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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.

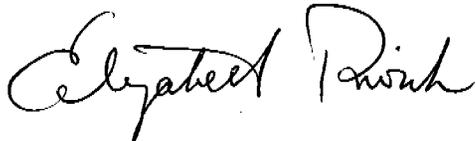
- Any graphic design developed to convey nutrition messages must promote a range of 5 to 12 servings of fruits and vegetables a day.
- The revised food guidance graphics need to do a better job of emphasizing the importance of eating a variety of colorful fruits and vegetables every day. The current 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

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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 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).

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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 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.*

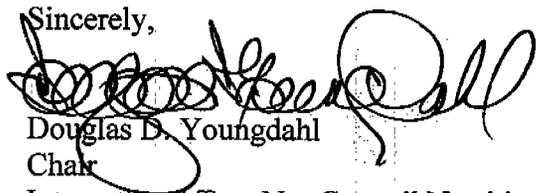
In recent months there has been much discussion by health professionals and the media about portion size and its impact on weight. Since portion sizes have grown dramatically over the last decade, it is important to put serving sizes into perspective. In its recent announcement of the qualified health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

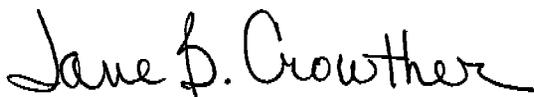
Omega Protein requests that the nutritional goals for proposed daily food intake patterns in Table #3 should be expanded to include EPA+DHA as Long Chain Omega-3. Also, an Acceptable Macronutrient Distribution Range (AMDR) for healthy diets with 1g per day for EPA+DHA for adults should be calculated 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 (1 oz.)</b>	<b>Calories</b>	<b>Total Fat (g)</b>	<b>Saturated Fat (g)</b>	<b>Cholesterol (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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- 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 2-3 cups vegetables 1-2 servings fruit 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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10/27/03  
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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.

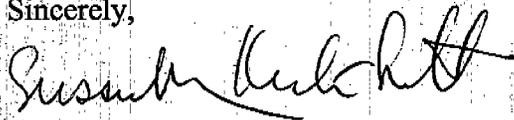
#### *Use of "cups" and "ounces" vs. "servings"*

- 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  
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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: 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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Tipton & 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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Lipton & Matto

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.

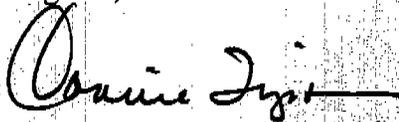
**Issue #5: Selection of appropriate illustrative food patterns for various consumer materials.**

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.

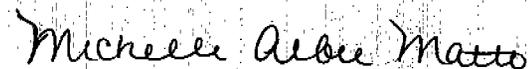
In addition to IDFA's comments, we are aware that the National Dairy Council has submitted comments concerning the importance of dairy in the Food Guide Pyramid. We fully support these comments and would like to emphasize the importance of the research the National Dairy Council reviews in depth.

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

5925  
Tipton & Matto

Regulatory Affairs Manager

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<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

KT

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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Kostas

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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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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**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.

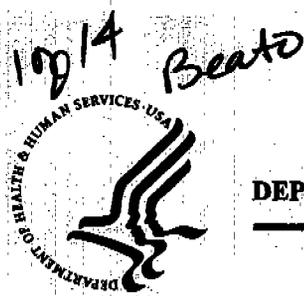
- The equivalents listed in Table 1, note 2 are very restrictive. For example, 2 cups of ready-to-eat cereal flakes is not applicable to puffed cereals, wheat biscuits (whole grain), or nuggets since they have different densities and shapes. What is the number of cups to provide 1 cup (2 servings) of 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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Beats

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 (½ 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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RT

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