEW ORLEANS, INC.

received  
10/21/03

KIT

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

To Whom It May Concern:

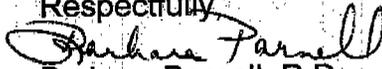
I am writing in response to the proposed changes to the Food Guide Pyramid. Although not perfect, the current Food Guide Pyramid has been helpful for educating students and consumers in making healthier food choices. Therefore, the revised version should not be too complicated so that it remains easy to follow by the general public.

Specific recommendations regarding the Food Guide Pyramid are as follows:

1. The Food Guide Pyramid, Nutrition Facts Labels and the Dietary Guidelines for Americans should complement each other using the same terminology and serving sizes.
2. Serving sizes for foods should be stated in specific volume or weight measures rather than the broader term of one serving.
3. It should be stressed that a standard portion does not compare to what the average American typically consumes, especially that offered by the fast food industry.

Thank you for your efforts.

Respectfully,

  
Barbara Parnell, R.D.  
Nutrition Coordinator

1991

received  
10/21/03  
KW

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Sir or Madam:

We are writing to you in support of a letter sent to you by Ms. Mary Palmer-Sullivan, The Executive Director of the National Barley Foods Council concerning the inclusion of barley in revised Food Guide Pyramid.

We have been actively working with food barley for over 20 years and are ardent believers and supporters of this grain for its nutrition and health benefits. As researchers at Montana State University we published numerous articles showing the positive benefits of barley when it is included in the diet. Food barley is not a new unproven ingredient for the human diet. It is unfortunate that this grain has been significantly ignored in recent years by the major actors in the American cereal industry and relegated mostly to "barley soups". There are many ways that barley can be utilized other than in soup.

As pointed out to you in the letter from Ms. Palmer-Sullivan, barley is an excellent source of soluble dietary fiber, especially B-glucans, which has been proven with oats and barley alike, to be effective in lowering blood cholesterol and leveling off glucose and insulin spikes in diabetic patients. Barley needs a chance to become an accepted cereal in the food industry for the benefit of the consuming public. This will not only provide an alternative grain of known health benefits for consumers, but will help American barley farmers by providing an additional market for their product.

Sincerely,



C.W. Newman Ph. D., FASAS  
R.K. Newman, Ph.D., RD, CDE, FADA  
Professor Emeritus, Montana State University

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NORTH DAKOTA  
DEPARTMENT OF HEALTH

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10/24/03

COMMUNITY HEALTH SECTION KT

October 23, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive Room 1034  
Alexandria VA 22302

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Oct 24, 2003

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10/24/03  
KT

Dear USDA Reassessment Team,

I have been reading about diet for a number of years and have come to be persuaded by the work of Center for Science in the Public Interest, Marion Nestle (Politics of Food), and Walter Willett (Eat, Drink, and Be Healthy). In terms of your particular task, please consider moving toward the improvements suggested by Willett, especially to recommend that we only sparingly eat red meat, butter, white rice, white bread, white potatoes + pasta, and sweets. It is hard to imagine that you (who are on this <sup>team</sup>) don't know this to be the best advice that you can offer the public, but I appreciate the difficult politics of your task. Please push as effectively as you can for modifying the pyramid to conform to our best science-based information.

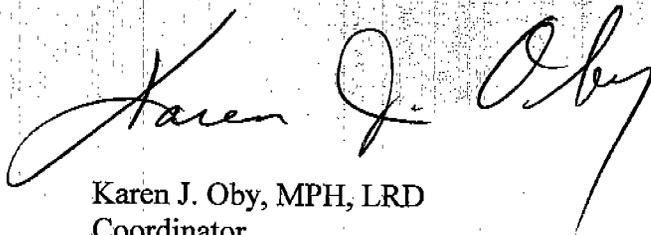
Good luck! Eric Nestle

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We commend the increased emphasis on whole grains. This is an area that needs more emphasis. By increasing emphasis in the Food Guide Pyramid, more whole-grain options will be offered in supermarkets and restaurants. Think of how fast-food chains could help increase the fiber intake of this country, if they just offered a bun that was one-third whole-wheat.

CNPP mentioned in the notice that physical activity will be encouraged in the Food Guide Pyramid consumer materials. We recommend that the CNPP consider including guidance on other positive behaviors that provide for better nutrition and social interaction in our society, such as promoting family meals; eating regular meals and snacks throughout the day and turning off the TV at mealtimes. There should be a section on infant/toddler feeding that promotes breastfeeding and offers other feeding suggestions such as attention to hunger/fullness cues when feeding young infant and toddlers and the inappropriateness of using food as a reward for good behavior.

Sincerely,



Karen J. Oby, MPH, LRD  
Coordinator  
North Dakota Healthy Weight Council

10/21  
Sloan

received  
10/27/03  
KT

October 23, 2003

Eric J. Hentges  
Executive Director  
Center for Nutrition Policy and Promotion  
Food Guide Pyramid Reassessment Team  
USDA CNPP  
3101 Park Center Drive  
Room 1034  
Alexandria VA 22302

Dear Mr. Hentges:

As a registered dietitian and consultant to the California Walnut Commission, I am writing in regard to the Proposed Daily Food Intake Patterns for Food Guide Pyramid. As the government modifies the food guide pyramid, I am pleased that the revisions suggest daily intake amounts of essential alpha-linolenic acid (ALA), however food sources noted of this essential fatty acid are misleading and incomplete. I realize that the main food sources of ALA in the American diet based on national surveys, are canola oils and soft margarines, however as American consumers begin to think about changing their personal dietary choices, they may want to know more about walnuts. Walnuts are unique as one of the only whole food sources of ALA – often thought, to be only in canola oil and canola based soft margarines. In addition, walnuts are also lower in calories and saturated fat than canola oil, plus offer protein, fiber and other nutrients. Recently, the Food and Drug Administration (FDA) affirmed the health claim, "Supportive but not conclusive research shows that eating 1.5 ounces per day of walnuts as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. See nutrition information for fat content." This FDA decision comes in response to a petition filed by the California Walnut Commission, which highlights a body of international scientific research substantiating the specific benefit of consuming walnuts as part of a heart healthy diet in reducing the risk of heart disease. The body of evidence suggests that the nutritional composition of walnuts contribute to these heart health benefits.

Clearly, further steps need to be taken to place greater emphasis on utilizing walnuts as a rich source of ALA, as well as polyunsaturated fat. I hope the USDA will join the U.S. Food and Drug Administration, the Food Nutrition Board of the National Academy of Sciences and other recognized agencies such as the American Heart Association in acknowledging the health benefits derived from the ALA in walnuts as they make their revisions to the Food Guide Pyramid.

Thank you for your consideration.

Sincerely,

  
Carol Berg Sloan RD

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Taylor &  
Stewart

THE  
**TAYLOR-HIGH**  
Center for Preventive Medicine **CLINIC**

received  
10/21/03  
KT

October 24, 2003

U.S.D.A. Center for Nutrition  
Policy and Promotion  
3101 Park Center Drive  
Room #1034  
Alexandria, VA 22302

Dear Members:

The Taylor-High Center for preventive medicine is a preventative medicine specialty clinic that specializes in the reduction of heart disease, diabetes, and high blood pressure. The majority of the clinic's patients are treated for both primary and secondary outcome from these illnesses. We see a substantial amount of obesity as well. As health care professionals with 30 years of combined experience we believe that nutrition and exercise are the cornerstones to achieving a healthy society. If the food guide pyramid is to be used as an educational tool for Americans then it should promote a plant-based whole food diet. It should also strongly advocate daily exercise.

The present food guide pyramid needs revision primarily in two categories, bread, cereal, rices, and fats, oils and sweets. If one simply looks at today's pyramid it would allow potentially for excessive amounts of starches to be served to populations who could be at extreme risk for developing a disease. For example, Native American Indians when using today's pyramid could consume 11 servings of white bread and sugar-coated cereals. This is a population that is at high risk for developing diabetes, and is essentially being recommended a food group that we may very well find out in the future is linked to increasing the likelihood of developing this particular illness. The U.S.D.A. Center for Nutrition Policy and Promotion should not encourage the already high rate of diabetes in any population but especially in the Native American population.

Another recommendation in the pyramid is that fats and oils should be used sparingly. As more and more information becomes available about fats it is clear that there are both good fats and bad fats. While we are discovering that saturated fats tend to be harmful and unsaturated fats tend to be helpful, the pyramid does not address this in its current structure. Every American should have a healthy amount of monounsaturated fat in their diet which should comprise of three generous servings a day. Omega-3 fish oils are just one example of a healthy fat that should be incorporated into a person's diet on a regular basis. The healing and nutritional benefits of omega-3s are well-documented throughout the medical literature.

The problem with today's nutritional debate is that it is clouded with faulty and sometimes dubious research. We feel that research needs to be evidence-based, well-constructed, and thoroughly peer reviewed to have merit. We look toward studies such as the Framingham Heart Study and the Nurses Healthcare Study to support our conclusions for developing a healthier framework for nutrition. Walter Willett, M.D. is a well-respected and well-published author in the nutritional field. He has testified before the U.S.D.A. Senate for Nutrition Policy on research that promotes plant-based full foods and unsaturated fats as the cornerstone of dietary changes. Dr. Willett's research outlines the dangers of only certain carbohydrates and does not condemn the entire category of carbohydrates. We support Dr. Willett's proposal for a change in the U.S.D.A. pyramid, and we support his particular model for that change.

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Taylor &  
Stewart

Dr. Willett's evidence-based and sound approach in changes in the nutritional pyramid represents today's best medical advice regarding diet and its impact on overall health.

If there was one area of the pyramid that we would like to emphasize it would be the inclusion of exercise on a daily basis. Americans are more sedentary and more overweight than ever before, and these two facts are not coincidental. Any consistent message regarding health and nutrition must have a message regarding exercise given in tandem as well.

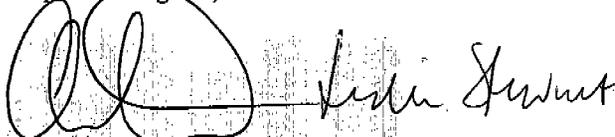
Our country will soon experience an additional financial hardship when the baby boomers hit Medicare age. This baby-booming population is currently far too heavy, far too sedentary, and at high risk for the development of diabetes, heart disease, and numerous other medical complications. Pharmaceuticals can only help prevent a small number of future medical events in a medication managed population.

Health care and healthy advice will have to revolve around nutrition and exercise in order to achieve the kind of goals for reduction in heart disease, high blood pressure, diabetes, and cancer that America should strive for. Nutrition and exercise can change not only the country's health, but also the country's economy. The U.S.D.A. Center for Nutrition Policy and Promotion has an obligation to promote a food-based model on a pure reviewed evidence-based medicine.

We appreciate your thoughtful consideration on this important nutritional topic. We realize that there will be many pressures from various industries upon the committee as it develops a new pyramid. We would urge the committee to follow the advice of independent researchers and their well-published medical trials such as Dr. Walter Willett's. We believe it could be easy to be bogged down in research provided by these various industries which clearly have an agenda which may be at odds with achieving optimal health for the American population. Please consider the design of the study and the conductor of the study when viewing any research that may impact your decision on the future pyramid.

In summary, we see preventable disease on a daily basis. We are treating this disease aggressively with medication, and have been woefully disappointed in our inability to stop this runaway health care crisis. Over the years our clinic has gone back towards nutrition and exercise as the cornerstones of health. We have been very pleased with the overall improvement of our healthy population when patients are given the information and direction to provide optimal health. We strongly advocate the revision of the pyramid, and we wholly endorse Dr. Walter Willett's model as a beginning.

Kindest personal regards,



Charles H. Taylor, M.D.  
Leslie Stewart, RD, LD

CHT/ITS/46/3404

10/21/03  
Heffel

received  
10/21/03  
KT

To Whom It May Concern,

I read through the changes being made to the Food Guide Pyramid and I am very impressed. The tables used are a great tool for professionals to refer to because they are very informative dealing with all ages and many caloric and energy needs. By working as a nutritionist I am able to use these tables as a reference and feel comfortable doing so. However, I feel that the general public would have a hard time understanding these tables and would use them incorrectly. When working as a Nutritionist for a local health agency, I learned as an educator the need to educate clients on how to use the Food Guide Pyramid properly. Therefore my recommendation would be to put a teaching module together with all the new information about the Food Guide Pyramid and distribute it to educators. This way the general public can learn how to use these tables in an effective way through a class or counseling.

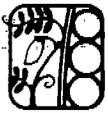
The Food Guide Pyramid design listing serving sizes along with the food groups still needs work. It lists a wide range of servings, especially for the bread and cereal group. I would recommend listing the serving amounts according to activity levels.

I did want to mention that the Food Guide Pyramid for young children is wonderful. Not only is it easy to understand, but also is appealing and gets your attention.

Thank you for you time.

Sincerely,

Carrie Heffel



# USA DRY PEA & LENTIL COUNCIL

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KT

23 October 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria VA 22302.

RE: Food Guide Pyramid revisions

Dear Gentilepersons:

We were pleased to learn that revisions are being considered for the Food Guide Pyramid. As the organization that represents the growers and processors of USA dry peas, lentils and chickpeas, we have commented many times in the past on the inappropriate placement of legumes in the Food Guide Pyramid meat/poultry/fish category, as the Guide currently designed. The placement of legumes with meat/poultry/fish is misleading, since the daily target for this category of 2-3 servings is clearly aimed at limiting the intake of fat and cholesterol. While the protein content of legumes might initially suggest a grouping with meat/poultry/fish, the more appropriate grouping for legumes would be with vegetables, since legumes are similar in a number of ways: low in calories, no cholesterol or saturated fat, very low in fat, and high in fiber. Given the benefits of legumes – high in protein, complex carbohydrates, and folate – we think it is clear that legumes should be put into the vegetable category, in order to encourage more people to consume healthy, low fat foods that provide great nutritional benefits. In fact, leaving legumes in the meat/poultry/fish category does a great disservice to those people who are cutting down on saturated fats by reducing meat intake – their best alternative source of protein is lumped in with meat in the guidelines, instead of in another category, which could help emphasize their suitability as part of a healthy, low-fat daily diet.

You are already aware of the Mediterranean Food Pyramid; in fact, the USDA website links to the Oldways Mediterranean Food Pyramid page at [www.nal.usda.gov/fnic/etext/000023.html](http://www.nal.usda.gov/fnic/etext/000023.html). The 'Mediterranean' approach mirrors our own view that legumes should be part of the normal daily diet, while foods high in saturated fat and cholesterol should be consumed more sparingly. If legumes are moved in the Food Guide Pyramid from the current meat/poultry/fish category to the vegetable category (or if a separate legumes category is created, as is done in the Mediterranean guide), with a recommendation for the category that would encourage 3 to 5 servings per day, we think the Food Guide Pyramid would better reflect the role of legumes in a healthy diet. Please feel free to contact us if you have any questions or comments, or if you would like any further information on peas, lentils and chickpeas. Thank you for your consideration of our request.

Regards,

Peter Klaiber  
Director of Marketing

received  
10/21/03



October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

To Whom It May Concern:

The Idaho Barley Commission would like to submit a comment on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid, regarding Issue No. 3 (the appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns –FR 68(176):53539).

We would encourage the inclusion of barley in the actual diagrams of the Food Guide Pyramid and in the footnotes that describe whole grains. Barley is high in total dietary fiber and has been recommended by the USDA Dietary Guidelines for Americans as an excellent means to increase whole grains in one's diet.

Human consumption of barley is diminutive compared to other cereal grains, but through consumer education on the nutritional benefits of barley we hope to increase consumption within the U.S.

The role of the Food Guide Pyramid is to be an educational tool for a balanced diet and we believe it is important to include barley as an example serving.

Thank you for your consideration.

Sincerely,



Kelly Olson  
Administrator

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Pohl

received  
10/27/03  
KT

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear FDP Reassessment Team Members:

Thank you for this opportunity to provide comments on revisions to the USDA nutrition education tool.

The Food Guide Pyramid was developed in 1992 and is clearly recognizable to many Americans. The nutrition messages promoted by the Food Guide Pyramid are intended to promote health through eating a variety of foods. The graphic strategically places the food groups to demonstrate proportionality. For example, a larger part of the diet should come from breads and cereals than milk and dairy products. The notoriety of the Food Guide Pyramid is demonstrated by the fact that it has been adapted to many different diets and philosophies by other organizations. Recent pressure has led to an effort to revise the FGP to be consistent with current science and to curb the obesity epidemic.

Critics of the FGP appear to want this allegedly simple graphic to be all things to all people. It is a momentous undertaking. Given the complexity of the field of nutrition, the varying needs of different population groups and conflicting philosophies of nutrition, it appears to be an impossible task. My sympathies are with the group charged with this effort.

If simple solutions are being pursued, these suggestions will prevail. They have been suggested by many others as well.

- Portray foods as servings rather than whole foods.
- Move cakes, cookies & pies from the breads & cereals group to the "other" food category
- Provide actual graphics of foods in the "other" category
- Differentiate between monounsaturated, saturated and unsaturated fats.
- Differentiate between complex carbohydrates, whole grains and enriched grains.
- Add water to the bottom of the pyramid - this is the most important nutrient.
- Identify goods that are excellent sources of fiber

Some experts want the FGP to promote physical activity. If this were done, it would no longer be a Food Guide Pyramid. It would have a different purpose and should be labeled as such. If the intent is to show the relationship of physical activity to food intake

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Pohl

in maintaining weight – the activity message should be outside of the actual pyramid (or plate). One suggestion would be to demonstrate this with a balance:



Activity pyramids have been developed. The activity pyramid should demonstrate that some energy expenditure is basal, some comes from daily activities (such as walking to work and doing housework) and some is intentional exercise.

The Five A Day the Color Way materials are wonderful. If this could be incorporated into the FGP it would provide more support for variety in the diet.

I am in agreement with those who feel that a new image would better convey the intent of the FGP. I would like to propose that we reconsider the plate as the basis for the nutrition education symbol used by USDA.

- The circle is a symbol of wholeness and unity.
- The circle, which preceded the pyramid, demonstrated how the functions of some foods overlapped (i.e., beans and legumes were placed between fruits and vegetables and meat).
- The space inside the pyramid is more confining than that inside the circle. Foods are not as recognizable due to the limitations on space.
- The FGP has been presented in many different forms by many different groups and this may make it difficult for individuals to distinguish between the USDA developed tool and alternatives.

The pyramid is a symbol from an ancient culture. It is associated with death and burial and mysterious practices that have been lost to modern society. Food is needed to nourish the body and required to reach wholeness. Food is eaten for health and well-being, to support growth, and has social, cultural and emotional connotations. Food intake can be guided by knowledge but it is also guided by a biologically intuitive function. The FGP is a totally knowledge based system that does not acknowledge the intuitive, life affirming aspects of food.

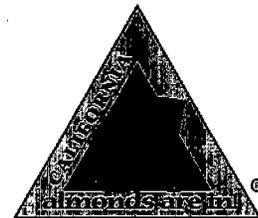
The current FGP has also been criticized for creating the obesity epidemic. This is a ludicrous idea. This would be an overestimate of the influence and educational value of the FGP.

Sincerely,

Susan A. Pohl, M.S., R.D.

1992 K. Lapsley

received  
10/21/03



Almond Board of California

October 23, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Public Comments on the Food Guide Pyramid

I am writing in response to the USDA's report, *Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data*, and specifically would like to provide comment on the *Nutrition Goal for Vitamin E*. As you are aware, approximately half of Americans are not meeting the current recommendations for vitamin E. In fact, according to CSFII data, Americans consume only about half of the recommended 15 mg of alpha-tocopherol per day.

The Food Guide Pyramid and Dietary Guidelines should be designed to help consumers reach the RDA for alpha-tocopherol vitamin E. Extensive research on vitamin E supports the DRI for the alpha-tocopherol form of vitamin E and suggests that alpha-tocopherol from food sources is the form best used in the body. The National Academy of Sciences has reviewed the body of research on vitamin E and supports these findings. In their 2000 report, the NAS quantified its recommendations for vitamin E in terms of alpha-tocopherol. Moreover, the NAS report does not support the use of high dose dietary supplements, and determined that the DRI for vitamin E can be met through a food first strategy.

Consumers can easily execute this food first strategy and incorporate alpha-tocopherol into the diet when making appropriate food choices. Almonds, for instance, are an excellent source of the alpha-tocopherol form of vitamin E. Eating one ounce of almonds (about a handful, or 23 almonds) provides 7.3 mg of alpha-tocopherol form of vitamin E. In the USDA report, the use of oils is noted to help consumers obtain the recommended amounts of vitamin E. However, research indicates that almonds are a superior source to commonly consumed oils, such as soybean oil. Soybean oil is the most commonly consumed oil (because of the popularity in its use among processed and fried foods), but it only provides a small amount of vitamin E. On a calorie-per-calorie basis, one ounce of almonds – 164 calories – delivers more alpha-tocopherol form of vitamin E than soybean oil. One hundred sixty-four calories in a one-ounce serving of almonds delivers 7.3 mg of alpha-tocopherol. One hundred sixty-four calories of soybean oil (equivalent to 1-1/3 tablespoons) only provides 2 mg of alpha-tocopherol.

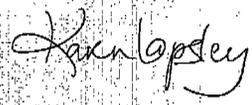
In addition to offering vitamin E, a one-ounce serving of almonds also provides protein, dietary fiber, vitamin B6, zinc, magnesium, copper, calcium, phosphorus and monounsaturated fat. Recent research also links almond consumption to heart health. Per capita consumption of tree nuts, such as almonds, continues to increase, reflecting consumer awareness of the important nutrients found in almonds—like vitamin E. The Food Guide

2007 K. Lapsley

Pyramid and Dietary Guidelines should also reflect this trend, and encourage consumers to choose nutrient-dense foods that will help them meet their vitamin E goal.

Thank you for your consideration of these comments.

Sincerely,



Karen Lapsley, DSc  
Director, Scientific Affairs  
Almond Board of California



# STATE OF NEW YORK DEPARTMENT OF HEALTH

October 22, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Sir or Madam:

Thank you for the opportunity to provide comments on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. As Director of the Hunger Prevention and Nutrition Assistance Program, a program that provides funding and technical assistance to the emergency food network in NYS, I would like to submit the following comments:

- Overall, the nutritional goals for the proposed daily food intake patterns are appropriate for professional use. The important issue is that these goals be communicated in language that people will understand. If foods that are high in desired nutrients are given the most emphasis, the message that they are contributors to a more healthful diet will come across.
- The nutritional goal of 1000 calories per day for children aged 1 to 3 years old and the limit of less than 10% of total calories from saturated fat daily appears to contradict the recommendation that children from 1 to age 2 be given whole milk. Being that whole milk provides approximately 50 saturated fat calories per cup and that one and a half to two cups of milk per day are recommended for this age group, this nutritional goal allows for little to no other sources of saturated fat in the diet of a 1 to 2 year old child.
- The nutritional goals do not take into consideration the nutrient vitamin D, which can be a nutrient of concern for our increasing population of older Americans. Although, the milk or calcium-rich food group includes vitamin D fortified fluid milk, the other calcium-rich dairy foods in this group are not fortified with vitamin D. Therefore, consumer educational materials need to stress the fact that for older Americans to meet their vitamin D requirements, their intake of calcium rich foods should include fluid milk.

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Clarke

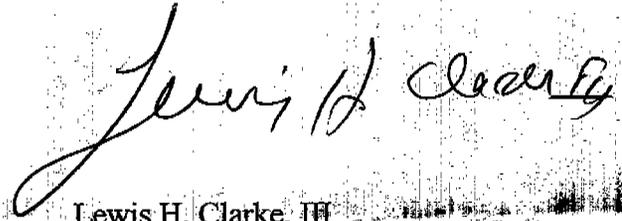
- The proposed daily food intake patterns are appropriate for educating Americans about a healthful diet. The increased amounts of whole grains, dark-green leafy vegetables, legumes and fruits are consistent with chronic disease prevention. The translation of these food intake patterns to Americans is critical. Emphasis should be on low-fat, nutrient dense foods that are minimally processed, as these foods are higher in fiber, lower in added sugars and higher in nutritional value. As director of a program which provides funds to purchase foods to enhance foods donated by food manufacturers and producers, most of which is highly processed food, such an emphasis on nutrient dense foods that are minimally processed, would support our work to improve the nutritional quality of food provided to food insecure individuals and families.
- The labeling of each food group should be considered part of the education on healthful eating. With that in mind, we would recommend that the names of the food groups be more nutrient-based (e.g. Protein-Rich Foods Group, Calcium-Rich Foods Group, etc.) The labels "additional fats" and "added sugars" may be misleading in that consumers may feel they should be added to achieve a healthful diet.
- We recommend the use of cups and ounces, rather than "servings" to suggest daily amounts from each food group. There is tremendous confusion between "serving" and "portion." When cups or ounces are not appropriate, portion sizes should be related to common object sizes, such as the palm of a hand or deck of cards.
- Consumer materials should be focused on balance and variety with special focus to the extreme demands for the best food choices during times of growth (childhood and pregnancy) and as we age. Specific recommendations for consumer materials include:
  - A separate Food Guide Pyramid for children and for older Americans.
  - Pictures of foods used in consumer materials should represent recommended portion sizes.
  - Fats and oils, and sweets should be separated into two groups.
  - Include some reference to trans fats in the fats and oils groups to reflect new labeling requirements.
  - There should be a clear understanding that the range of number of servings is based on age, gender, and physical activity level.
- When looking at Table 2 and Table 3 there are three distinct calorie levels that become apparent within a 600 calorie range determination:
  - Level 1 – Children 2-8 = 1000-1600 calories
  - Level 2 – All females and older Americans (>50) = 1600 – 2200 calories
  - Level 3 – Males 14-50

These three levels could be subsets of the food patterns for developing consumer materials.

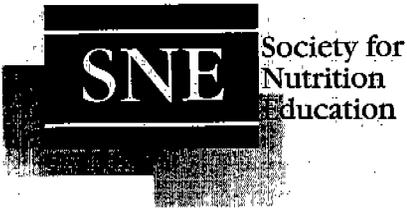
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Meeting the dietary needs of Americans is clearly a challenge. With the rise in obesity in all age groups we must strive to shift the current eating and physical activity patterns contributing to this rise. We appreciate the opportunity to contribute to this process and anxiously await the final product.

Sincerely,



Lewis H. Clarke, III  
Director  
Hunger Prevention and Nutrition  
Assistance Program



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October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

The Society for Nutrition Education (SNE) welcomes the opportunity to provide comment and share insights with the U.S. Department of Agriculture's Center for Nutrition Policy and Promotion (CNPP) on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid.

SNE represents the unique professional interests of nutrition educators across the United States and is strategically poised to work with USDA in the revision of the Food Guide Pyramid as the premier educational tool for educating consumers. Our organization is dedicated to promoting healthy, sustainable food choices and has a vision of healthy people in healthy communities. SNE members fulfill this mission through research, innovative nutrition education, and communication for the public, professionals, and policy makers. In addition, SNE publishes the *Journal of Nutrition Education and Behavior*, the premier juried research periodical solely devoted to behavioral nutrition, research, and policy.

SNE is responding to CNPP's request for comments published in the Federal Register on September 10, 2003. Enclosed, please find our comments

Sincerely,

Jane Voichick, PhD  
President

Elizabeth Crockett, PhD, RD, CDN  
President-Elect

Enclosure

**SNE**

Society for  
Nutrition  
Education

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**Formal Comments of  
The Society for Nutrition Education**

**To the  
Food Guide Pyramid Reassessment Team  
Center for Nutrition Policy and Promotion  
U.S. Department of Agriculture**

**Concerning  
Food Guide Pyramid, Daily Food Intake Patterns**

**October 24, 2003**

37910  
Vicki Chick & Crockett

**SOCIETY FOR NUTRITION EDUCATION**  
**Statement about the Proposed Revision of the**  
**USDA Food Guide Pyramid**  
**October 2003**

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2. Appropriateness of the selection of nutritional goals.....2

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The Society for Nutrition Education (SNE) welcomes the opportunity to provide comment and share insights with the US Department of Agriculture's Center for Nutrition Policy and Promotion (CNPP) on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. SNE represents the unique professional interests of nutrition educators across the United States and is strategically poised to work with USDA in the revision of the Food Guide Pyramid as the premier educational tool for educating consumers. Our organization is dedicated to promoting healthy, sustainable food choices and has a vision of healthy people in healthy communities. SNE members operationalize this mission through research, innovative nutrition education, and communication for the public, professionals, and policy makers. In addition, SNE publishes the *Journal of Nutrition Education and Behavior*, the premier juried research periodical solely devoted to behavioral nutrition, research, and policy.

SNE is responding to CNPP's request for comments published in the Federal Register on September 10, 2003:

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CNPP is requesting comments on the proposed daily food intake patterns and the supporting technical data for the Food Guide Pyramid. CNPP is asking for comments on the adequacy, methodology, and use of the data... Proposed food intake patterns and summary of comments received in response to this notice will be presented to and discussed with the 2005 Dietary Guidelines Advisory Committee before the patterns are finalized...(1).

SNE's comments are based on the currently available data on food intake patterns and the Society's unique professional expertise. The following areas are addressed in this document:

- Using sedentary, reference-sized individuals in assigning target caloric levels
- Selection of nutritional goals
- Proposed food intake patterns
- Specifying commonly used food measures instead of "servings" in the Pyramid

### **1. Appropriateness of using sedentary, reference-sized individuals in assigning target caloric levels.**

Rather than use of a confusing set of sedentary, reference sized individuals in assigning target caloric levels, SNE would like to see any changes made to be consistent with the kcal recommendations from current food information sources. SNE encourages the Committee to consider using the 2000 kcal standard used in nutrition labeling or the simple ranges used in the current Dietary Guidelines, i.e., indicate three recommended ranges based on indicated appropriate kcal recommendations that are based on gender, activity level and age.

### **2. Appropriateness of the selection of nutritional goals.**

SNE maintains that by using the RDA or Adequate Intake (AI) set by the IOM in recent Dietary Reference Intake reports, CNPP is using the appropriate source of information. The goal to have an intake of key nutrients within the RDA or AI range, but less than the upper tolerable intake level, is appropriate.

One micronutrient (Vitamin E) and one macronutrient (carbohydrate, specifically sugar) deserve special attention. While SNE understands the caution of CNPP regarding a greatly increased RDA for vitamin E compared to previous standards, the actual level recommended in the 2,000 kcal pattern is only 55 percent of the recommendation (with the range from 44 percent to 81 percent in the patterns calculated for adults). If the pattern to be used is to be scaled downward, then the Vitamin E levels should be higher for the reference pattern.

There are diverse opinions regarding the healthful range of sugar intake, as well as the potential relationships between sugar intake and chronic diseases, such as diabetes, cardiovascular disease, obesity and weight maintenance (2,3). Current USDA dietary guidance is vague and nonspecific in relation to the levels of sugar consumption that can be considered healthful or appropriate within a daily pattern. Research has documented that consumers vary widely in their interpretation of the recommendations to consume "moderate" amounts of added sugars (4). There is a need for clear and understandable recommendations regarding sugar intake levels so that nutrition educators and consumers can apply these recommendations to promote healthful diets.

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The IOM established a maximal added sugar intake of 25 percent of calories (5). CNPP indicates that its proposed daily food patterns include between 6 and 13 percent of calories from added sugar. There is not agreement within the Society for Nutrition Education about the appropriate level of added sugar to include in the revision of the Food Guide Pyramid. Since this issue is important and controversial, this section will summarize key points raised by SNE members so that these points can be included in CNPP's consideration.

Some SNE members strongly support CNPP's proposed levels of sugar intake. In support of this approach, they note that added sugars provide calories, but few, if any other nutrients. Consumption of foods high in added sugars can displace more nutrient dense foods from the diet (6). An additional example from the literature further illustrates this concern: A reanalysis of the data that was done to produce the Food Guide Pyramid for Puerto Rico (7) indicated that "when caloric need is low, it is difficult to add fat and sugar to the diet and maintain an intake of nutrients that meets the RDA." Although it may be possible for some people to consume up to 25 percent of calories as added sugars and still meet dietary recommendations, it does not necessarily follow that professional recommendations should include maximum potentially acceptable levels of sugar consumption within the range used in consumer education materials. The range of added sugar intake proposed by CNPP should allow diet patterns that are acceptable and realistic in relation to current consumption patterns and that provide achievable goals.

SNE members who support the range of sugar intake proposed by CNPP also note that a group of international experts assigned by the WHO/FAO to study the scientific literature recommended that free sugars should be less than 10 percent of total energy (2). (These "free sugars" also include the sugars that naturally occur in fruits.) The experts assigned by the WHO/FAO admit that their recommendation is controversial, but cite methodological flaws in the studies that seem to indicate no relationship between free sugars and weight gain. The three points that they use to support their recommendation are: 1--"free sugars contribute to the overall energy density of diets", 2--they "promote a positive energy balance" and 3--"drinks that are rich in free sugars increase overall energy intake by reducing appetite control"(2).

Other SNE members strongly support using the IOM report's information about sugar intake in the development of the revised Pyramid. These members stress that IOM reports go through a more rigorous scientific review process than the WHO report. They recommend that CNPP be consistent in using the IOM report as the basis for its recommendations.

SNE recommends that CNPP give very careful consideration to the various arguments relating to sugar intake recommendations with the goal of providing clear recommendations that can form a solid basis for the work of nutrition educators to assist consumers to choose healthful diets.

### **3. Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.**

A recent study has shown that current food groupings of the Food Guide Pyramid are confusing to the general public (8). The criteria used to develop these food groups include nutritional similarities among foods, similar uses of the foods in meals, and consumer perceptions of the

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foods as similar (1). Studies of how people manage their navigation through documents have shown that readers can easily absorb and understand about five categories, possibly as many as seven (9). Beyond that, they cannot remember the information. Therefore, SNE feels that an additional criterion should also be addressed: easy to manage by the general public.

The Society recommends the following revisions of the Food Guide Pyramid to educate Americans about healthful eating patterns:

**Potatoes and similar starchy vegetables should be grouped with grain foods**

Potatoes and similar starchy vegetables have traditionally been grouped with vegetables in guides that were based on a "foundation diets" such as the basic four or basic seven. There are reasons why potatoes and starchy vegetables should be moved to a "starchy plant foods" group. These reasons are: 1) the other practical use by consumers and 2) their nutrient profile. From a consumer perspective, rice, pasta and potatoes are typically considered interchangeable choices. In other words, an individual will often substitute rice or pasta for potatoes, but would rarely consider substituting other vegetables, e.g., squash or spinach, for potatoes. In terms of similar uses of the foods in meals the recommended change provides a more natural grouping than a grouping that separates grains from these starchy vegetables.

In the daily patterns presented by CNPP potatoes are grouped with corn and peas, as are other complex carbohydrates such as yucca, manioc, cassava, and plantains. These latter foods are not traditionally consumed by Americans of European descent, but they are consumed as a basic source of carbohydrates in diets from the tropics of all parts of the world, the Caribbean, and diets in many Latin American countries (7). SNE recommends that these other complex carbohydrate foods be grouped with grain foods in food guides.

With regard to their nutrient profiles, food tables show that a medium potato (or ½ cup) provides about 85-90 kcal, a slice of whole grain bread about 85 kcal, ½ cup of rice between 100 and 130 kcal depending on the type of rice, and ½ cup of pasta 90-100 kcal. When a comparison was made of the nutritional contribution of bland, starchy vegetables compared with whole grain or enriched cereals, the differences between the two types of cereals were greater than the differences between the starchy vegetables and the two cereal groupings (7). Potatoes had significantly greater potassium and vitamin C than the cereals, but neither of these nutrients is in danger of being over-consumed at toxic rates from normal foods. Both kinds of cereals had more protein than the starchy vegetables, but too little protein is not a common problem in American diets. Whole grain cereals had more magnesium, phosphorus, potassium, zinc, copper, manganese and vitamin B6 than their enriched counterparts. While there were insufficient data to make comparisons for most of these nutrients with the starchy vegetable group, potatoes were closer to enriched cereals for these nutrients than they were to whole grains (7). Given these nutrient profiles, if enriched cereals are considered an adequate source of complex carbohydrates, then potatoes can also be considered an adequate source.

For these reasons, the Society recommends that potatoes and other similar starchy, vegetables be grouped with rice, pastas, cereals and breads. This would require a change, in the current basis for a serving of foods from this food group from 1 oz. flour commodity equivalent to a gram

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carbohydrate equivalent. Since the daily pattern given in Table 1 has half of the servings from whole grains and half from enriched, the suggested new balance would be half from whole grains and half from potatoes and other starchy vegetables or enriched grain products.

SNE appreciates that this proposed change would alleviate the observations of critics of the current Food Guide Pyramid when they point out that the most commonly consumed food in the vegetables group is potatoes, which have lower nutrient density than most other foods in the vegetable group.

### **Legumes**

Legumes are nutrient-rich foods, and are especially good sources of healthful fiber that is low in U.S. diets. SNE recommends that CNPP give careful consideration to the placement of legumes within the revised Pyramid. The goal should be to select the placement that will best support the development of educational messages and materials to help consumers increase consumption of legumes.

Based on their nutrient profile – as high starch, fiber, and protein foods – a strong case can be made to locate legumes in the meat/protein group, the vegetable group, and/or the grain group. SNE suggests that CNPP conduct additional studies that will take into consideration what people consider to be the best overall natural food grouping(s) for legumes, based on how consumers use legumes in meals and family food patterns. These studies should examine the role that beans play in various vegetarian diets versus diets that include meat sources of protein. Research is also needed to assess whether consumers find it confusing for legumes to be included in more than one food group, as they are now. This information would make it easier to determine how to best group legumes to encourage their consumption.

### **Fruits and Vegetables**

Some SNE members believe that fruits and vegetables should form the foundation of the diet along with grains. In a recent presentation at the 9<sup>th</sup> European Nutrition Conference in Rome, the point was made that there is consistent evidence that 8 or even 9 servings of vegetables and fruit each day should be consumed to optimize health, not 5 a day. SNE supports a greater emphasis on both legumes and fruits and vegetables in future revisions of the Food Guide Pyramid.

### **Oils/soft margarines**

This group is designed to provide vitamin E and linoleic and  $\alpha$ -linolenic acids. However, other foods that are also good to excellent sources of these nutrients – tree nuts, seeds and avocados – have not been included. Although consumption of these foods in the U.S. is currently low, SNE recommends the explicit inclusion of these foods in the group. The guidance should specify that peanuts, which are not rich in vitamin E (1), should be grouped with meat/protein foods. Some SNE members suggest that the tip of the pyramid and how fats in general, should be approached should be reconsidered. Saturated and trans fats should be separated from the monounsaturated and polyunsaturated fats.

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### Water

Water is an essential nutrient for the human body. Until the IOM releases its report on water and electrolytes it is difficult to make a specific recommendation. Therefore, the Society urges CNPP to consider the upcoming recommendations so that a basis for adequate hydration can be included in the Food Guide Pyramid.

#### 4. Use of commonly used food measures vs. "servings" in consumer materials to recommend daily amounts to choose from each food group and sub-group.

SNE recommends that the recommended quantities of foods be explicitly stated on the Pyramid graphic in terms of commonly used food measures such as cups and ounces. The current use of "servings" is a major barrier to using the Food Guide Pyramid. Comments received from nutrition educators in SNE indicate that many find they must spend excessive time explaining the serving sizes of foods, limiting the time available to adequately communicate the Pyramid's overall message: to eat the five major food groups (grains, potatoes and other starches, fruits, vegetables, milk and protein foods) in appropriate quantities. Furthermore, serving sizes for some foods in Food Guide Pyramid guidance are different from the serving sizes used in food labeling, increasing consumer confusion.

For example, if a reference pattern of 2,000 kcal were used, the recommended food quantities and number of multiples of these quantities to consume per day would be:

- Whole grains, potatoes and other starches: 1 cup or two slices of bread (4 per day)
- Vegetables: 1/2 cup cooked, 1 cup raw (4 per day)
- Fruits: 1/2 cup (3 per day)
- Milk and milk products: 16 fluid ounces or 2 cups (more added for growing children)
- Meats, poultry, fish, and eggs: 5 or 6 ounces (SNE recommends use of a whole number, rather than a fraction).

These food quantity recommendations could be scaled up or down proportionately to meet the caloric and nutrient needs of individuals with different activity levels, life cycle needs or body sizes.

### SNE Summary Recommendations

1. Using various specific caloric levels for sedentary individuals at different ages is not deemed the most appropriate way to communicate what an individual should do. Instead, SNE recommends that one or three calorie levels be chosen--to provide the RDA's and Adequate Intake's (AI's). The selection of 2,000 kcals as the reference pattern would make the food guide more compatible with the food labels.

2. SNE recommends that CNPP give very careful consideration to the various arguments relating to sugar intake recommendations with the goal of providing clear recommendations that can form a solid basis for the work of nutrition educators to assist consumers to choose healthful diets.

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3. The criteria established by CNPP to develop food groups should include making the food groups simple and easy to manage by the general public. SNE has concerns about the ability of the public to be able to apply the sub-groups of vegetables as currently conceptualized.

4. SNE suggests that CNPP consider potatoes and other similar starchy, vegetables be grouped with rice, pastas, cereals and breads. This would require a change in how the servings of foods from this group are expressed. CNPP could use the data at hand regarding consumer patterns and nutrient composition to confirm or disconfirm this suggestion.

5. SNE urges CNPP to do choice studies to determine what people consider to be natural groupings for legumes; i.e. give the general public the option of placing legumes with meats, vegetables or grains to see what they select.

6. SNE supports a greater emphasis on legumes and fruits and vegetables in future revisions of the food guide pyramid.

7. SNE recommends that additional excellent sources of vitamin E and EFAs be included in the food guide pyramid.

8. SNE recommends that CNPP consider the IOM's impending report on water intakes so that a basis for adequate hydration can be included in the food guide pyramid.

9. In conjunction with #1 above, if a reference pattern of 2000 kcals is adopted for the Food Guide Pyramid, we suggest the basic serving sizes and/or daily intakes for this pattern to be:

- Whole grains, potatoes and other starches: 1 cup or two slices of bread (4 per day)
- Vegetables: 1/2 cup cooked, 1 cup raw (4 per day)
- Fruits: 1/2 cup (3 per day)
- Milk and milk products: 16 fluid ounces or 2 cups (more added for growing children)
- Meats, poultry, fish, and eggs: 5 or 6 ounces (SNE recommends use of a whole number, rather than a fraction).

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October 22, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Team,

I use the FGP often in my nutrition education counseling. I'm wondering if whole grains could be depicted in the pyramid since they are so much more beneficial nutritionally than refined grain products. Also, if lower fat varieties of foods from the dairy and meat/ meat alternative groups could be depicted, I think that would be beneficial as well. For example, perhaps 1% milk could be added to the milk carton picture and chicken breast could replace a whole chicken.

Thank you very much for giving the public a chance to comment on our thoughts. I appreciate it!

Sincerely,

*Gina Lombardi, R.D.*

Gina Lombardi, R.D.

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October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

To the Food Guide Pyramid Reassessment Team:

The International Bottled Water Association (IBWA) welcomes this opportunity to submit comment on proposed revisions to the food intake patterns that form the basis of the Food Guide Pyramid. IBWA is a trade association representing the bottled water industry and is the authoritative source of information about all types of bottled waters. Founded in 1958, IBWA's membership includes U.S. and international bottlers, distributors and suppliers. Strengthened by IBWA Model Code, the Association is committed to working with the U.S. Food and Drug Administration (FDA), which regulates bottled water as a packaged food product, and state governments to set stringent standards for safe, high quality bottled water products.

IBWA stresses the importance of water consumption for proper hydration and refreshment and strongly encourages the inclusion of water consumption in the 2005 revision of the Dietary Guidelines and resulting Food Pyramid. The National Academy of Sciences Panel on Dietary Reference Intakes (DRIs) for Water is expected to report on specific water DRIs; a report that was scheduled for release in March 2003 but has been delayed with a possible release in, I have been informed, December 2003. DRIs are most often used as the scientific basis for additions/inclusion in the Dietary Guidelines. IBWA respectfully urges the Food Guide Pyramid Reassessment Team to seriously consider and utilize the science as reflected in the water DRI as a basis for inclusion of water for refreshment and hydration in the Food Guide Pyramid. If Guidelines are provided for general fluid intake, water - whether from a bottle or the tap - should be specified among those recommendations.

IBWA has noted that, while the final report on the 2000 Dietary Guidelines include references to the importance of drinking water, there are no specific daily intake recommendations. Proper hydration is absolutely crucial for human fitness, health, and well being. The "Modified Food Pyramid for 70+ Adults," developed by the USDA Human Nutrition Research Center on Aging at Tufts University, has made a recommendation for eight daily servings of water to form the foundation for the "Modified Food Pyramid for 70+ Adults." By all accounts, recommended water intake is most appropriate for inclusion in the 2005 Dietary Guidelines and resultant general Food Pyramid for all age groups.

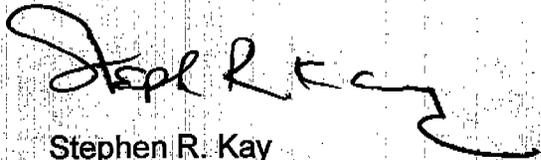
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**IBWA Letter -- Page 2 of 2**

Water is an excellent choice for hydration and refreshment because it does not contain calories, caffeine, sugar, artificial coloring, alcohol and other ingredients that may contribute to overweight/obesity, hypertension and other maladies. Based on statistics<sup>1</sup>, the average consumer drinks up to two quarts of water per day, regardless of the source. Depending on an individual's weight and level of exercise or activity, that amount may vary. However, water is an ideal drink of choice for all age groups and levels of activity. For the active to moderately active person, water provides hydration and refreshment to replace fluids lost during exercise. For sedentary individuals, water hydrates and refreshes without adding calories. For all persons, water and proper hydration aids many other physiological functions including cushioning of the joints, aiding digestion, cognitive function and respiration.

Bottled water, as a package food product regulated by the US Food and Drug Administration (FDA) is a sensible reference point for the Dietary Guidelines as it is a food product that delivers the above mentioned benefits of water while providing consistent safety, quality, convenience and good taste.

Sincerely,



Stephen R. Kay  
Vice President, Communications

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<sup>1</sup> Derived from "2003 Bottled Water in the U.S." by Beverage Marketing Corporation and "Plain Talk About Drinking Water," by Dr. James M. Symons



**NFPFA**

*The Food Safety People*

**NATIONAL**

**FOOD**

**PROCESSORS**

**ASSOCIATION**

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Food Guide Pyramid Reassessment Team  
Center for Nutrition Policy and Promotion  
U.S. Department of Agriculture  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

RE: Notice of Availability of Proposed Food Guide Pyramid Daily Food Intake Patterns and Technical Support Data and Announcement of Public Comment Period  
*68 Federal Register 41507, July 11, 2003.*

Dear Sir or Madam:

The National Food Processors Association (NFPFA) submits the following comments on the notice referenced above.

The National Food Processors Association is the voice of the \$500 billion food processing industry on scientific and public policy issues involving food safety, food security, nutrition, technical and regulatory matters and consumer affairs. NFPFA's three scientific centers, its scientists and professional staff represent food industry interests on government and regulatory affairs and provide research, technical services, education, communications and crisis management support for the Association's U.S. and international members. NFPFA members produce processed and packaged fruit, vegetable, and grain products, meat, poultry, and seafood products, snacks, drinks and juices, or provide supplies and services to food manufacturers.

The USDA Center for Nutrition Policy and Promotion (CNPP) requests comments on five thematic issue areas related to proposed daily food intake patterns and technical support data for the Food Guide Pyramid (FGP) reassessment activity. NFPFA submits these comments in an effort ultimately to improve public understanding of the FGP and increase its use as part of maintaining healthy weight, diet, and lifestyle with respect to food.

**Appropriateness of using sedentary, reference-sized individuals in food intake patterns**

NFPFA concurs with the use of reference-sized individuals in the daily food intake patterns. However, we disagree with the selection of sedentary activity level for the energy expenditure target for developing daily food intake

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Food Guide Pyramid Reassessment Team  
October 27, 2003  
Page Two

patterns. In taking this approach, CNPP chooses to maximize nutrition, but to minimize physical activity in the energy balance equation related to diet and health. The FGP is a tool for Americans to put the Dietary Guidelines into action and choose what and how much to eat from food groups to get adequate nutrients and not too many calories.<sup>1</sup> Like the *Dietary Guidelines for Americans*, the FGP was developed and established for "healthy Americans."<sup>2</sup>

The approach taken by CNPP contradicts the philosophy and recommendation in the President's *HealthierUS* Initiative.<sup>3</sup> The first topic within the *HealthierUS* initiative, Physical Fitness, recommends, "Be physically active every day. Learn how to make regular physical activity a routine part of your life."<sup>4</sup> Further, the first two guidelines in the "Aim for Fitness" tier of the *Dietary Guidelines for Americans* focus on healthy weight and physical activity.<sup>5</sup> Similar to the *HealthierUS* initiative recommendation, the Dietary Guideline for activity is "Be physically active every day." The keystone message in the "Build a Healthy Base" tier is "Let the Pyramid guide your food choices." On balance, NFPA believes the underlying principles for the FGP must acknowledge both attention to adequate nutrient intake balanced with physical activity at some level higher than "sedentary".

NFPA requests that USDA reconsider and recalculate daily food intake patterns within the "low active" range described in Table 2<sup>6</sup> rather than using "sedentary". If nutrient standards are set to be adequate, we believe that physical activity levels higher than sedentary must be used for developing the daily food intake patterns.

#### **Appropriateness of the selection of nutritional goals for the daily food intake patterns**

The selection of nutritional goals for the daily food intake patterns is of concern to NFPA. While we concur that the Food and Nutrition Board's reports on Dietary Reference Intakes (DRI) are the correct nutrient reference standards to use, we believe that some DRI information remains to be considered in the reassessment. Further, NFPA disagrees with how CNPP has chosen to apply the DRIs to build the proposed daily food intake patterns.

<sup>1</sup> U.S. Department of Agriculture. 1992. The Food Guide Pyramid. Home and Garden Bulletin no. 252. Washington, DC: Government Printing Office. Also accessible at <http://www.usda.gov/cnpp/pyrabklt.pdf>.

<sup>2</sup> U.S. Department of Agriculture. Using the Food Guide Pyramid: A resource for nutrition educators. P. 1. Accessed at <http://www.nalusda.gov/fnic/fpyr/guide.pdf>.

<sup>3</sup> President's HealthierUS Initiative. 2003. Accessed at <http://www.healthierus.gov/>.

<sup>4</sup> HealthierUS Initiative program components. 2003. Accessed at <http://www.healthierus.gov/exercise.html>.

<sup>5</sup> U.S. Department of Agriculture and U.S. Department of Health and Human Services. 2000. Nutrition and Your Health: Dietary Guidelines for Americans. Fifth edition. Home and Garden Bulletin No. 232. Washington, DC: Government Printing Office. Also accessed at: <http://www.health.gov/dietaryguidelines/dga2000/document/frontcover.htm>.

<sup>6</sup> Center for Nutrition Policy and Promotion, U.S. Department of Agriculture. Accessed at <http://www.usda.gov/cnpp/pyramid-update/FGP%20docs/TABLE%202.pdf>.

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Food Guide Pyramid Reassessment Team  
October 27, 2003  
Page Three

NFPA requests that the CNPP FGP reassessment fully consider the upcoming report on DRIs for water and electrolytes, rather than rely solely on the nutrition labeling standards used for the daily food intake patterns. Additionally, as CNPP moves forward with the reassessment project, we urge review and consideration of the pending recommendations from the FNB panel on Uses of Dietary Reference Intakes for Nutrition Labeling. This report may have implications worthy of consideration for the FGP, regulations and standards for USDA's food and nutrition programs, and USDA's nutrition labeling regulations for meat and poultry products.

Conspicuously absent from the FGP reassessment information is consideration of the 2003 FNB report, *Dietary Reference Intakes: Applications in Dietary Planning*.<sup>7</sup> The 2003 DRI planning report was released after the CNPP FGP reassessment was well underway. Based on the recommendations in that report, we question whether the CNPP has utilized the DRI structure appropriately, and respectfully requests CNPP to justify why the approach of using RDAs (recommended dietary allowance) was taken versus the use of EARs (estimated average requirement) to develop the daily food intake patterns. We do agree with CNPP's assessment that in the case of nutrients or food components for which an EAR is not listed, the AI (average intake) should be used.

As noted by the values in Table 5, nutrient contributions based on the RDA often provide 250 percent or more of the RDA for a given age-gender life stage grouping.<sup>8</sup> Nutrients that present challenges using this method include vitamin E and iron for many life stage groups. Calcium, for which an AI was established, also represents a challenge. CNPP should reconsider and reevaluate the daily food intake patterns using the EAR versus the RDA.

Our rationale is two-fold: one is the interpretation of the DRIs and how they are used to develop food guides for the population, and the other is the interpretation of the DRIs and how they are used for dietary planning. The current FGP is a tool that acknowledges that it does not meet the needs of "everyone". The proposed daily food intake patterns use pooled or grouped data and CNPP asks for comments toward using subsets of information from the twelve daily food intake patterns. Thus, the FGP and the basis for this reassessment are prepared from pooled data or information about groups, not individuals; and the resulting proposed daily food intake patterns are prepared for groupings by age, gender, and activity level, not specific to meet the individual needs of every American.

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<sup>7</sup> Institute of Medicine. 2003. *Dietary Reference Intakes: Applications in Dietary Planning*. Report of the Subcommittee on Interpretation and Uses of Dietary reference Intakes and the Standing Committee on the Scientific Evaluation of Dietary Reference Intakes, Food and Nutrition Board. Washington, DC: The National Academies Press (prepublication copy).

<sup>8</sup> CNPP, USDA 2003. Accessed at <http://www.usda.gov/cnpp/pyramid-update/FGP%20docs/TABLE%205.pdf>.

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Page Four

When planning intakes for a group, the 2003 DRI report is very clear,

*For groups, the goal of planning is to determine a usual intake distribution that results in a low prevalence of intakes that are inadequate or at risk of being excessive. The Estimated Average Requirement, AI, and Tolerable Upper Intake Level are used in planning the diets of groups.<sup>9</sup>*

The 2003 DRI dietary planning report outlines a population-based approach to using the EAR (or AI, when no EAR exists) to develop diets for groups. The report summarizes the use of DRIs for planning intakes of apparently healthy individuals and groups in Box S-2.<sup>10</sup> Figure S-1 of the DRI dietary planning report summarizes the decision tree for dietary planning.<sup>11</sup> For specific details, please see the report Summary and Chapter 3 and 4. Chapter 4 is particularly useful for segments of the population where nutrient intake patterns or needs are not normally distributed. By following these definitions and decision-making models, it is clear to NFPA that CNPP should use the EAR for nutrients in developing the proposed daily food intake patterns.

NFPA reiterates the need for CNPP to use DRI values and justify the use of the RDA versus the EAR. After addressing the issue of using the EAR versus RDA, there may be other strategies for addressing any shortfalls in the nutrient patterns, such as with vitamin E and with iron. Such strategies might include reconsideration of national enrichment requirements or fortification policy. We realize that for most foods, this is not under USDA's jurisdiction, but consideration should be given to this issue.

#### **Appropriateness of the proposed food intake patterns for educating Americans about healthful eating**

NFPA believes that the basic architecture of the food patterns is sound, but reserves final judgment once consideration has been given to using the EAR as the nutrient standard upon which to evaluate nutrient composition of daily food intake patterns.

#### **Appropriateness of using "cups" and "ounces" vs. "servings".**

While not important for technical development of the daily food intake patterns, this issue is a critical consideration for enabling consumers to utilize the FGP when making food choices within and among food groupings. To maximize consumer benefit, NFPA believes that the FGP should move to serving sizes and use of household measures as used in nutrition labeling. There will always be some tension between the FGP and the food label. However, if consumer nutrition education materials can focus on servings expressed as portions, NFPA believes that government nutrition and food information tools such as the FGP and the Nutrition Facts panel can better deliver information of use to consumers for building healthful diets. We urge CNPP

<sup>9</sup> IOM 2003, p. 3.

<sup>10</sup> IOM 2003, p. 3.

<sup>11</sup> IOM 2003, p. 4.

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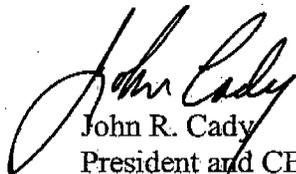
to invest in consumer testing and evaluation when education materials or revisions to the FGP are prepared for phase three of the reassessment process.

**Selection of appropriate illustrative food patterns for various consumer materials.**

As was the choice in development of the original FGP, NFPA believes that a subset of food intake patterns that are based on a range of calories or a central number will be most useful to consumers. Using the full range or spectrum of daily food intake patterns will not serve any use for educating consumers about healthful diets. NFPA believes that there may be value in looking at harmony between the FGP and the nutrition label to increase focus on the relationship between food choices based on nutrition information from food labels and those from a food guide to fulfill the healthy eating and lifestyle choices embodied in the current and future *Dietary Guidelines for Americans*. All three tools – the nutrition label, the FGP, and the *Dietary Guidelines for Americans* – must be approached from a more systematic and integrated approach across government. As guidance to consumers on quantity of foods within a daily food intake pattern, NFPA underscores the need for comprehensive testing and evaluation of consumer materials to accompany the FGP in the future.

Thank you for the opportunity to comment on this important issue. As USDA proceeds forward with the Food Guide Pyramid reassessment, we look forward to future discussions about ways to maximize flexible use of the food guide graphic and to integrate it with government-wide and industry efforts to educate the public about “How to Eat” and live healthful lifestyles. We hope our comments, insights, and recommendations included herein are useful as CNPP refines and finalizes the FGP reassessment.

Regards,



John R. Cady  
President and CEO  
National Food Processors Association

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milk. The difficulty in digesting traditional dairy products may deter many minorities from consuming the recommended servings of traditional dairy products. We recommend including alternative dairy product options in the food guide pyramid such as soy milk, lactose-free milk, goat milk, goat cheese and yogurt in lieu of milk and cheese so those who are lactose intolerant are presented with other dairy options to meet their calcium and protein requirements.

#### Increased consumption of whole grains and fruits and vegetables

The food pyramid suggests 6-11 servings of grains. Most Americans interpret "grains" to mean white bread, white pastas and white rice. We suggest lowering the suggested servings of white bread, rice and pasta and emphasizing an additional food category called "whole grains" that includes wheat pasta, brown rice and whole grain breads. We suggest adding other grains in this section such as rice crackers, rice pudding, naan, corn and flour tortillas, pita bread and tabouleh. Additionally, we suggest that more servings of fruits and vegetables should be emphasized due to the greater nutritional value that can be found in fresh, frozen, canned and dried fruits and vegetables.

#### Appropriate use of sedentary, reference-sized individuals

With a majority of the US population being obese or overweight, using a sedentary life-style guide is a reasonable and appropriate way to guide the reduced daily caloric needs of sedentary adults and adolescents. Sedentary adolescents are missing entirely from the daily caloric guide. We feel adolescents should be included since more adolescents are becoming overweight or obese. A stronger emphasis on physical activity should also be included within the food pyramid guide. A combination of physical activity along with nutritional and dietary guidelines is the most efficient way to maintain a healthier life-style.

#### Appropriateness of using "cups" and "ounces" vs. "serving"

The term "serving size" can be vague and imprecise. Using basic measurements such as "cups" and "ounces" quantifies the serving sizes for the average consumer which facilitates a consistent use of one "serving size." In addition to using "cups" and "ounces," we suggest also using a variety of visual cultural icons to signify one "serving." For example, a deck of cards, 1/2 of a tortilla or 4 strips of grilled meat can be used as visual multicultural icons to represent one "serving."

In conclusion, the AMA and its MAC appreciate the opportunity to provide recommendations to the food guide pyramid. Attached for your reference, you will find current AMA policy that addresses obesity and nutritional guidelines as well as a recently adopted resolution "Obesity and Culturally Competent Dietary and Nutritional Guidelines." Our AMA and its MAC are working on a report and recommendations for its June 2004 policy-making meeting. Feel free to contact me if we can be of further assistance.

Sincerely,



Michael J. Scotti Jr., MD  
Senior VP of Professional Standards

Enclosure

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Scotti

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 428  
(A-03)

Introduced by: National Medical Association  
Subject: Obesity and Culturally Competent Dietary and Nutritional Guidelines  
Referred to: Reference Committee D  
(Carol A. Tavani, MD, Chair)

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- 1 Whereas, It is estimated that approximately 61% of all US adults are obese and the obesity rate
- 2 of children and adolescents has doubled since 1970; and
- 3
- 4 Whereas, The obesity rate in minority communities has increased disproportionately in
- 5 comparison to whites in the US; and
- 6
- 7 Whereas, According to the US Department of Agriculture, healthier diets may prevent \$71 billion
- 8 per year in medical costs, lost productivity, and premature deaths caused by four diet-related
- 9 diseases: coronary heart disease, cancer, stroke and diabetes mellitus; and
- 10
- 11 Whereas, Coronary heart disease, cancer, stroke and diabetes mellitus disproportionately affect
- 12 African American, Hispanic and American Indian communities in comparison to other racial and
- 13 ethnic groups in the US and contribute to persistent racial and ethnic health care disparities; and
- 14
- 15 Whereas, The USDA developed *Dietary Guidelines for Americans* and a *Food Guide Pyramid*
- 16 that do not fully incorporate cultural and socioeconomic considerations as well as racial and
- 17 ethnic health disparities as it relates to body weight, diet and nutrition; and
- 18
- 19 Whereas, The American Medical Association entered an ongoing Memorandum of
- 20 Understanding (MOU) with the US Department of Health and Human Services that directly
- 21 supports the goals of *Healthy People 2010* to improve the health of the nation and eliminate
- 22 racial and ethnic health disparities; and
- 23
- 24 Whereas, AMA Policy H-150.953, "Obesity as a Major Health Program," supports working
- 25 "...with appropriate federal agencies, medical specialty societies, and public health
- 26 organizations to educate physicians about the prevention and management of overweight and
- 27 obesity in children and adults, including education in basic principles and practices of physical
- 28 activity and nutrition counseling"; and
- 29
- 30 Whereas, The AMA is also developing a clinical tool, which includes minority health disparities,
- 31 to guide clinicians in assessing and treating adult obesity; and
- 32
- 33 Whereas, *The Journal of Preventive Medicine* 2002:vol 22 reports a high correlation between
- 34 lower income and minority neighborhoods having less access to supermarkets and a greater
- 35 incidence of unhealthy diets than non-minority or higher income neighborhoods; and
- 36
- 37 Whereas, The AMA and its Minority Affairs Consortium, along with the National Medical
- 38 Association and other organizations, have concluded that obesity and its health complications
- 39 contribute to persistent racial and ethnic health care disparities; therefore be it

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- 1 RESOLVED, That our American Medical Association and its Minority Affairs Consortium study
- 2 and recommend improvements to the US Department of Agriculture's *Dietary Guidelines for*
- 3 *Americans* and *Food Guide Pyramid* so these resources fully incorporate cultural and
- 4 socioeconomic considerations as well as racial and ethnic health disparity information in order
- 5 to reduce obesity rates in the minority community (Directive to Take Action); and be it further
- 6
- 7 RESOLVED, That our AMA report its findings and recommendations to the AMA House of
- 8 Delegates by its 2004 Annual Meeting. (Directive to Take Action)

Fiscal Note: No Significant Fiscal Impact

Received: 5/7/03

## RELEVANT AMA POLICY

### H-150.953 Obesity as a Major Public Health Program

Our AMA will: (1) urge physicians as well as managed care organizations and other third-party payors to recognize obesity as a complex disorder involving appetite regulation and energy metabolism that is associated with a variety of comorbid conditions; (2) work with appropriate federal agencies, medical specialty societies, and public health organizations to educate physicians about the prevention and management of overweight and obesity in children and adults, including education in basic principles and practices of physical activity and nutrition counseling; such training should be included in undergraduate and graduate medical education and through accredited continuing medical education programs; (3) urge federal support of research to determine: (a) the causes and mechanisms of overweight and obesity, including biological, social, and epidemiological influences on weight gain, weight loss, and weight maintenance; (b) the long-term safety and efficacy of voluntary weight maintenance and weight loss practices and therapies, including surgery; (c) effective interventions to prevent obesity in children and adults; and (d) the effectiveness of weight loss counseling by physicians; (4) encourage national efforts to educate the public about the health risks of being overweight and obese and provide information about how to achieve and maintain a preferred healthy weight; (5) urge physicians to assess their patients for overweight and obesity during routine medical examinations and discuss with at-risk patients the health consequences of further weight gain; if treatment is indicated, physicians should encourage and facilitate weight maintenance or reduction efforts in their patients or refer them to a physician with special interest and expertise in the clinical management of obesity; (6) urge all physicians and patients to maintain a desired weight and prevent inappropriate weight gain; (7) encourage physicians to become knowledgeable of community resources and referral services that can assist with the management of overweight and obese patients; and (8) urge the appropriate federal agencies to work with organized medicine and the health insurance industry to develop coding and payment mechanisms for the evaluation and management of obesity. (CSA Rep. 6, A-99)

### H-440.902 Obesity as a Major Health Concern

The AMA: (1) recognizes obesity in children and adults as a major public health problem; (2) will study the medical, psychological and socioeconomic issues associated with obesity, including reimbursement for evaluation and management of obese patients; and (3) will work with other professional medical organizations, and other public and private organizations to develop evidence-based recommendations regarding education, prevention, and treatment of obesity. (Res. 423, A-98)

### H-350.965 Culturally Effective Health Care

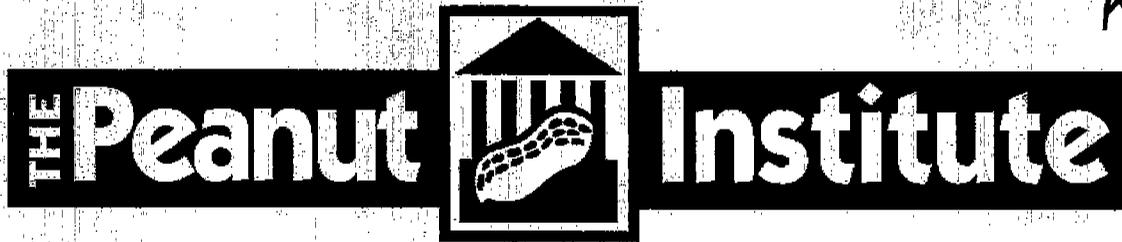
Our AMA renews its commitment to supporting the importance of culturally effective health care in eliminating disparities and to exploring ways to provide physicians with tools for improving the cultural effectiveness of their practices. (Res. 718, I-02)

See also:

**H-350.967 Eliminating Health Disparities**

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, Virginia 22302

October 24, 2003

Re: Proposed Daily Food Intake Patterns for Food Guide Pyramid

Dear Food Guide Pyramid Reassessment Team:

Peanuts and peanut butter are unique foods within the "Meat group" in that they provide plant protein, fiber, good unsaturated fat, and many micronutrients and phytochemicals. Usually eaten as a protein source, peanuts and peanut butter are relatively inexpensive foods and are a positive substitute for refined carbohydrates or for saturated fat. For example, peanuts can replace croutons on a salad. Or, peanut butter can be used as a healthful and inexpensive alternative to sandwich items containing higher amounts of saturated fat.

Peanuts and peanut butter are loved by Americans, representing about 80% of the "nuts" eaten in the United States. (1) Nutrition research shows that when peanuts and peanut butter are consumed in small amounts daily, they can help lower cholesterol, reduce the risk of type 2 diabetes, and satisfy hunger. (2-4)

No matter what shape the new Food Guide Pyramid takes, we feel that peanuts and peanut butter should be given special consideration as complex plant foods that:

1. Can be eaten on a daily basis in small amounts;
2. Can be a healthy substitute for refined carbohydrate or saturated fat sources; and
3. Can satisfy hunger without leading to weight gain.

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**Peanuts and Peanut Butter Can Be Eaten Daily in Small Amounts**

As you know, a recent Food and Drug Administration (FDA)-approved qualified health claim says, "Scientific evidence suggests but does not prove that eating 1.5 ounces of most nuts, such as peanuts, as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. See nutrition information for fat content." The claim is based on a large body of epidemiological and clinical studies showing a 25-50% reduction in the risk of heart disease when 1 to 2 ounces of peanuts, nuts, or peanut butter are consumed 5 or more times a week. (2)

**Peanuts and Peanut Butter Can Be a Healthy Substitute for Refined Carbohydrate or Saturated Fat Sources**

Peanuts are technically a legume, but are categorized with and consumed like "nuts" in the United States. New uses for peanuts, such as satays, sauces and dips, are becoming more popular. In addition to healthy mono- and poly-unsaturated fat, peanuts contain the most plant protein of any "nut." They also are highest in the amino acid arginine, a precursor to nitric oxide, which helps to dilate blood vessels and improve blood flow.

Researchers from Harvard University report that, "Based on data from the Nurses' Health Study, we estimate that substitution of the fat from one ounce of nuts for equivalent energy from carbohydrate in an average diet was associated with a 30% reduction in CHD [coronary heart disease] risk and the substitution of nut fat for saturated fat was associated with 45% reduction in risk." (5)

Researchers from Harvard also found that consuming a half serving (one tablespoon) of peanut butter or a full serving of peanuts or other nuts (one ounce), five or more times a week is associated with a 21% and 27% reduced risk of developing type 2 diabetes, respectively. The study authors state, "Our findings suggest potential benefits of higher nut and peanut butter consumption in lowering the risk of type 2 diabetes in women. To avoid increasing caloric intake, regular nut consumption can be recommended as a replacement for consumption of refined grain products or red or processed meats." (3)

An FDA report highlights areas where the government intends to focus efforts on providing better nutrition and health messages to consumers, including: "The benefits of substituting nuts for other sources of saturated-fat-containing protein to help reduce the risk of heart disease." (6)

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Peanuts and peanut butter are plant protein sources that bring along good unsaturated fat, as well as many other beneficial micronutrients. Peanuts are a good source of fiber, vitamin E, folate, potassium, magnesium, and zinc, all of which are thought to be important to health. Peanuts and peanut butter also contain bioactive components such as resveratrol, beta-sitosterol, flavonoids, and antioxidants.

### **Peanuts and Peanut Butter Can Satisfy Hunger Without Leading to Weight Gain**

Research from Purdue University shows that snacking on peanuts and peanut butter is an effective way to control hunger without leading to weight gain. Following a snack of peanuts or peanut butter, the participants' hunger was reduced for two and a half hours. When participants were fed typical portions of high-carbohydrate snacks, hunger returned within a half hour. (4)

A recent review paper on nut consumption and body weight concludes, "The available data demonstrate that nut consumption among free-living individuals is not associated with higher BMI [body mass index] compared with non-nut consumers despite the fact that nuts are fat- and energy-dense foods." (7)

Further, a free-living study at Harvard School of Public Health shows that participants who followed a calorie-controlled, moderate-fat diet (35% of calories from fat) with peanuts and peanut butter were able to lose more weight and keep the weight off longer than those following a calorie-controlled, low-fat diet (20% of calories from fat). (8)

In summary, we urge you to consider the following points:

1. Peanuts and peanut butter can be eaten on a daily basis in small amounts, not only as a protein source, but as a source of healthy fats, fiber, vitamins, hard-to-get minerals, phytochemicals and antioxidants;
2. They can be a healthy substitute for refined carbohydrate or saturated fat sources; and
3. Peanuts and peanut butter can satisfy hunger without leading to weight gain.

Thank you for your efforts.

Sincerely,

*John T. Powell*

John T. Powell, President  
The Peanut Institute

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References:

1. *Federal Register*. September 11, 2003. Vol. 68, No.176.
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6. FDA to Encourage Science-based Labeling and Competition for Healthier Dietary Choices. July 10, 2003. [www.fda.gov/bbs/topics/NEWS/2003/NEW00923.html](http://www.fda.gov/bbs/topics/NEWS/2003/NEW00923.html)
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8. McManus, K., et al. A randomized controlled trial of a moderate-fat, low-energy diet compared with a low-fat, low-energy diet for weight loss in overweight adults. *International Journal of Obesity*. 2001;25:1503-11.

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October 22, 2003

Dr. Eric Hentges  
Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy & Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Dr. Hentges:

The Sugar Association (Association) is pleased to submit comments on the proposed revision of the U.S. Department of Agriculture, Center for Nutrition Promotion and Policy's (CNPP) Food Guide Pyramid. The Association commends the Federal Government for its concerns about the health and well-being of the American public, and acknowledges the dedication of those working hard on Americans' behalf. The Association believes today's public health challenges require innovative strategies and contemporary initiatives when educating the American public about healthful eating and active lifestyles.

The Association would like to comment on two specific questions cited as of particular interest to CNPP.

**Question 3: "Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns."**

It is impossible to comment explicitly on the scientific validity of the proposed dietary intake suggestions. The body of scientific evidence underpinning the proposed dietary patterns has not been made available for public examination. Thus, the Association offers the following observations for CNPP deliberation:

- There is no evidence that the proposed eating patterns are based on true scientific consensus.
- It is impossible to determine if the proposed eating patterns are based on outdated data that contradict the current body of science, or are derived from the extrapolations and assumptions of the developers.
- Proposed serving sizes and, more importantly, serving numbers do not accurately characterize what the American public perceives as real-life food portions.
- The current Food Guide Pyramid is so overly prescriptive and has required multiple, detailed accompanying materials to be developed in efforts to effectively educate the consuming public and every indication is that the new Pyramid will require similar materials making it less effective.

**Be Sure It's Sugar: The Natural Sweetener... 15 Calories Per Teaspoon!"**



2003  
P. 150

The Association sees value in a visual representation of scientifically verifiable, consensus-based dietary guidance that gives emphasis to active lifestyles and the increased consumption of fiber and nutrient-dense foods.

We also believe it would be more constructive in today's environment if the literature accompanying the Food Guide Pyramid would help consumers understand what a proper portion size is, whether they are eating fruit, vegetables, grains, meat, dairy items, fast food or dessert. This approach would provide a practical tool to help Americans eat less food. The diets of the American public are very diverse and so is the diversity of opinion among the scientific and nutrition community about what constitutes a healthful diet. However, all agree on one thing - the major health concern facing the American public is overeating.

**Question 2: "Appropriateness of the selection of nutritional goals", specifically "Nutritional Goals for Added Sugars."**

First, the Association would like to call attention to the fact that the term "moderation" cited in the *Federal Register* Notice, which is the advice contained in Dietary Guidelines for Americans, is so often ignored in current nutrition debates and advisories. The term "moderation" is not synonymous with "limit" or "restrict."

The Association firmly believes that the American public is better served by nutrition advice that is able to withstand the scrutiny of the entire body of science, no matter the issue. The Association is on record as a critic of the current Food Guide Pyramid due to the fact that its added sugars consumption suggestions are based on mathematical formulas, not on scientific consensus. This mathematical model is once again the paradigm for the proposed revision of the Food Guide Pyramid in spite of the very extensive scientific review by the National Academy of Science, Institutes of Medicine, (NAS, IOM) which concluded:

- "Based on the data available on dental caries, behavior, cancer, risk of obesity, and risk of hyperlipidemia, there is insufficient evidence to set a UL for total or added sugars."

The NAS, IOM report states unequivocally,

- "There is no clear and consistent association between increased intakes of added sugars and BMI." (Emphasis added)

In fact, every comprehensive review of the scientific literature continues to exonerate sugars intake involvement in any lifestyle disease, including obesity. The current NAS, IOM report found that selective nutrient displacement was observed in some sub-populations only after their intakes of added sugars exceeded 25% of their daily calories, which is well above current USDA estimates.

Second, the Association questions the scientific validity of the suggested added sugars servings in the previous as well as the proposed Food Guide Pyramid and its accompanying literature. The Food Guide Pyramid is the primary public reference for the

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term "added sugars" and gives an unwarranted credibility to, and implied endorsement of, the current negative emphasis on sugars intake. These calculated serving suggestions are used as the primary basis for misrepresenting the impact of sugars intake on the health of the American public.

The Association respectfully requests that CNPP consider the reality that the current negative emphasis on sugars intake may have the same unforeseen consequences as the simplistic dietary advice to singularly limit dietary fat. Obesity rates have only increased throughout the "low-fat" decade of the 1990s.

Furthermore, the eating patterns suggested in the Food Guide Pyramid do not reflect the realities of food fortification. When fortification is ignored, more servings of most food groups are required to achieve recommended nutrient intakes. Much of the recent criticism of the current Food Guide Pyramid correctly identifies consumer confusion between the recommended number of servings and what the average person thinks is a serving size. This confusion has had the unintended consequence of Americans believing they are allowed to consume too much food.

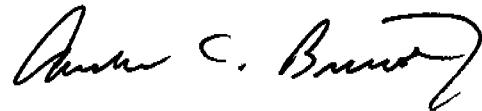
The present CNPP mathematical model, which automatically means more servings and more calories are required, artificially lowers the number of calories that are allotted to the so-called "added sugars." Consumers have the impression that this is a recommendation based on science, not the result of a well intended but imperfect formula.

The continued emphasis on "added sugars" in the absence of any valid scientifically verifiable health implications will only further obscure the real issue: if one consumes more calories—no matter the source—than one burns, weight gain is inevitable.

Third, the Food Guide Pyramid has not undergone independent, external scientific or medical peer review. The responsibilities of the 2005 Dietary Guidelines Advisory Committee are already extensive. The current plan to simply tack a review of the Food Guide Pyramid's planned revisions to the duties of the current Dietary Guidelines Advisory Committee generates a question as to the thoroughness of such a review process.

The Association asks that CNPP take into consideration these comments in its effort to develop an effective educational tool to assist the American public getting back on the track of good health and well-being.

Sincerely,



Andrew C. Briscoe  
President

10/25 Ascherio



HARVARD SCHOOL OF PUBLIC HEALTH

Department of Nutrition

received  
10/27/03

KJ

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

To Food Guide Pyramid Reassessment Team:

We appreciate the opportunity to comment on the proposed revision of the Food Guide Pyramid.

Overwhelming evidence from controlled feeding studies, randomized clinical trials, and epidemiological studies indicate that the Food Guide Pyramid is in need of fundamental revision. The core message of the current dietary pyramid, that all fats and oils should be used sparingly and that starches should be consumed in large amounts, has never had clear scientific support and is inconsistent with studies from at least 40 years ago showing opposite effects of various types of fat on blood lipid levels. Empirical evidence has shown that individuals who adhere to the guidance of the Food Guide Pyramid (as expressed in the Healthy Eating Index) do not enjoy the expected health benefits [McCullough ML et al, Am J Clin Nutr 2002;76:1261-71]. Alternative recommendations, based on a rational interpretation of available data, in contrast, do appear to provide health benefit. Moreover, increasing evidence suggests that the emphasis on high carbohydrate intake, including large amounts of refined starch has contributed to the epidemic of obesity, and other adverse health outcomes, without improving health. These issues are discussed in some detail in a recent article by Willett and Stampfer MJ. [Rebuilding the food pyramid. Sci Am 2003;288:64-71]. More detailed references are provided in the citations from that article.

It is certainly reasonable to solicit suggestions, but we urge that revision of the Pyramid be delayed until after the conclusion of the work of the newly constituted Advisory Committee for the U.S. Dietary Guidelines. Logically, the Pyramid should provide the consumer oriented expression based primarily on those guidelines. As the Advisory Committee has just met for the first time, it is simply premature to develop the revised pyramid concurrently. The nature of the topics of particular interest to the Center for Nutrition Policy and Promotion (CNPP) for comments suggests that only minor tinkering with the Pyramid is contemplated. This would be a major disservice to the American people and for the cause of public health. The Pyramid has largely failed in its stated mission, and requires complete restructuring.

We offer the follow comments on the specific "topics of interest":

**1. Appropriateness of using sedentary, reference-size individuals in assigning target caloric levels:**

Although weight control is a top priority, setting target calorie levels is likely to be a useless exercise. For total calories, the obvious goal for individuals at ideal weight is to balance caloric

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intake with caloric expenditure. For overweight individuals, caloric expenditure should exceed caloric intake until ideal weight is attained. This balance can be measured with exquisite accuracy by assessing weight and weight change. A related issue is the change in adiposity, independent of body weight. This is best reflected in waist circumference. Again, consumers can see this easily. In contrast, neither typical consumers nor nutrition practitioners can estimate either caloric intake or caloric expenditure with sufficient precision to calculate caloric balance. Also, it is unrealistic to assume that Americans can or will constantly tally up their caloric intake or measure their food intake in ounces or fractions of cups. The primary goal of a food guide graphic should be to convey which foods should be emphasized and which should be minimized for optimal health. Energy balance will need to be monitored primarily by assessing weight and weight change. Thus, we suggest that the proposed detailed stratification by energy requirements not be introduced unless the USDA can provide clear evidence that this will assist people in long-term weight control. Otherwise, is it likely to cause confusion and distract attention from the importance of healthy food choices.

We do encourage that the revised graphic carry a message about the importance of increasing physical activity, reducing physical inactivity and weight control.

## 2. Appropriateness of the selection of nutritional goals:

The selection of nutritional goals in general, and the principles proposed are sensible, but some of the examples provided are not.

### 2.1 *Trans Fat*

The most egregious nutritional goal regards *trans* fat. The material states, "an intake goal for *trans* fat was not set because no quantified standard is provided..." This is simply untrue. The recent IOM report on macronutrient intake states explicitly that the goal for *trans* fat is to eat as little as possible. Indeed, wording to this effect has now been added to the new nutrition label including *trans* fat, which has been set forth by the FDA. Reducing *trans* fat, and eliminating its major source (partially hydrogenated vegetable oils) is probably the easiest way to improve nutrition available to our country. Substitutes are available for virtually every product that contains *trans* from partially hydrogenated oils. The cost differential is small, and even the most conservative estimates suggest a large health benefit. Indeed, such a cost effectiveness analysis was the basis for the Office of Management of Budget to prompt the FDA to issue rules for the new nutrition label that includes *trans* fat. The evidence for harm from *trans* fat is incontrovertible, based on many randomized trials. Compared to the oils from which it is derived, partially hydrogenated fat has clear adverse effects on lipids linked to risk of heart disease. Furthermore, strong evidence suggests other adverse effects. Hence, it is simply unconscionable that the CNPP does not plan to provide information about limiting consumption of *trans* fats in materials designed for consumers. To the contrary, the ultimate product should provide clear guidance for consumers to replace sources of saturated and *trans* fat with sources of non-hydrogenated unsaturated fatty acids.

### 2.2 *Vitamin E:*

The goal of the Pyramid is to change the American diet to more healthy patterns of eating. It is not meant simply to reflect the current typical American diet. A healthy diet can meet the new RDA levels for vitamin E as specified in the 2000 IOM report on Dietary Reference Intakes through

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sensible choices of foods rich in vitamin E, principally those rich in vegetable oils. Likewise, the CNPP did not consider it feasible to specify the use of nuts and seeds to meet the RDA since they contribute only 4% of the total vitamin E in American diets. This is precisely the point. A healthy dietary pattern should include greater consumption of nuts and seeds. Indeed, among the individual foods studied in epidemiologic investigations, nuts consistently emerge as among the most healthful food items.

### 2.3 *Added sugars:*

Any sensible dietary advice will sharply limit added sugars. This recommendation is not based on just the harmful effect of sugar per se, which includes exacerbation of the insulin resistance syndrome, but also the adverse effect of additional calories without other nutrients (empty calories).

### 3. **Appropriateness of the proposed food intake patterns:**

The proposed patterns here exemplify and illustrate the earlier comment regarding small tinkering with the Pyramid as opposed to the necessary full-scale revision. Intake of refined carbohydrates (including added sugars) should be sharply curtailed. The current advice, maintained in the proposed revisions, calls for 6-11 servings of carbohydrates per day. The call for an increased proportion of that in the form of whole grains is laudable, but does not go far enough. Even if three or four servings of whole grains are included in the recommendations, the current levels of carbohydrate would still imply that three to nine servings of refined starch is desirable. Refined starches do not have documented health benefits, but like sugar exacerbate the insulin resistance syndrome and are a major source of empty calories. Thus, they should be included in the foods to be used sparingly. Further, certain root and starchy vegetables, such as potatoes and corn are more nutritionally similar to grains than green leafy, orange/yellow or cruciferous vegetables that have been associated with reduced risks of cancer and cardiovascular disease. Thus, they would be better placed in the grains group and relabeled "grains and starchy vegetables". As noted above, the advice on fats is also inadequate. Many Americans consume inadequate amounts of healthful fats probably in part because of poor nutritional advice provided by our government. A clearer distinction of the kinds of fats is mandatory.

The proposed revision of the food guide pyramid continues to lump meats, eggs, nuts, and legumes together as the "protein" group. Although these food groups are all high in protein, the health effects of these foods are distinctly different. Convincing epidemiologic and clinical evidence indicates that higher consumption of fish is protective against heart disease, whereas a higher consumption of red and processed meats increases risk of heart disease, type 2 diabetes, and probably colorectal cancer. Also, plant-based foods (including nuts, peanuts, beans, and peas) are not only excellent sources of protein, but also rich sources of healthy fats, antioxidants, minerals, fiber, and phytochemicals. Thus, it makes more sense to separate different sources of protein in the food guide pyramid. Specifically, fish and poultry should be separated from red meat. Nuts and legumes should be placed together or closer to other plant-based foods such as fruits, vegetables, and whole grains.

Also, the current Pyramid and examples in the proposed revision imply that high dairy consumption is an essential part of a healthy diet. This is likely to be driven by the extremely high calcium RDA and the assumption that this must be met by foods. The validity of this RDA itself is questionable;

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interestingly the U.K. more recently reviewed the available evidence and concluded that the RDA should be 700 mg per day for all persons over 19 years of age. Further, a large body of data indicates that persons consuming high amounts of dairy products do not have appreciably reduced fracture rates, and in many studies high consumption of dairy foods has been associated with advanced prostate cancer and ovarian cancer. Thus, we cannot assume that this is safe. The recommendations also ignore the fact that a substantial percentage of the U.S. adult population cannot tolerate high dairy product consumption due to lactose intolerance. At a minimum, the recommendations should clearly indicate that calcium supplements, calcium fortified soy milk or 100% juices are alternative sources of calcium.

**4. Appropriateness of using cups and ounces versus servings in consumer materials to suggest daily amounts to choose from each food group and sub-group:**

Given the current super-sizing phenomenon in food service establishments and the natural individual variation of serving/portion size, it is important to give guidance on reasonable quantity of consumption. Effective communication for the general public is especially critical because they do not have a good grasp of what quantity of food is considered a reasonable serving size. The new design needs to be flexible enough to be applicable for people with different energy needs, and yet able to convey quantity clearly. In addition, any reference to serving size should be consistent with what is being used by the FDA as these are what consumers will see on food labels.

In summary, we strongly urge the CNPP to redirect their efforts toward a complete revision of the Food Guide Pyramid based on available scientific data, and free from the influence of the food industry. The goal should be promoting the health of Americans, not the commercial interests of food product providers. We do appreciate that a revision of the Food Guide Pyramid is being considered, and we are prepared to work with the CNPP to evaluate the potential health consequences of draft guidelines (or indices based on them, such as the Healthy Eating Index) using the large prospective databases that we have developed.

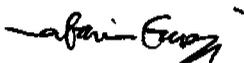
Yours sincerely,



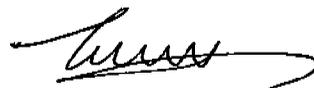
Alberto Ascherio, M.D., Ph.D.  
Associate Professor



Lilian Cheung, Sc.D., R.D.  
Lecturer, Director of Health Promotion and  
Communication



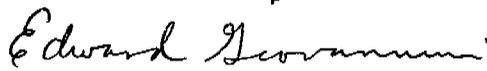
Wafie Fawzi, Dr.P.H.  
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Teresa Fung, Sc.D., R.D.  
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Matthew Gillman, M.D.  
Associate Professor

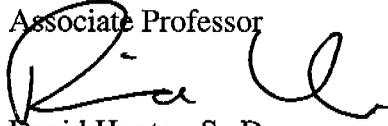


Edward Giovannucci, M.D., Sc.D.  
Associate Professor

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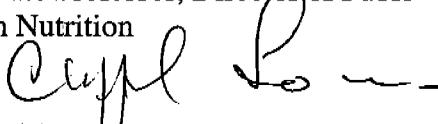
Frank Hu, M.D., M.P.H., Ph.D.,  
Associate Professor



David Hunter, Sc.D.  
Professor



Karen Peterson, D.Sc.  
Associate Professor, Director of Public  
Health Nutrition



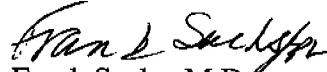
Clifford Lo, M.P.H., Sc.D.  
Assistant Professor



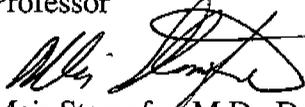
W. Allan Walker, M.D.  
Professor



Eric Rimm, Sc.D.  
Associate Professor



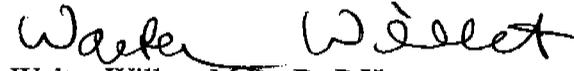
Frank Sacks, M.D.  
Professor



Meir Stampfer, M.D., Dr.P.H.  
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Marianne Wessling-Resnick, Ph.D.  
Professor



Walter Willett, M.D., Dr.P.H.  
Professor, Chair



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October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

**Attention: Members of the Reassessment Team**

The Dairy Council of California commends the USDA for recognizing the vital role milk and dairy play in a balanced, daily diet and strongly supports the continued placement of milk and dairy as major food group within the food guide pyramid.

Milk and dairy products contain nine essential nutrients and are the number one source of calcium and vitamin D. In fact, milk and dairy products provide about 70 percent of calcium consumed in the American diet; yet calcium is a primary nutrient lacking in the diets of more than two-thirds of American adults. The statistics are particularly concerning for children who are consuming far below the daily recommended intake of 800-1,300 mg per day. In fact, nearly nine out of 10 teenage girls and seven out of 10 teenage boys fail to get the recommended amount of calcium in their diets.

Two new reports confirm the importance of children's calcium intake for strong bones. A *Journal of the American Medical Association* study reports a significant increase in the incidence of forearm fractures in adolescents during 1999-2001 compared to 30 years prior, citing poor calcium intake during peak bone growth periods, change in physical activity or both as the contributing factor. Another study in the *Journal of the American Dietetic Association* showed that adolescent boys who consumed three servings of milk a day had increases in bone density twice as great as those who drank juice; the same boys had higher intakes of calcium, vitamin A, vitamin D. These two studies reinforce the concern that if children fail to consume enough calcium during peak growing years, they may be faced with the possible consequences of weaker bones during adolescent and teen years.

While some oppose dairy's role in the food guide pyramid and advocate the use of supplements or fortified products, the Dairy Council strongly discourages against this

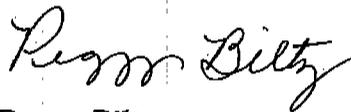
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position. Calcium-fortified beverages and supplements may provide adequate amounts of calcium, however, these alternatives do not compare to the nutrient-rich package dairy offers. Also, milk is the most common food source containing vitamin D, which is essential for optimizing calcium absorption. The nutrients in dairy products have protective factors that help prevent diseases and conditions including high blood pressure, osteoporosis, rickets and certain cancers. More recently, emerging science shows a strong connection between weight loss and calcium intake specifically from dairy products. Supplements and calcium-fortified products do not offer the same host of benefits.

In closing, I want to reiterate again the importance of a food guide pyramid in which milk and dairy products are recognized as part of healthy, balanced diets for all Americans.

Please contact me should you have any questions at \_\_\_\_\_ Thank you.

Sincerely,



Peggy Biltz  
Chief Executive Officer  
Dairy Council of California



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In particular, NPA supports the Center's reliance on Dietary Reference Intakes (DRIs) established by the National Academy of Sciences Institute of Medicine (IOM). NPA agrees that nutritional goals for the daily food intake patterns that form the basis for the Pyramid should be based, as applicable, on the Recommended Dietary Allowances (RDAs) and the Acceptable Macronutrient Distribution Ranges (AMDRs) established by the IOM. With specific regard to carbohydrate, the IOM has established (1) an RDA of 130 g for most adults (excluding pregnant and lactating women, for whom RDAs of 175 g and 210 g, respectively, were established) and children over the age of two, and (2) an AMDR of 45 to 65% of calories. The 130 g RDA for carbohydrate is based on the amount of carbohydrate utilized by the brain, which uses carbohydrate (in the form of glucose) almost exclusively for its energy needs; the AMDR for carbohydrate represents the proportion of carbohydrate in the total diet that the IOM believes best promotes health and minimizes the risk of chronic disease. These authoritative recommendations confirm the continued importance of carbohydrate-containing foods, including pasta, in human nutrition, and are appropriately used as nutritional goals for food intake patterns.

NPA also agrees with the Center that the proposed intake patterns, as reflected in Table 5, Nutrients in Proposed Intake Patterns, are consistent with the IOM's quantitative recommendations for carbohydrate intake. NPA is concerned, however, that the intake patterns reflected in the proposed materials are not sufficiently detailed to serve as useful guides to informed food choices. The proposed patterns identify the recommended number of servings from the grains group for twelve target calorie levels, and divide grains into two subgroups: whole grains, and other grains. The proposed patterns also provide examples of foods in each subgroup, but do not provide any further context about the diversity of carbohydrate-containing foods or the importance of such foods in the daily diet.

NPA believes that, if the proposed intake patterns and corresponding food groups are to be used to their full potential as education tools, the following measures are necessary:

- To offset the proliferation of fad diets that seek to cast healthful carbohydrates in a negative light, materials accompanying food intake patterns should emphasize that carbohydrates in grains, fruits, vegetables, and dairy are desirable and recommended for consumption as part of a balanced diet.
- The current Pyramid and proposed intake patterns do not adequately convey the diversity of carbohydrates or the beneficial attributes of certain types of carbohydrate-containing foods, such as pasta. To better educate consumers about the diversity of carbohydrates, the nutritional benefits of particular forms of

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carbohydrates should be highlighted. For example, whole grains may contain fiber and antioxidants and may reduce the risk of heart disease and some cancers. The carbohydrates in pasta and certain other foods have a low glycemic effect and may be useful in promoting satiety and long-lasting energy.

- Whole grain pasta should be added as an example in the whole grains subgroup.
- Materials accompanying any illustrative food patterns used in consumer educational materials must make clear that each pattern represents simply one example of a healthful intake pattern at a particular calorie level. The proposed intake patterns contain carbohydrate at 52 to 59% of calories, but the IOM recommendations allow for carbohydrate consumption at levels up to 65% of calories. Thus, the proposed intake patterns do not represent the only appropriate patterns at the identified calorie levels.
- NPA supports the creation of additional intake patterns to reflect a greater variety of caloric intakes. The proposed pattern based on 1000 total calories, however, is unrealistic for most consumers and should be removed.

\*\*\*\*\*

NPA appreciates the Center's consideration of these comments and looks forward to participating further in the Pyramid reassessment process.

Sincerely,



Gary Jay Kushner  
Counsel to National Pasta Association

1. Foster-Powell, et al., 2002. International Table of Glycemic Index and Glycemic Load Values: 2002. Am. J. Clin. Nutr. 76:5-56.

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**American Dietetic Association**  
**Your link to nutrition and health.<sup>SM</sup>**



October 25, 2003

USDA Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Dr. Hentges:

The American Dietetic Association (ADA) appreciates the opportunity to provide input to the revisions of the USDA Food Guide Pyramid in this first phase of the process. The USDA Food Guide Pyramid is a vital public health education tool, and it is paramount that it be based in strong science and developed with consumer understanding and application in mind. ADA is committed to providing feedback based on sound scientific evidence and significant scientific agreement.

**Table 1: Proposed Daily Food Intake Patterns.**

**Q: Appropriateness of using "cups" and "ounces" versus "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup.**

Consumers have a difficult time interpreting servings vs. volume or weight measures. ADA appreciates that USDA is looking to determine which approach may make the most sense to consumers. Given the interrelationship between the USDA Food Guide Pyramid and food labels, ADA recommends that to the extent possible the portions on the pyramid to be congruent with those listed on food labels so as to maximize consumer understanding. Further, ADA suggests that the recommendations on the pyramid be based on amount of reference foods or their equivalents rather than the traditional language of "servings." In other words, were the dairy recommendation to remain the same, the ADA would prefer the goal being, "Drink 2-3 8-ounce cups of lowfat milk or the equivalent per day" rather than the current "Consume 2-3 servings of dairy per day." The subtext would then define what portions constitute equivalent servings of milk rather than defining what a serving is. This method has the additional advantage of allowing pyramids to be enhanced for ethnic groups by including a more comprehensive list of equivalents without burdening the visual impact of the pyramid.

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ADA acknowledges that choosing reference foods for each category may be a daunting task – particularly in groups such as grain where the foods vary widely. In those cases ADA recommends market testing several sample reference foods to determine what is most valuable and practical to consumers.

**Q: Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns. Are the proposed patterns reasonable intakes to expect for the various age/gender groups? Is the proposed intake of some food groups or subgroups feasible?**

The ADA is concerned that many of the meal patterns - particularly those at lower calorie levels - would not provide adequate micronutrients to many subgroups in the population. ADA realizes that those calorie levels may not be intended for adolescent and adult populations, but, given the current rates of obesity and the trend toward calorie restrictive diets, it is imperative that any consumer materials make clear that these meal plans do not necessarily meet the DRI for vitamins and minerals for many subgroups. For instance, neither adolescent nor menopausal females would meet their calcium recommendations utilizing any of these meal patterns. Likewise, any adolescent or adult following calorie meal patterns below the 1200 level would be unlikely to ingest adequate levels of vitamins B, C, D, and E, calcium, phosphorus, or zinc. The ADA recommends additional servings of certain key foods such as dairy and vegetables be recommended for adult use of the lower calorie meal patterns or that special recommendations for adolescents and adults accompany the graphic. The recommendations should indicate that anyone attempting to restrict caloric intake should focus on choosing nutrient dense and fortified foods and may need to supplement their food intake with a multi-vitamin/multi-mineral supplement.

Finally, ADA strongly believes that one of the USDA Food Guide Pyramid's great strengths is that it is anchored to usual and typical American food consumption patterns. It has always been intended to help people meet their nutrient needs to the extent possible within the confines of their usual eating patterns. To that end it is a feasible and user-friendly tool for educators, health professionals, and consumers. It is crucial that these patterns be based on the most current national food intake data available to continue its tie to actual American eating patterns. It is also crucial that these patterns take into account cultural and ethnic eating pattern differences to make sure that all Americans can utilize the tool effectively.

#### **Table 2: Energy Levels for Proposed Food Intake Patterns**

**Q: Appropriateness of using sedentary, reference-sized individuals in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern.**

The ADA agrees with using the DRI as the basis for recommended calorie levels for each population and with the CNPP decision to use sedentary individuals in each age and sex group as the reference individuals. Overestimating usual energy needs should be avoided.

The ADA is concerned, however, with the use of "sedentary, low active, and active" as the three labels of activity levels. These designations would likely be confusing to consumers since the

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common vernacular for activity levels does not match the definitions in the DRI. In other words, people who walk approximately 1 mile per day consider themselves to be low active rather than sedentary. Likewise, someone who walks 2.5 miles or 5000 steps/day generally considers him or herself to be moderately active rather than low active. Thus, ADA recommends renaming the categories to eliminate confusion. To that end, ADA recommends naming them exactly what they are: "Less than 1.5 miles of activity per day, 1.5-3 miles of activity per day, and 3 or more miles of activity per day." Given the recent trend toward and ease of step counting this could be termed as, "< 3000 steps/day, 3-6000 steps/day, and 6000+ steps/day."

The ADA would also like to emphasize that, as these calorie goals for different activity levels illustrate, combining activity with eating is imperative for improving the health of Americans. The ADA strongly recommends that the updated USDA Food Guide Pyramid or equivalent educational tool incorporate activity recommendations to emphasize the balance between nutrition and activity in the overall health picture.

### **Table 3: Nutritional Goals for Proposed Daily Food Intake Patterns**

#### **Q: Appropriateness of the selection of nutritional goals for the daily food intake patterns?**

The ADA is supportive of using the DRI along with emerging science as the basis for these nutrient goals. Vitamin D is absent and must be addressed, especially in light of the re-emergence of rickets among young children and elder adults. The ADA would also like to recommend that you consider iodine intakes. The accompanying materials to the USDA Food Guide Pyramid must include advice on incorporating fortified foods, very rich food sources, supplements, etc. for nutrients that are low in the food supply including vitamin D, vitamin B12 in elders, iron, zinc, iodine, and calcium.

### **Table 4: Nutrient Profiles of USDA Food Guide Pyramid Food Groups and Subgroups**

ADA recognizes that the CSFII '94-'96 and '98 are the best comprehensive datasets currently available. However, ADA believes that these datasets and their analysis are likely an inaccurate representation of both the current food supply and the current eating habits of American families. The past ten years have included significant changes in the food supply, such as fortification with folic acid and calcium. Thus, the food databases used to analyze the intake data are not in line with the current food supply. Secondly, American eating habits have also changed markedly over the past 10 years. With increased dependence on quick and fast food, increased portion sizes, and other trends, it is entirely possible that '94-'96 data are not providing an accurate picture of today. Thus, the ADA strongly recommends that the food composition databases be updated and that more current food consumption data be analyzed. If a more up-to-date and equally comprehensive dataset were to become available during the revision period, ADA would recommend reevaluating these nutrient profiles using the most current data. For example, the data should be compared with latest NHANES data now available.

(The current reliance on outdated data underscores the importance of adequately funding nutrition-monitoring activities such as CSFII. The chronic under-funding of CSFII has resulted in the current data deficit with which we are now working. Fully funding CSFII and all of its

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components including the Diet, Knowledge, and Health survey is critical to the integrity of this project and future nutrition education initiatives.)

**Table 5: Nutrition in Proposed Intake Patterns**

**Q: Section of appropriate illustrative food patterns for various consumer materials. For development of consumer materials, what criteria should be used to select a smaller number of illustrative food intake patterns? Which subsets of patterns would be most useful for various audiences?**

The ADA supports using smaller subsets of patterns to address specific audiences. Similar to the volume versus serving size debate, ADA would like to see the subsets synchronized with the FDA Nutrition Label such that people could find their recommended calorie levels as a category on the label. ADA recognizes that the label is also being reviewed. Therefore, ADA recommends coordination with FDA in order to link the two educational tools.

In regards to which patterns should be chosen, ADA recommends choosing a reference adult female, reference adult male, and reference elder adult *need* rather than choosing patterns reflective of average *intake*. It would not be advisable in our current obesity epidemic to use average intake as a benchmark for calorie intake. Rather, we should base recommendations on average need. Other subsets of recommendations should then be developed for children, adolescents, pregnant women, and adults aiming to lose weight. Stressing that these are special populations requiring more or fewer calories may help people recognize that the primary meal patterns are only relevant to modestly active healthy adults.

The most recent DRI equations for estimated energy requirements should be used to determine energy needs for women and men. However, the DRI reference adults – 19-year-old healthy weight males and females – should not be used as the reference individuals for illustrative food intake patterns. The DRI estimates for energy needs of sedentary reference adults are above 2000 calories/day, but many adults actually require fewer calories to maintain their weight. Given that energy needs decline with age and that overweight is a major health issue in the US, it would not be advisable to use the higher calorie levels needed by 19 year olds to represent the average caloric needs for all adults. Thus, ADA asks that the model calorie levels be based on estimates of energy requirements for average age adults rather than those of 19-year-olds.

ADA appreciates the opportunity to offer comment on this important public health tool. ADA encourages continuing and strengthening the use of evidence based reviews as well as expert judgment for developing information to inform the process.

Sincerely,



Marianne Smith Edge

President, The American Dietetic Association

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**OLDWAYS**  
**PRESERVATION TRUST**

The food issues think tank - promoting healthy, traditional and sustainable food choices

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
Room 1034  
3101 Park Center Drive  
Alexandria VA 22302

Dear Team Members,

Thank you for the opportunity to comment on the process for revising the Food Guide Pyramid; we agree with you that an update is badly needed.

Oldways is the "nonprofit food issues think tank" that has also developed food guide pyramids for consumers. Most widely known in western cultures is our "gold standard" Mediterranean Diet Pyramid, but in other cultures our Asian Diet Pyramid, our Latin American Diet Pyramid, and our Vegetarian Diet Pyramid are also well known. These food guide pyramids have been acknowledged by the CNPP; see, for example, *Nutrition Insights 2, April 1997, Are All Food Pyramids Created Equal?*

In this context we have the following specific comments on the process for revising the Food Guide Pyramid; they are numbered as per Part V of the Notice in the Federal Register, September 11, 2003, p. 53536 et seq.

1. We support the use of sedentary reference-sized individuals in assigning target calorie levels, on the condition that it be made clear in accompanying plain and specific language that sedentary individuals bear significantly higher risks for chronic diseases than active individuals. In other words, the language used to describe this "sedentary reference-sized individuals" approach must take great care not to encourage or license sedentary behaviors.
2. The selection of adequacy and moderation goals in Table 3 appears proper and consistent with the IOM, with one single glaring and quite astonishing oversight. CNPP has an unmistakable public health obligation to set an intake goal for trans fats; the goal should be "to avoid trans fats." The FDA has announced that information on trans fats will soon be included on Nutrition Facts Labels; the nutrition science consensus indicates no safe level for trans fats; and the 2000 Dietary Guidelines for Americans urges Americans to be "cutting back on ... trans fats." Consequently, a stern instead of tepid admonition about avoiding trans fats is the proper course for CNPP. Not to take this step is to put CNPP's entire Food Guide Pyramid review process at risk of failed credibility for ignoring the obvious.
3. The new CNPP approach to proposed food intake patterns is a welcome advance; these alterations appear to be tied directly to the current science and consistent with virtually all other guidelines in wide consumer use. History makes plain that professionals and families can easily accommodate to them; whether they *will* accommodate to them is a different issue. The example of the "low-fat diet" recommendation of the 1980s and early 1990s is an apt one. RDs and consumers adopted these low fat recommendations, the food industry responded with an avalanche of low- and no-fat products, and consumers swarmed to them. This was, however, a public health disaster, because consumers increased their caloric intake from sugars and highly-refined flours - and as a direct result we now as a nation confront epidemic overweight and obesity problems.

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4. Please do eliminate serving sizes and also mixing up grams and ounces; instead, use what consumers and families have grown up using and still do use every day - ounces, cups, teaspoons and tablespoons, slices - in other words, use the food terms that are used in the recipes in cookbooks, newspapers and magazines, and on radio, television and the internet. The Nutrition Facts Label has recognized this - it uses "1 cup" as its universal serving size. CNPP absolutely must follow this FDA consumer-friendly lead if the Food Guide Pyramid and related materials are to reach consumers with effective messages.

An example: the USDA has said that "a serving size is not a prescribed amount to eat," because is about one-half of the "serving" that its research concludes that consumers usually eat (USDA Misc. Pub. 1514). Nonetheless, the Food Guide Pyramid uses this unrealistic "serving size" throughout its consumer materials.

For an extensive commentary on the confusion surrounding consumer serving sizes, please see Gifford, KD, "Dietary Fats, Eating Guyides, and Public Policy: History, Critique, and Recommendations," American Journal of Medicine, Vol. 113(93) at 89S-106S.

5. Adding smaller subsets of illustrative food patterns is important for the credibility of the entire Food Guide Pyramid apparatus and for the credibility of the professionals who will take the new materials to the public. One good reason is that "one size does not it all" when it comes to the vast array of sizes, shapes, metabolic rates, activity levels, and food preferences of Americans. A second good reason is that while about three-quarters of consumers recognize the Pyramid, less than one-quarter understand it; the reason for this cognitive dissonance is that the Pyramid is not written for consumers but for professionals. To remove this dissonance, the Pyramid must use plain, everyday language, and simple, clear images. Then, and only then, will it encourage and enable consumers to turn away from unhealthy eating and drinking habits and towards healthy eating and drinking patterns.

On a related matter, there seems to be some confusion about the development and timing of the official release of an updated and revised Food Guide Pyramid. Page 1 of your Q&A dated September 10, 2003 says that the "posting of a second Federal Register notice to obtain public comment on the updated food guide graphic is planned for 2004." Page 2 of the Q&A says that "the updated pyramid will be released in 2005" and "will be consistent with the 2005 revision of the Dietary Guidelines." Veterans of the Dietary Guidelines process are aware that the final version of the Guidelines have actually been published in the year following the official date, i.e. 1995 in 1996, 2000 in 2001. We hope that you are taking this into your planning process; it would be a poor result if the Food Guide Pyramid was developed before the Dietary Guidelines Report is made final and approved by all the responsible officials.

On a second related matter, the slides of T. Britten need correcting. The 2000 Dietary Guidelines do not place emphasis on "lowering saturated fat;" they emphasize a diet "moderate in total fat" and "low in saturated fat and cholesterol. It is clear that the 2000 Dietary Guidelines intended specifically to move away from the unfortunate "low fat" guidelines of prior Guidelines, and CNPP should be hewing to this stricture.

Thank you again for this opportunity to comment.

Very truly yours,

K.D. Gifford/ dcm  
K. Dun Gifford  
President

cc: Sara Baer-Sinnott  
Executive Vice President

10/3  
Buchner

October 20, 2003

received  
10/21/03  
KT

Food Guide Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Circle  
Room 1034  
Alexandria VA 22302

Dear Food Guide Reassessment Team:

As medical director of Kronos Optimal Health Company in Phoenix, Arizona, I am responsible for overseeing the development and implementation of optimal health products and services for corporations and consumers. Nutrition and exercise play important roles in our overall strategy of helping people live as healthy as possible for as long as possible. I am pleased to provide comments on the proposed Daily Food Intake Patterns and the accompanying technical support data tables. My comments are provided in accordance with the number in which you have indicated particular interests.

**Item 1**

I feel it is appropriate to use "sedentary, reference-sized individuals" in assigning target calorie levels for assessing the nutritional adequacy and moderation of each food intake pattern. It is difficult to use varying heights and weights in the context of keeping things simple. It is appropriate to use average height and ideal weight as the basis for calorie intake levels. I also agree it is important to avoid average weight, as most people who would follow these guidelines would err on the side of eating more rather than less.

**Item 2**

I agree with the appropriateness of the selection of nutritional goals for the daily food intake patterns, total fiber, and added sugar. However, I do not agree that food intake should be altered to achieve the Vitamin E intake recommended by the IOM. Additionally, it should be noted that a vitamin E supplement should be taken to make up for dietary deficiencies.

**Item 3**

I believe the proposed patterns are reasonable intakes for the various age/gender groups and that they are feasible. The science behind the recommendations is both strong and valid. The breakdown and difficulty comes in representing the appropriate intakes into a graphic representation that is both easy to understand and easy to implement. Families and individuals will be able to use these patterns if they are graphically represented in a comprehensible fashion.

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Item 4

It is more appropriate to use methods of measurement that are commonly used in the household. Most households do not have scales; therefore, there is no understanding of "ounces." A measurement by cups is probably easier to understand. Any measurements used should be used consistently, regardless if it is a measurement of cooked or uncooked food. I do not believe "servings" is an appropriate measure, either, as no one knows what that means. It may be more feasible to use some form of cup measurement in relation to a portion and a serving. It is also extremely important to match the language of food intake with the Nutrition Facts Food Labels. They must be equivalent to reduce confusion.

Item 5

I feel it is important to keep things as simple as possible. At first, I did not like the 12 calorie levels; I felt it was too complex. I now believe that it is the best method because it will provide specific guidance for appropriate food intake levels.

The selection of a smaller subset of patterns may be confusing. It may be more important to offer consumer materials that illustrate the overall concept of "calories in should equal calories out" to maintain weight. If you need to lose weight, you need to decrease calories and increase physical activity. If you need to gain weight, you need to increase calories and maintain physical activity. The consumer material should illustrate a graphic related to the types of foods that should be eaten, such as the Kronos "Circle of Nutrition" (enclosed for your review), which would be the size of a plate and have the plate divided in thirds to represent lean proteins, healthy fats, and complex carbohydrates and whole grains. To meet specifics for the individual, there should be a web-based calculator where you enter your race, height, weight, age, and activity level, and then what appears is where you fit into the 12 calorie intake levels and the types of foods consumed most by that specific population.

Thank you for the opportunity to provide comments on this important endeavor. If I may be of further assistance, don't hesitate to contact me.

Best of Health,

*Gary Bucher MD*

Gary Bucher MD  
Medical Director  
Kronos Optimal Health Company

Enclosure

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Bucher

"Eat for sustenance. Drink to re-hydrate your body."

PROTEINS TO AVOID



10/21/03 JAFFA

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

received  
10/21/03  
KW

October 21, 2003

Please rename the "Meat and Beans" group as the "Beans and Meat" group.

This would encourage people to eat more beans and less meat. People who do so consume more fiber, less cholesterol and less saturated fat.

These statistics are from "The Food Revolution" by John Robbins, page 19:

"Drop in heart disease for every 1 percent decrease in blood cholesterol: 3-4 percent (footnote 10).

Blood cholesterol level of vegetarians compared to non-vegetarians: 14 percent lower (footnote 11)."

Please take this step of renaming the "Meat and Beans" group the "Beans and Meat" group.

Respectfully,

Eric Jaffa

Eric Jaffa

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1993 Schoeller



# The American Society for Clinical Nutrition, Inc.

THE CLINICAL DIVISION OF THE AMERICAN SOCIETY FOR NUTRITIONAL SCIENCES

## *The American Journal of Clinical Nutrition*



received  
10/21/03

KT

October 24, 2003

*President*  
Dale Alan Schoeller, PhD

*Vice President*  
Samuel Klein, MD

Food Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive  
Room 1034  
Alexandria, VA 22302

Dear Food Pyramid Reassessment Team:

The American Society for Clinical Nutrition (ASCN), with 1400 members, consisting primarily of MD's and/or PhD's engaged in clinical nutrition research and education, thanks you for the opportunity to comment on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. Our journal, *The American Journal of Clinical Nutrition*, has the top impact factor of any peer-reviewed nutrition research and dietetics journal. Our comments are the following.

### Fruit and Vegetables (5-A-Day)

Table 1 presents the food pattern at each of 12 different calorie levels. At 1000, 1200, and 1400 calories/day, the food patterns described in Table 1 do not deliver the minimum "5-A-Day" servings of fruits and vegetables promoted by the federal government agencies. To remedy this problem, two steps could be taken:

- 1) Adjust the "additional fat" at each calorie level so that it will be equivalent to 17.25% of total calories (we obtained this figure by comparing the percentage of calories from "additional fat" at all 12 calorie levels and selecting the lowest value). At the three lowest calorie levels, this adjustment will "free up" calories from fat that can be used to boost vegetable and fruit intake.
- 2) Adjust the "added sugars" at 1000 calories to 2 teaspoons; at 1200 calories to 3 teaspoons; and at 1400 calories to 4 teaspoons/day for the same purpose as described above.
- 3) Individuals should be encouraged to consume fruits and vegetables that are deeply colored in order to achieve higher nutrient density especially at the lower calorie intakes.

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### **Milk Group**

In Table 1, the servings in the milk group at the three lowest calorie levels (1000, 1200, and 1400 calories) are 2 cups/day and at the other nine calories levels are 2 or 3 cups/day. ASCN recommends that the servings be changed to 3 or 4 cups/day. At the lower calorie levels, it will be necessary to emphasize the use of fat free choices in order to stay within the calorie levels. Table 5 assumes that only children ages 1 to 8 years are consuming at the three lowest calorie intakes. This assumption is incorrect as it is not unusual for many older Americans and adult females that are on diets to have calorie intakes in this range. Since the calcium AI for adults 19 through 50 years of age is 1,000 mg/day and 1,200 mg/day for those over 50 years of age, these individual would not receive adequate calcium unless they were consuming 3 to 4 cups/day from the milk group.

### **Portion Sizes Should be Consistent Across all Tools Guiding Consumer Intake**

As the development of the Food Guide Pyramid continues, ASCN strongly emphasizes the need to standardize portion sizes across all government tools that are intended to guide consumer food choices. The need to make portion sizes consistent between the Food Guide Pyramid and the Nutrition Facts Label on food products has never been more urgent. Inter-agency cooperation in achieving this goal should be a priority.

### **The Food Guide Should be Evidence-Based**

ASCN encourages the USDA to conduct the necessary consumer research to insure the Food Guide Pyramid is readily understood by the vast majority of Americans. Whether the Food Guide is a pyramid or some other shape, it should rely on icons and illustrations that are fully consumer tested to reflect the costs of food items as well as current consumption patterns and food availability. As a top priority, ASCN believes that consumer testing should verify that the Food Guide Pyramid influences the behavior of those who use it for weight management and to construct a healthier diet.

### **Exercise for Health and Weight Management**

The role of exercise in health and weight management should be graphically conveyed so that consumers understand the need to balance the food they eat with sufficient exercise to avoid weight gain and to stay healthy. There is consumer confusion about the Surgeon General's recommendation of 30 minutes per day of physical activity (for health) and the 2002 Institute of Medicine recommendation of 60 minutes of moderate intensity activity (for prevention of weight gain). The Food Guide Pyramid can clarify these two recommendations and the usefulness of each.

### **Guidance on Supplementation**

For some nutrients, guidance on supplementation should be offered. For example, as recommended in the IOM Dietary Reference Intakes Report on the B Vitamins released in 1998, adults over age 50 may need food fortified with vitamin B<sub>12</sub> or B<sub>12</sub> supplements and women who are capable of becoming pregnant need folate from fortified food or supplements.

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Vitamin E

ASCN does not believe that typical food intakes of vitamin E are far less than the RDA as started in the Federal Register notice of September 11, 2003 on page 53538. As stated in the IOM Dietary Reference Intakes Report for Vitamin E released in 2000 on page 248, "These two studies indicate that Vitamin E intakes from CSFII and NHANES III surveys are probably underestimated even with the adjustment factor (0.8) and suggests that mean intakes of apparently healthy adults in the United States and Canada are likely to be above the RDA of 15 mg (34.9  $\mu$ mol)/day of  $\alpha$ -tocopherol."

Thank you again for the opportunity to comment on the proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. Please contact us if we can be of further assistance.

Sincerely,



Dale Schoeller  
President



National Pecan Shellers Association

received  
10/21/03  
KT

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Lemieux

October 24, 2003

Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Food Guide Pyramid Reassessment Team:

The National Pecan Shellers (NPSA) is a non-profit organization located in Atlanta, Georgia, whose members shell and process approximately 70% of the total U.S. pecan crop. NPSA supports its own nutritional research and education on pecans, and also supports nutrition research on other tree nuts through its membership in the International Tree Nut Council (INC). NPSA appreciates the opportunity to provide comments on proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid.

It is our view that the nutritional goals and daily food intake patterns that serve as the basis for the Food Guide Pyramid should serve as a tool to improve food intake for optimal health and disease prevention. Therefore, we recommend considering a separate category for legumes, nuts and seeds. We have specifically addressed below, several of the topics of particular interest to CNPP.

*Appropriateness of the selection of nutritional goals.*

The emphasis on low-fat diets is now under scrutiny as a more moderate approach has currently been taken to dietary fat recommendations. While lowering saturated fat to lower heart disease risk is well accepted, the amount and type of fat for healthy eating has become more important. A "moderate" dietary recommendation approach to total fat, emphasizing unsaturated fat food choices, is included in the USDA Dietary Guidelines for Americans 2000 (1). The 2000 American Heart Association (AHA) Dietary Guidelines (2) recommendation to "limit foods high in saturated fat and cholesterol; and substitute unsaturated fat from vegetables, fish, legumes, and nuts" includes nuts in a more predominant role than in the past. In May 2001, the National Institutes of Health's National Cholesterol Education Program Report (3) formalized its recommendation to keep total fat in the diet between 25-35% of calories. The recommendation for polyunsaturated fat in the diet is up to 10% of calories, and up to 20% of calories for monounsaturated fat. This is the first time monounsaturated fat has been officially

***Pecans. So Good. So Good for You.***

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“increased” as part of a recommended healthy eating plan. This has a major implication for nuts, which contain significant amounts of unsaturated fatty acids.

Earlier this year, the Food and Drug Administration’s (FDA) Task Force on Consumer Health Information for Better Nutrition released a report highlighting four key areas where FDA intends to focus its efforts on providing better nutrition information and health messages to consumers in the coming months. One such area includes, “The benefits of substituting nuts for other sources of saturated-fat-containing protein to help reduce the risk of heart disease (4).”

Shortly after FDA released its report, it also announced a new qualified health claim for nuts and heart disease. The claim is the result of a petition that was filed by the International Tree Nut Council and supported by NPSA. As part of the supporting documentation in the petition, a review article by Penny Kris-Etherton, PhD, RD, provides a thorough overview of the five large epidemiological and 11 clinical studies that document “frequent consumption of nuts decreases the risk of coronary heart disease” (5). Current status of research on unsaturated fats in nuts demonstrates that nut consumption can play a role in lowering coronary heart disease risk by decreasing both total cholesterol and LDL cholesterol levels. Research studies on nuts, which contain relatively high amounts of unsaturated fatty acids, have shown similar results in reducing risk factors associated with heart disease.

Epidemiological evidence from major population studies, which began with observations in Seventh Day Adventists (6), have documented the association between frequent nut consumption and lowered coronary heart disease risk (7). Clinical research trials on consumption of specific nuts including, almonds (8), walnuts (9), pecans (10), macadamias (11), hazelnuts (12), pistachios (13) and peanuts (14), show significant decreases in total cholesterol and LDL cholesterol levels. Important observations from these clinical studies include: subjects with normal or high cholesterol levels can achieve significant total and LDL cholesterol lowering; dietary regimens with increased unsaturated fats from nuts can be based on low fat recommendations (30% calories from fat) or a traditional high fat American diet (35-39% calories from fat) and show significant lowering of total and LDL cholesterol; significant blood cholesterol reduction of 5-12% for total cholesterol and 10-15% for LDL cholesterol.

Meeting vitamin and mineral recommendations is also critical for an individual to maintain good health and meet nutritional goals. The National Academy of Sciences has set a new precedent, setting daily requirements for vitamin and minerals beyond eliminating nutrient deficiency, to preventative or optimal health (15). Nutrient density of foods may become more important in food choices in order to meet micronutrient needs through foods, while keeping caloric intake in check. Food choices that include multiple nutrient benefits may become an important concept for consumers. In the meantime, the USDA, with the assistance and support of the INC and NPSA, recently conducted a comprehensive nutrient profile for micronutrients in nuts. The results show that nuts are valuable sources of significant amounts of copper, magnesium, manganese, phosphorus, selenium, and vitamins like thiamin, B-6 and E (16).

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While formal recommendations are not yet in place, the potential role of phytochemicals in health represents the leading edge in emerging science. This area is driven by research on chemical components found in foods that might have measurable health benefits like plant sterols for lowering cholesterol, or polyphenols for prevention of cancer. Nuts, a complex plant food, contain a wide variety of phytochemicals like phytosterols (beta-sitosterol), polyphenols (flavonoids, ellagic acid), phytoestrogens (isoflavonoids) and tocotrienols, that may play a significant role in heart disease and/or cancer prevention (17). Beta-sitosterol, for example, is one of several plant sterols found in nuts. It is implicated in cholesterol lowering, but more recently, cancer prevention (18). A collaborative, comprehensive analysis of phytochemical compounds is underway with the USDA, the Produce for Better Health Foundation and a number of commodity groups, including the INC and NPSA, to characterize these compounds in fruits, vegetables and nuts.

***Appropriateness of the proposed food intake patterns for educating Americans about healthful eating patterns.***

Over the past few years, nutrition experts and Oldways Preservation and Exchange Trust have begun to recommend a Mediterranean-like diet characterized by abundant plant foods (fruit, vegetables, breads, other forms of cereals, beans, nuts and seeds), fresh fruit, olive oil, dairy products (principally cheese and yogurt), fish and poultry consumed in low to moderate amounts, zero to four eggs consumed weekly, red meat consumed in low amounts, and wine consumed in low to moderate amounts, normally with meals (19). In a recent study published in the *New England Journal of Medicine*, researchers studied the effects of a Mediterranean diet on mortality in a population-based, prospective investigation involving 22,043 adults in Greece. Greater adherence to the traditional Mediterranean diet was associated with a significant reduction in total mortality. According to the authors, "After adjusting for age, sex, education, smoking status, BMI, waist-to-hip ratio, energy expenditure score and total energy intake, the only individual measures that were predictive of total mortality were the intake of fruits and nuts and the ratio of monounsaturated fats to saturated fats (20)."

Dietary consumption patterns from the Mediterranean region have historically shown the lowest recorded rates of chronic diseases and the highest adult life expectancy. It has also been shown that apparent benefits of the Mediterranean diet seem to be transferable to population groups from different origins and dietary habits, i.e., Australians (21). The Mediterranean diet as a secondary prevention measure is also much less expensive compared to other diet or drug treatments (22).

Government food consumption and nutrient intake data over the last ten years indicate that consumers are in the process of changing eating patterns, though somewhat misguided in their approach. While it appears that the fat message has taken hold and percentage of calories from fat has decreased to 32% of calories, total caloric intakes have risen (23). This increase in caloric consumption, together with limited amount of physical activity has contributed to increased incidence of obesity in the U.S. When it comes to dietary fat intake, recent consumer surveys including the Food Marketing Institute Trends Report (24) and the *Better Homes and Gardens* Consumer Survey 2000

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Lemieux

(25), demonstrate a decreased consumer interest/awareness in fat. It is possible that consumers are already making food choices with fat in mind so it is less of an issue for them. Interestingly, more consumers are on reduced fat and cholesterol diets than weight loss diets.

Recent studies do not implicate unsaturated fat or nuts in the diet as a contributor to weight gain. According to a recent paper published in the *American Journal of Clinical Nutrition*, epidemiologic studies indicate an inverse association between frequency of nut consumption and body mass index. No body weight changes were seen in well-controlled nut-feeding trials; and some studies with free-living subjects in which no constraints on body weight were imposed, showed a nonsignificant tendency to lower weight while on the nut diets (26). A report in the 2001 *Journal of International Obesity* showed that an energy-restricted diet containing 35% calories from fat (the extra fat coming from unsaturated fat foods such as peanuts, peanut butter, tree nuts and olive oil) produced similar improvements in body weight to a low-fat diet. And, an extra serving of vegetables were consumed by the high-unsaturated fat diet. Participation rates were significantly higher over an 18-month period for the high-unsaturated fat diet (27).

Current consumption of monounsaturated fat in the U.S. is 12.5% of calories and polyunsaturated fat is 6.4% of calories. Ironically, the three top contributors to monounsaturated fat in the US diet are beef, margarine and bakery goods, which do not contain significant amounts. Nuts are currently ranked 12<sup>th</sup> and oils are ranked 9<sup>th</sup>, although these foods contain primarily monounsaturated fat (23). To switch to an overall diet that contains close to 20% of total calories from monounsaturated fat, the inclusion of nuts is critical. However, there has also been a significant decline in consumers' awareness of unsaturated fat from over 40% in 1995 down to 25.5% in 2000 (25).

According to CSFII, in 1994-1996, 13 percent of U.S. consumers age 2 and over consumed tree nuts on any given day. Nuts are mostly consumed as snacks (51% of nuts consumed). Nut consumption is low compared to other protein sources. For example, nuts are eaten as a part of the evening meal only 14% of the time, demonstrating an opportunity to move nuts to the center of the plate (28).

It is critical to know where consumers are headed and whether they are ready to make changes in their eating habits for personal health, including eating nuts. Most surveys on consumer attitudes on nutrition and health show an overwhelmingly high interest in "ensuring good health." *Better Homes and Gardens* (25) reports that 85.5% of respondents work to prevent health problems, *HealthFocus* (29) reports 88% and *Prevention* (30) reports 79% of consumers want to ensure good health. In addition, according to *HealthFocus* (29), most consumers see a connection between nutrition and their health and they believe foods can offer benefits that reach beyond basic nutrition to disease prevention.

According to *Better Homes and Gardens* (25), 88% of consumers are serving more meatless meals for diet and health reasons. In a new report from Mintel Consumer Intelligence (31), research shows that the vegetarian food market will continue to grow for the next five years at a rate of 100% - 125%. While only 2.5% of American consumers are consistent vegetarians, it is estimated that 25% of consumers replace meat

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with meat alternatives at least for some meals. These "occasional vegetarians" may be making the switch for health purposes and may never intend to change their diets completely. Nonetheless, they are a major force in the growing interest in vegetarianism. What these "semi-vegetarians" need is the option to access more meat-free prepared meals and education—something nuts can provide.

The Food Guide pyramid can and should be used as a tool to help educate consumers about an optimal diet for disease prevention. A separate category in the pyramid, focusing on legumes, nuts and seeds would help educate consumers on the benefits of these important foods. It's important to note that although tree nuts are not legumes, they have a similar nutrient profile to peanuts, which are legumes (16). We recommend that tree nuts and peanuts be grouped together to help consumers move in the direction of plant-based diets.

*Appropriateness of using "cups" and "ounces" vs. servings in consumer materials to suggest daily amounts to choose from each food group and sub-group.*

In recent months there has been much discussion by health professionals and the media about portion size and its impact on weight. Since portion sizes have grown dramatically over the last decade, it is important to put serving sizes into perspective. In its recent announcement of the qualified health claim for nuts, the FDA stated:

"Scientific evidence suggests but does not prove that eating **1.5 ounces per day** of most nuts as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. [See nutrition information for fat content.]"

Not surprisingly, most consumers do not know how much 1.5 ounces is, so NPSA suggests the equivalent of about 1/3 cup—which is the serving size used in the U.S. Dietary Guidelines.

Thank you for considering these comments, if we can provide you with additional information, please let me know.

Sincerely,



Russell A. Lemieux  
Executive Director  
National Pecan Shellers Association

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Lemieux

## References

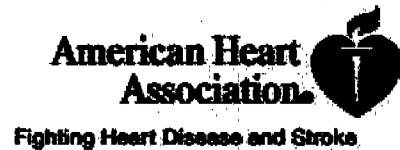
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Lemieux

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October 24, 2003

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

Dear Sir or Madam:

The American Cancer Society, American Diabetes Association and the American Heart Association are pleased to provide comments concerning the USDA's proposed revisions to the daily food intake patterns that serve as the technical basis for the Food Guide Pyramid. These comments are in response to the Federal Register notice of Thursday, September 11, 2003 (v 68, #176).

The diseases represented by each of our organizations place a huge toll – both human and financial – on the American public. Each year, 1.5 million people die from cancer, diabetes, heart disease or stroke, representing 2 out of every 3 deaths.<sup>1</sup> Financially, it is estimated that these chronic diseases cost this country more than \$600 billion each year.<sup>2,3,4</sup> The cost to America for obesity is estimated at \$117 billion each year.<sup>5</sup> Because nutrition, physical activity and weight control play important roles in the development and management of chronic disease, we are pleased to work together to influence what forms the basis for sound nutrition policy and consumer education in the United States.

We applaud the USDA in keeping with its goals to provide the best available science-based information about healthy dietary patterns and to influence dietary practice among consumers. This parallels what each of our organizations has done throughout our histories, not only to decrease disease risk but to improve disease management, as well. It is this experience and commitment to improving healthy lifestyles and decreasing chronic disease risk that are reflected in the comments and concerns below.

We first address the five topics of particular interest to the USDA's Center for Nutrition Policy and Promotion (CNPP), and then address several other topics of concern in this area:

1. Appropriateness of using *sedentary, reference-sized individuals* in assigning target calorie levels (Table 2) for assessing the nutritional adequacy and moderation of each food intake pattern.
  - With the increase in obesity in the American population, we support the USDA's proposal to use sedentary individuals at their reference weights in assigning target calorie levels. Using reference instead of median weight will better reflect caloric requirements for the general US population and aid in educational efforts on weight management.
2. Appropriateness of the *selection of nutritional goals* for the daily food intake patterns.
  - We support USDA's selection of nutrition goals for the daily food intake patterns (Table 3).
3. Appropriateness of the proposed *food intake patterns for educating Americans* about healthful eating patterns:

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- For each food group, we suggest that there be emphasis placed on nutrient quality and that there be a way to identify nutrient dense foods within a food group. For example, whole grains should be distinguished from and emphasized over refined or processed grains; whole fruits and vegetables should be emphasized over juice; lean protein sources should be emphasized over those higher in saturated fat.

To accomplish this, icons could be used within a variety of ways: all icons within the fruit and vegetable category should represent nutrient-dense choices (for example, replace apples, grapes and iceberg lettuce with peaches, mangoes, kiwi and red cabbage); icons for all dairy products should depict lowfat and fat-free choices (for example, a glass of milk that says "lowfat" across it); larger icons should be used to depict healthier choices within the meat group (ie fish and poultry icons larger than red meat).

- Preferably, dessert items such as frozen yogurt and other dairy desserts would not be included in the milk group but rather in another category containing sweets, fried foods, etc that are to be consumed infrequently.
- The USDA indicates that "Pyramid serving sizes within a group must be approximately equivalent in both calories and nutrients" (FR-68 p53539; 2<sup>nd</sup> column). The calories and macronutrients (in terms of 1/2 cup servings) are widely discrepant between the dark-green and deep-yellow vegetable subgroups and the legumes and starchy vegetable subgroups. We suggest that the starchy vegetables and the legumes be shifted from the vegetables group to the grains group (with a name change for the group to indicate the additions). The calories and nutrients from a serving of starchy vegetables or legumes (1/2 cup) are a much better "equivalency" for the grains group than the vegetables group, whether based on all foods or most commonly used foods.<sup>6</sup>

The most recent update (2003) of the American Diabetes Association's Exchange Lists for Meal Planning again uses this designation for these two food groups and found it to be a good fit for both calories and nutrients.<sup>7</sup> We strongly encourage the CNPP to recalculate the vegetable and grains groups in Table 4 to reflect this change and we feel sure you will find the same result.

Finally, with obesity so prevalent in the US in nearly all age groups, consumer perception of portions needs to be downsized. Grouping starchy vegetables with grains may help consumer better identify sources of calories in their diets.

- "Added fats" and "Added sugars" are both very difficult to comprehend in terms of food choices because the values given incorporate fat (or sugar) that occurs as part of food items intrinsically and fat (or sugar) that the consumer might choose to add. This leads to a very misleading presentation, suggesting it is "healthy" to add much more fat (or sugar) than the intended. Because there is increasing scientific evidence that the *type* of fat in the diet plays more of a role in chronic disease development than *total* amount of fat, emphasis should be placed on healthier fat choices (monounsaturated, omega three and polyunsaturated fatty acids), both within the "Added fats" and other relevant food groups. If it is decided to retain the "Added fats" category, emphasize liquid oils and margarine, and nuts and seeds over solid fats by listing them first in this section. In addition, separate margarine from oils due to trans-fat content of the former, and emphasize soft margarines over stick versions. Within the "Added sugars" category, it should be stressed that the amounts of added sugars are **not** specific recommendations for amounts of added sugars to consume.
4. Appropriateness of using "cups" and "ounces" vs. "servings" in consumer materials to suggest daily amounts to choose from each food group and subgroup

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- Given the general misperception among the public of what constitutes appropriate portion sizes, the revised Food Guide Pyramid must attempt to communicate this concept in a meaningful way. Pyramid graphics should include representation of appropriate portion sizes, and supporting collateral for consumers should explicitly show how today's "usual serving sizes" (ie larger than appropriate/standard) relate to recommended intake. See the enclosed brochure titled *First Step in Meal Planning* that has incorporated serving sizes as well as practical tips in selecting the most nutrient dense choices in each category.
- We believe that in most cases, recommended total daily amounts to choose from each food group should be expressed in cups or ounces per day instead of servings. Exceptions to this include whole fruits and bread products, which do not convert easily to cup or ounce measurements and would likely cause confusion if the attempt is made to convey these items this way. There is great variation in the serving suggestions on the Nutrition Facts Label and standard reference amounts for the Food Guide Pyramid, and we encourage USDA to determine how best to develop consistency in serving sizes across Food Guide Pyramid recommendations and the Nutrition Facts Label.

By indicating the total amounts for a day in cups or ounces rather than by total servings for most food groups, consumers will be better able to compare their actual intake to the recommendations. In addition, we feel it is important to make the statement that the upper range of recommended intake for foods within a category are for those individuals who require a higher caloric level based on age and/or physical activity level.

#### 5 Selection of appropriate illustrative food patterns for various consumer materials.

- The publication of all twelve calorie ranges may be useful in the technical documents for professionals, however, we suggest using five or six calorie ranges in the various consumer materials. For example dividing the ranges into categories such as 1,000-1399, 1400-1799, 1800-2199, 2200-2599, 2600-2900, and 3000+.

#### General comments related to revision of the Food Guide Pyramid.

- The foundation for recommendations made within the revised Food Guide Pyramid should first and foremost be the available scientific evidence. This will help ensure the credibility of the Pyramid recommendations and garner the support of the scientific and health communities.
- With regard to a reshaping of the pyramid, we would suggest conducting focus group testing to identify how consumers group foods and which graphic representation would most effectively convey the nutritional messages to help consumers assess and improve their diets.

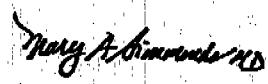
In clinical practice, it is often helpful to use a circle or plate representation to provide a visual of food choices. This method may be useful for the general public as well. Such a visual can be easily related to proportions of a meal from different food groups. Additionally, use of a similar graphic may be used across age groups and cultures.

- We would like to emphasize the importance of encouraging physical activity to promote general good health as well as its role in the prevention of diabetes, heart disease and cancer and other chronic health conditions. Balancing food intake with daily physical activity is essential in promoting health and should be considered for inclusion in the new Food Guide Pyramid.

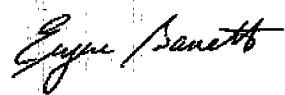
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We appreciate the USDA's efforts to evaluate and revise the Food Guide Pyramid and for allowing participation in the process.

Sincerely,



Mary A. Simmonds, MD, FACP  
President  
American Cancer Society



Eugene J. Barrett, MD, PhD  
President  
American Diabetes Association



Augustus O. Grant, MD, PhD, FAHA  
President  
American Heart Association

Fig 5  
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October 24, 2003

Eric J. Hentges  
Executive Director  
USDA Center for Nutrition Policy and Promotion  
Food Guide Pyramid Reassessment Team  
3101 Park Center Drive, Room 1034  
Alexandria VA 22302

Dear Dr. Hentges:

Thank you for the opportunity to comment on CNPP's Proposed Daily Food Intake Patterns, which serve as the technical basis for the Food Guide Pyramid.

The USA Rice Federation is a national trade association representing all segments of the U.S. rice industry. Through a wide variety of consumer research and education programs, we have gained a keen insight and understanding of consumer preferences on issues regarding dietary choices, as well as food preparation and consumption. Our experience and knowledge, coupled with research from other expert sources, guides our response on certain of CNPP's proposed revisions.

The Tables presented in the CNPP document are very impressive. It is apparent much time, thought and hard work were dedicated to their creation. Issues we would like to comment on involve a few technical points, as well as points of view we feel need to be addressed:

1. Our primary goal must be to focus on improvement of nutrition in America. This can only be achieved with a healthy balance of all nutrients. In Table 1, "Proposed Daily Food Intake Patterns", Page 1 allows for "Additional Fats" and "Added Sugars" at each calorie level. As calories increase, however, so do percentages of fats and sugars. For example, at 1600 calories, allowed sugars and fats total 24.5% of the day's calories. At 3200 calories, sugars and fats represent 35.4% of the total day's calories. Wouldn't it be more balanced to encourage increased consumption from healthier food groups?
2. In Table 3, "Nutritional Goals for Proposed Daily Food Intake Patterns, Goals for Macronutrients", Page 3 depicts a double column under "Carbohydrate". The first column, entitled "RDA", lists the 1989 Recommended Dietary Allowances of the necessary glucose

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required by the brain to function. It was estimated to be 130 grams per day, regardless of the person's age, gender or overall caloric requirements.

The column next to RDA is AMDR, representing the Acceptable Macronutrient Distribution Range, which bases its values as percentages of total daily calories in order to maintain body weight. Considering the wide array of Daily Calories considered in the proposed Food Guidelines (1000-3200 calories per day), the AMDR allows for a range of 112-520 grams of Carbohydrate per day. This is a more authentic reflection of the actual intake of a large population group, therefore it is much more realistic to utilize the AMDR 45-65 percent range of total daily calories it allows. For simplicity sake, we support the average National Academy of Science recommendation for carbohydrates, 55 percent of calories, rather than providing a range of 45-65 percent.

3. Table 4, "Nutrient Profiles of Food Guide Pyramid Food Groups and Subgroups", appears to have an error on Page 3 under Macronutrients. The grains group shows a positive value for cholesterol. That is highly unlikely for foods that don't sport livers to have cholesterol.
4. As USDA points out, using the term "serving" to mean a standardized amount of food is widely misunderstood by consumers. Therefore we recommend using "cups" for cooked rice, pasta, and cereal. We would discourage the use of ounces for cooked rice, cereal or pasta as this is not practical for consumers.
5. The recommendation for half of the daily servings of grains to be whole grains is not consistent with current recommendations of a minimum of three servings a day and is not realistic or practical. We recommend you continue with the commonly recognized level of three servings per day from whole grains.
6. Finally, we urge the USDA to remember that a consumer education campaign must be simple and easy to understand. While we support the approach of multiple caloric levels for dietitians and nutrition professionals, the use of twelve distinct calorie levels would be confusing and overly detailed, requiring significant time for consumers to discern. This approach is much too complicated, and consumers might ignore calorie levels altogether. Perhaps fewer, more familiar caloric levels (1200, 1500, 1800, 2000, 2500 etc.) would be acceptable or, since the minimum caloric level of 1600 calories is necessary for the current Food Guide Pyramid, that number could be used as a base, with additional servings added as needed for higher caloric levels.

Today two-thirds of U.S. consumers are eating rice once a week, 85 percent have rice at least twice a month, and 90 percent are eating rice in restaurants, up from 75 percent in 1992. Clearly rice is a mainstay of the diet in the U.S. and worldwide. Its taste, versatility, nutritional value, convenience, and low cost make rice a popular choice with consumers nationwide and of different cultural backgrounds.

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In your FGP goals to promote overall health, reflect up-to-date nutrition, develop a realistic tool that includes common foods reflective of food consumption patterns, and is practical, evolutionary, and allows maximum flexibility, rice fits.

Thank you for your consideration of the U.S. rice industry's views and comments.

Sincerely,

  
Stuart Proctor  
President and CEO  
USA Rice Federation

1992 Browning  
American Institute  
for Cancer Research

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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

October 24, 2003

Dear Members of the Pyramid Reassessment Team:

In January of 1999, the American Institute for Cancer Research (AICR) submitted to the Dietary Guidelines Advisory Committee (DGAC) the following recommendations for changes to the Dietary Guidelines for Americans 2000:

1. Give first priority to plant-based foods;
2. Emphasize variety and minimal processing;
3. Emphasize consumption of whole foods and caution against use of nutrient supplements as a primary strategy for preventing disease;
4. In place of recommendations on fats, caution against use of excessive added fat, salt and sugar.

These recommendations – many of which were adopted by the DGAC – were based on conclusions of the expert panel that authored AICR's landmark report on the link between diet and cancer entitled *Food Nutrition and Prevention of Cancer: A Global Perspective*. This exhaustive 650-page report examined over 4,500 studies relating to all aspects of the diet-cancer link.

The report weighed the international scientific evidence and issued a list of simple guidelines that, if adopted, could reduce worldwide cancer rates by an estimated 30 to 40 percent. (See pp. 522-523.) Since the report was published, its conclusions have been consulted and adopted by governments, official agencies, research scientists, teachers, health professionals, community groups, families and individuals worldwide.

AICR and its global affiliate, the World Cancer Research Fund International, have recently embarked upon the creation of a second report, which will again review the evidence for connections between lifestyle (diet, physical activity, weight management) and cancer prevention. This second report is scheduled for publication in 2006.

Until that time, the conclusions found in the original AICR expert panel report remain the most comprehensive and authoritative guidelines for cancer prevention ever undertaken.

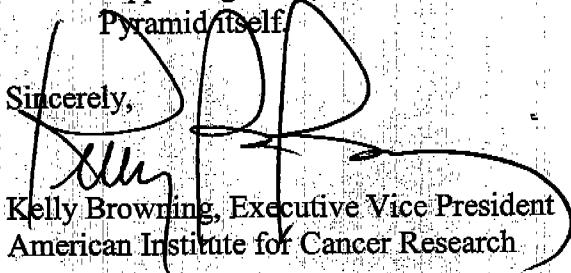
As the Food Guide Pyramid Reassessment Team considers changes to the Pyramid, AICR wishes to direct its attention to evidence contained in *Food, Nutrition and the*

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*Prevention of Cancer: A Global Perspective.* Note that adopting the recommendations listed below would amount to a simple "fine-tuning" of the current Pyramid.

1. **Explicitly recommend that whole grains be selected *over* refined grain products.** (See Recommendation 5 on p. 513, and the evidence supporting the recommendation in Chapter 6.1.)
2. **Clearly distinguish between plant-based protein and animal sources.** The AICR report links consumption of red meat with cancers of the colon and rectum, pancreas, breast, prostate and kidney. Animal fat is linked with cancers of the lung, colon, rectum, breast, endometrium and prostate. (See Recommendation 7 on p. 515 and the evidence supporting this recommendation in Chapter 6.6.) **Place more emphasis on beans, nuts and seeds. Lean protein should be encouraged** (see discussion of saturated fat, p. 392.) **Emphasize lowfat or nonfat dairy products** for same reason.
3. **Distinguish between fats and oils of animal origin and vegetable oils with a favorable fatty acid profile.** (Again, see discussion of saturated fat, p. 392.)
4. Because **physical activity is an essential part of calorie balance and is linked to lower cancer risk** (see Recommendations 2 and 3 on p. 513 and the evidence supporting these recommendations in Chapter 5.1) it should be listed on the Pyramid itself.

Sincerely,



Kelly Browning, Executive Vice President  
American Institute for Cancer Research