



American Soybean Association®

AUG 26 2004

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August 25, 2004

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

Dear Members of the Food Guide Pyramid Reassessment Team:

On behalf of the American Soybean Association (ASA), I appreciate the opportunity to provide comments regarding the update of the Food Guide Pyramid. ASA is a membership-driven, grassroots policy organization representing 25,000 producer-members on national issues important to U.S. soybean growers.

Our interest in revising the Pyramid includes two issues: soyfoods and trans fats.

#### Soyfoods

First, we encourage the Team to recognize the growing importance of soyfoods in the diets of many Americans. Research conducted by the United Soybean Board shows that more than 25 percent of U.S. consumers buy and use soy at least once a week. The current Pyramid includes tofu, soyburger and soy-based beverages in its recommendations. Recognizing the enormous growth in soyfoods consumption since the Pyramid was developed, we recommend that the Team consider expanding this listing to include references to the many nutritional soyfoods that Americans increasingly select, including soy yogurt, soynuts and additional soy-based meat alternatives.

In addition, the Team is certainly aware that soymilk has moved into the beverage mainstream, with supermarket sales growing at a rate of 25 percent a year. By 2010, soymilk is expected to represent as much as 10 percent of U.S. dairy consumption. We strongly encourage the Team to reflect the widespread consumption of soymilk by specifically referencing calcium-fortified soymilk as a recommendation in the Milk, Yogurt, and Cheese Group, not as a footnote.

#### Trans Fats

Soybean farmers are committed to developing non-trans alternatives that will continue to provide the superior functional characteristics found in soybean oil, which have made it the oil of choice around the world. In the United States, soybean oil represented 81% of edible oil consumption in 2002. Soybean oil is relatively low to moderate in saturated fat and is a good source of poly-

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and monounsaturated fats. Additionally, soybean oil is one of the few non-fish sources of omega-3 polyunsaturated fatty acids.

While we appreciate that food companies are facing decisions on whether and how to reformulate products to achieve zero or low trans fats, it is important for the Team to recognize that partially hydrogenated soybean oil cannot be replaced in the near term. Supplies of other domestic oils, such as canola or corn, that are able to replace some uses is quite limited. The only tropical oil available in sufficient quantity is palm oil, which has significantly higher levels of cholesterol-raising saturated fats.

Anticipating the revision of the Nutrition Facts label in 2006, the soybean industry is pursuing a variety of solutions to the trans fat issue. Several processing technologies have been developed that transform the chemical and physical properties of soybean oil so that the end product has few or no trans fats. In addition to processing technologies, the soybean industry is actively pursuing near-term improvements in soybean germplasm that will sharply reduce or eliminate trans fats in food products. Seed companies will begin introducing new varieties of soybeans in 2005 that are low in linolenic acid, reducing the need for hydrogenation. By 2006, significant supplies of this oil will be available for commercial use, greatly reducing the amount of trans fats in the U.S. food supply.

ASA is very concerned that revisions to the Dietary Guidelines and Food Guide Pyramid not have the unintended consequence of pushing food companies to replace partially hydrogenated vegetable oil with heart-unhealthy fats, including palm oil, as the solution to the trans fats issue. We have already heard numerous reports of companies ramping up imports of palm oil and other tropical oils in an effort to avoid identifying trans fats on their product labels. This unintended consequence of the trans label requirements will not serve its original purpose of improving public health. However, it will have a negative impact on growers of the second largest crop produced in the United States and displace domestic oil production with imports.

In addition to putting the trans fats issue in proper perspective, we believe it is important that the Food Guide Pyramid differentiate the health attributes of unsaturated versus saturated fats. It would be helpful if the Pyramid also identified the superior qualities of monounsaturated and polyunsaturated fats, such as the benefits of omega-3 fatty acids.

We appreciate the Team's consideration of our views.

Sincerely,

Neal Bredhoeft

Neal Bredhoeft  
President

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AUG 26 2004  
[Signature]

To: Food Guide Pyramid Reassessment Team  
From: Jackie Graff

Graff / 2

Roswell, GA  
Ph:  
Email:  
Web:

### Proposals for the New Food Guide Pyramid By Jackie Graff, R.N., B.S.N.

The present food pyramid along with high powered advertising are part of the reason we are the fattest and most unhealthy we have ever been in this country. Immigrants from other countries who adopt our way of eating become overweight and get many diseases not common in their countries. The change is long overdue. People are getting diseases in their youth that they used to get as they aged. I see this in my work as a nurse.

The American public should know the truth. We do not need just a few tweaks to the present pyramid. We do not need small changes that allow manufacturers to spin new products and consumers to gradually change their diets. The public needs guidance for changes NOW! The U.S.D.A. needs to get it right this time, our lives are depending on honest information. Individuals can make their own choices- just give us the truth. Enough studies are out there that prove the following proposed guidelines.

The TRUTH is needed- some will follow and some will not. We cannot change everyone. Some will eat what they want with no consideration of their health. People that want to improve are confused and need guidance, they need the truth. There are many diet books out there that do not work long term, this is why there are so many- because they do not work. With all of our intelligence and knowledge it is embarrassing to be the most overfed, overweight, malnourished country in the world. We have to stop letting the food industry and diet books, whose interest is dollars, affect the health of our nation.

This change in the food pyramid should not be influenced by any special interest food groups. It should be based on how we should eat to get the most nutrition out of our food choices. Our most nutritious foods are whole fruits, vegetables, nuts and seeds that do not come in packages. These contain a large amount of antioxidants, phytonutrients, omega 3 fatty acids, vitamins and minerals. These nutrients and antioxidants are protection for plants and will also protect us from chronic disease.

The nutrients we need to get from our food cannot successfully be obtained from a pill. The nutrients we get from food work synergistically with each

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other. To get enough of these nutrients we need to be eating a lot of fruits and vegetables.

### The Following Pyramid Is Proposed

1. The base should be the maintenance of energy, having an exercise program and controlling calories and weight.
2. The next level should be a **variety** of organic healthy whole carbohydrates such as fruit and vegetables having color: green, yellow, orange, red, blue, purple, with a large portion of this uncooked to preserve the nutrients.
3. The next level should be whole grains and starchy vegetables.
4. The next level should be legumes, beans, peas, sprouted nuts and seeds.
5. The next level should be limited amounts of fats from fruits, vegetable, nut and seed sources. With no more than 20-30% of our calories coming from these healthy fats.
6. A strong notation should be made on the pyramid of foods that should be **eaten rarely and eventually eliminated completely from the diet**. These should be: salt ( no more than 1000 mg /day or less), sugar, high fructose corn syrup, and other processed sugars, refined grains, trans-fatty acids, and saturated fat (all animal products have saturated fat). **All of these foods need to be eliminated completely from the diet, not cut in half as proposed by the USDA.**
7. What professional in the health and nutrition field is telling us that we are deficient in saturated fat, sugar, refined grains, or trans-fats and need to get them into our diet? These foods cause inflammation and can lead to many of the chronic diseases that plague our society. If these unhealthy foods are eaten then there would not be enough calories left for the fruits and vegetables containing a large amount of antioxidants, phytonutrients, vitamins and minerals which can keep the body healthy.
8. If enough of the levels two through five are eaten to maintain energy and a healthy weight there will be more than adequate protein, folate, calcium, omega 3 fatty acids, and other nutrients in the diet. (refer to the WHO's recommendations for protein needs). Animal protein and fat are not necessary for a healthy diet.
9. A plant based vegan diet with a healthy variety of uncooked fruit, vegetable, nuts, and seeds is the healthiest way to eat.

AUG 26 2004



# American Dry Bean Board

Vienna, Virginia

Fax: (

e-mail: l

Website:

August 25, 2004

Mr. Eric J. Hentges  
Executive Director  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

234

Kimball  
105

RE: FR Doc 04-15710 Notice of Proposal for Food Guide Graphic Presentation and Consumer Education Materials

Dear Mr. Hentges:

Thank you for the opportunity to present comments on the food guide graphic and educational materials on behalf of the membership of the American Dry Bean Board (ADBB).

ADBB is a private national trade association that represents all growers and shippers of dry beans in the United States. ADBB's mission is to promote the consumption of dry beans domestically. We invite you to visit our website at [www.americanbean.org](http://www.americanbean.org).

We work very closely with our sister organization, the US Dry Bean Council (USDBC), and support its position on this issue.

First, we support using the term "beans" in the proposed pyramid graphic as a subgroup of the Meat and Beans Group. We note that your background materials place dry beans in the legumes subgroup in vegetables. As your background information notes, legumes include dry beans, lentils, peas, and peanuts.

Our comments specifically concern using the term "beans" instead of "dry beans" or "legumes" in the messaging and tools developed for the food guidance system. ADBB is concerned that using term "legumes" in supporting educational materials is confusing and inconsistent.

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"Beans" is the term most commonly used by consumers to refer to individual types of beans such as black beans, pinto beans, kidney beans and others. We believe "beans" should be used in the food guidance system to refer to these foods. The term "beans" is one that consumers readily recognize when referring to dry beans (whether dry in a bag or further processed.)

### **Supporting Consumer Research**

#### ***Beans (not Dry Beans)***

Results of a recent consumer research study, sponsored by Bush Brothers & Company, showed that 70% of consumers believe that the key difference between "dry beans" and "beans" is whether or not they have been processed. When asked to describe "dry beans", 35% of consumers mentioned a specific type of bean (i.e., pinto, black, chili) or simply said "beans."

We believe these data conclude that consumers do not commonly use the term dry beans to describe the entire food category and that the term "beans" is more commonly used and represents all beans – dry in a bag or further processed. Proper consumer guidance should suggest that consumption of all beans, processed or not, are important to include in a healthy diet.

#### ***Beans (not Legumes)***

This consumer research study also concluded that consumers lack understanding of which foods constitute the category of foods referred to as "legumes" and would better understand the legume category if more common references are used, such as "beans".

The data showed that when consumers were read a list of several different foods a stronger association was made with the term "Beans" versus the term "Legumes". For example, 80% of consumers tested identified pinto beans as a dry bean, compared to only 60% who associated pinto beans with the term legumes. Similar results were found for black beans (76% versus 57%) and kidney beans (71% versus 62%).

Less than 40% of respondents identified peanuts and green peas as legumes and about 16% identified Zucchini Squash, Pumpkins and Potatoes as legumes, further indication that the term does not effectively communicate which foods are classified as such, and provides poor consumer dietary guidance.

#### ***Study Background***

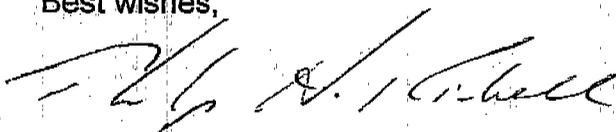
These data were collected through two omnibus studies among separate, but nationally representative samples of 500 consumers in the continental United States. One sample was asked questions about dry beans and pulses. The

Kimball 3 of 5

other sample was asked questions about legumes and pulses. The resulting data sets were weighted to reflect national percentages. The range of error on a sample of 500 is plus or minus 4.4%

A copy of the supporting test data is available upon request from USDBC.

Best wishes,



Philip H. Kimball  
Executive Director  
American Dry Bean Board

Enclosure: "Beans in the Diet -- A Healthy Whole Food"

## Beans in the American Diet - A Healthy Whole Food

Kimball  
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Beans are truly a Healthy Whole Food because of their seemingly endless health benefits. Because beans are so unique in this aspect, they could happily reside in the majority of the base level classifications on the food pyramid. Beans are currently classified in the Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts grouping and in the Vegetables group, but this only begins to reflect their nutritional benefits. In light of findings in recent years with regards to the health benefits of beans, strong consideration should be made as to how beans are classified in the revised Food Pyramid. The high nutrition content and health benefits of beans should be promoted to consumers as a Healthy Whole Food.

### Some of the benefits of beans include:

- Beans help maintain a low glycemic index with regulates healthy blood glucose levels.
- This is extremely important for therapeutic diets such as diabetes mellitus, obesity, hypertension, and digestive disorders
- The high fiber levels of beans contribute to colon and cardiovascular health
- Soluble fiber - CVD Health
- Insoluble fiber - Colon Health
- Beans are a low calorie food.
- Beans are fiber-dense, promoting healthy weight levels.
- Polyphenolics in beans help maintain healthy vascular and heart function as well as overall health
- Beans are an excellent source of vitamins
  - Folate has played a major role in the reduction of birth defects
  - Thiamin (B1) also aids in healthy vascular and heart functions
  - Niacin (B3)
  - Pantothenic acid
- Excellent source of antioxidant (flavonoids) activity that research shows can aid in the prevention of heart disease and certain cancers
- Beans are an important source of essential minerals
  - Magnesium
  - Iron
  - Potassium
  - Copper
  - Phosphorus
- Beans are low in fat, this helps to maintain healthy weight levels
- Beans are cholesterol free

As the Pyramid is being reassessed it would be a perfect opportunity to promote Beans as a truly "Healthy Whole Food". We would like to see the Guidelines "Highlight" what a healthy choice that Beans really are and to include them in the 1<sup>st</sup> tier or the Primary food group for all the reasons above. With the governments focus on heart health, obesity and a number of other health related issues, there are few basic proteins that offer the benefits that Beans provide.

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One means of promoting the health benefits of beans to consumers would be to emulate how other cultures have placed beans into their "Food Pyramids". For example, beans have their own category in the Mediterranean and Asian Food Pyramids. In both of these cases, beans are near the base of the Food Pyramid between The Fruits category and the Vegetables category. These pyramids demonstrate to consumers that Beans have health benefits similar to those in fruits and vegetables, but with so much more to offer.

Modifying the U.S. Food Pyramid to reflect the Whole Food nature of Beans would give consumers a better opportunity to incorporate this nearly perfect food into their diets. The current guidelines do not do justice to these numerous health benefits.

AUG 26 2004

# Portion Control Serving Utensils (patent pending)

Lebanon, Indiana

235

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August 23, 2004

Dear Sir or Madam:

Thank you for taking the time to review this letter. I ask you to take a few minutes to review the materials attached or to forward them to the appropriate person in your organization for review. I currently have a product idea in the patent pending stage. It deals with using serving utensils to control portion sizes.

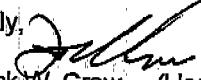
Excess weight whether being overweight or obese increases the risk of many diseases and disorders (including some that your organization works hard to prevent). The current mantra of weight control is to "eat less, exercise more". Weight control is a current topic of much interest and importance. My product idea addresses the problem and provides a solution for the situation where most people measure what goes on their plate (their portion size) visually. This measurement is often inaccurate and results in an oversize portion on their plate. A consequence of this behavior is eating more than necessary and ultimately excess weight.

Portion size control is the key to eating less and can only be accomplished when we know how much we are eating. Serving size is the key to portion control. My idea provides a means to measure the amount of food before it is placed on the plate. The goal is that the portion size equals the standard serving size. The foundation of this products success is three fold. First; when the portion on a plate is a serving size, which has been accurately measured by the portion control serving utensil, it is more likely that the amount would be less than one would put on their plate initially from just a visual measurement. Second; once a serving size is eaten, the hunger urge is less and the person is less likely to go back for seconds or thirds. Finally, use of the portion control serving utensil trains a person to better visually measure their portion sizes when they eat someplace that does not have the portion control serving utensil. This occurs without any increased health risk or side effects.

Use of the portion control serving utensil would encourage accurate measurement of portion sizes and ensure that the portion size equals a serving size. The resulting weight loss and increased ability to control weight would be of assistance to your organization by removing excess weight as an increased risk factor in the very diseases and disorders that your organization works tirelessly to prevent.

The portion control serving utensil is in the patent pending stage. Your organizations endorsement or approval of this product idea, I believe, could accelerate the application process and be a positive influence on the ultimate outcome. If this is not an appropriate request of your organization I apologize for taking your time. However, your organizations endorsement or approval of this idea would also assist in getting this product to the market sooner so it could be available for people who would like to safely and effectively lose weight and maintain a safe weight. This is an outcome that would assist in lowering the risk of the very diseases and disorders your organization works to prevent. I have attached with this letter a short memo which describes this product and how it works in greater detail along with a few diagrams of the product idea.

Thank you in advance for your time in reading this letter and/or for your forwarding this letter to the appropriate person in your organization.

Sincerely, 

Frederick W. Crow (Home phone ) ; email )

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Date: 7/25/2004

From: Fred Crow

RE: PORTION CONTROL SERVING UTENSILS

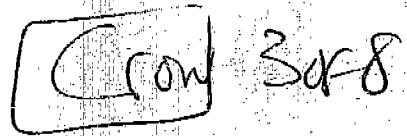
Obesity and being overweight are currently recognized to be at almost epidemic proportions in the United States and other parts of the world. This is a problem that is currently emerging and is a topic of much interest and discussion. The problem is not specific to any particular age, gender, race, or culture. People constantly underestimate their weight and underestimate the amount of food they eat. Excess weight can increase the risk of or cause diabetes, cardiovascular diseases, high blood pressure, stroke, joint pain, arthritis, sleep apnea, and several types of cancers including, but not limited to breast, colon, prostate, and kidney. Excess weight and inactivity is estimated to account for over 300,000 premature deaths in the U.S. alone. Reports indicate that since 1980, the number of overweight children has tripled, and that up to 25% of U.S. children are obese. It has been reported that unless people start eating less and exercising more, one in three children in the U.S. born in the year 2000 will become diabetic. The World Health Organization estimates that between 1.1 and 1.7 billion people in the world are overweight.

A common problem relating to the overweight and obesity dilemma is that one's eyes measure what is put on a plate, and that measurement of food is seldom, if ever, a "standard serving size". A portion is the amount of food we or someone else puts on our plate for us to eat. Oversize portions are a factor in the overweight and obesity dilemma. As a result of super sizing, almost every food portion has increased dramatically over the past 30 years. A "serving size" is a standard amount set by the U.S. government and it represents the amount customarily consumed at one sitting and provides a standard measurement for nutritional values. Serving sizes are perhaps most recognized from the Nutritional Facts Panel which provides the nutritional content, including the number of calories, fat, etc. at that particular serving size of food.

Accurate serving size measurement is necessary to permit one to monitor their food intake, and consequently, the intake of calories, sugar, fat, carbohydrates, sodium, cholesterol, etc. Accurate serving size measurement encourages portion control and thus weight management. No matter what you eat, if you only eat a standard serving size you will be more likely to lose weight. Successful weight management is promoted when the portion size equals a standard serving size.

Problems occur when we use our eyes to measure the portion we put on our plate. Generally this is done when one is hungry. The combination of hunger and the use of our eyes to measure the portion generally results in multiple serving sizes on the plate. This coupled with our childhood training to "clean your plate" results in overeating and weight gain. Without accurate measurement of serving sizes one easily lets their hunger and eyes mistakenly convince them that they are only eating a serving size of a particular food.

A simple test can illustrate this behavior. In the morning or for your first meal of the day (for late sleepers) try this test. Pour your breakfast cereal in a bowl. Now, measure how much you poured into the bowl and compare it to the nutritional facts panel "serving size". (When I took this test I found that the amount I had in the bowl was actually two to three times the serving size listed on the package.)



Accurate measurement of serving sizes assists in weight management in several ways. First, if the amount on your plate (the portion) is a serving size, then by the time you eat that amount, your hunger urge will be less and you will be less likely to get second or third portions. Second, you will visually learn, with repeated use, the likely serving size of foods and thus when dining someplace that does not have portion control serving utensils, be better able to visually measure an appropriate serving size. (e.g. at a restaurant which serves oversize portions, eat only a serving size and take the rest home for another meal.) The user of portion control serving utensils will be transformed from serving size challenged to serving size savvy.

The serving utensil whether a fork, spoon, slotted spoon, pasta fork, dessert server, ice cream scoop etc. has two detachable and removable segments. The first is a handle segment and the second is the actual utensil or tool segment. The tool segments are interchangeable with the handle segments. The handle segment has a measuring device that measures the amount of food on the tool segment. The handle segment also contains a display device that displays when a serving size has been obtained on the tool segment. The display device can also indicate if more or less food is needed to achieve a standard serving size. The user can add or remove food as needed to obtain the standard serving size. The user is given this important information easily and discreetly. Use of the measuring mechanism is optional, so that those who did not wish to measure their serving sizes can simply use the serving utensil in its traditional manner.

The cook, host or actual user (hereinafter collectively referred to as the preparer) selects the food menu. For example, if "Kraft Macaroni and Cheese" were selected, the preparer selects a handle and the appropriate serving tool (i.e. spoon). The preparer attaches the spoon into the handle segment and presets the handle display to indicate a serving size of 2.5 ounces (the serving size found on the Nutritional Facts Panel on the package). The 2.5 oz. is the serving size listed on the Nutritional Facts Panel for a 2000 calorie diet. The macaroni and cheese is served by placing it on the tool and measuring it. If it is more or less than one serving size (2.5 oz.) then food is added or removed from the tool until one serving size is achieved. The serving size is then placed on the plate and becomes a portion. If a Homestyle Bakes from Banquet is selected (e.g. Country Chicken, Mashed Potatoes and Biscuits) then the preparer again selects the appropriate tool (a spoon or a spatula) and connects it to the handle. The serving size is obtained from the Nutritional Facts Panel (e.g. 116 g for a 2,000 calorie diet). The handle is preset by the preparer to display when a serving size (116 g) is achieved. The user places the food on the tool, measures it and adjusts the amount of food until the serving size of 116 g is achieved. This amount is placed on the plate and becomes the portion.

In each instance the user is told when one serving size is on the utensil and that is the portion placed on the user's plate. The user after eating one serving is less likely to go back for additional portions if weight management is their goal. For those not desiring to use the measuring mechanism, they simply use the serving utensil in its traditional manner without engaging the measuring and display apparatus.

The decorative cover (which is removable and washable) option allows the preparer to incorporate the serving utensils into the meals decorative theme. (E.g. for the Fourth of July, flags; for Thanksgiving, pilgrims; etc.) The decorative covers are designed so that they do not interfere with the serving size measurement mechanism or display. Another option for the decorative covers includes a treatment (e.g. chemically or by ultraviolet light) which would prohibit the cross-contamination through the transfer of germs or bacteria between different users of the serving utensils.

These modifications to the traditional serving utensil provides millions of dieters a new hands-on tool to assist them in their struggle to lose, control, or maintain their weight. The application of this invention could be utilized in commercial settings such as schools, hospitals, cafeterias, restaurants, or in any place food is sold and consumed. The use of this invention promotes measuring of serving sizes, so that users will not have to measure excess weight.

An additional benefit of this invention is that it does not create increased risks or side effects to the user.

7/25/2004

PORTION CONTROL SERVING UTENSILS

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This invention increases the utility and functions of the traditional serving utensils. Traditionally, the serving utensils sole purpose has been to transfer food from a serving container to the plate for consumption. Now, the serving utensils are a tool to assist in weight management. The serving utensil with a decorative cover option can also be a part of the decorative theme of the meal, much the same as centerpieces, napkins, napkin holders, etc. Finally, the serving utensils with treated decorative covers can prevent cross-contamination of bacteria and germs between different users.

  
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[Home](#)

[Attachments](#)

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### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of a serving utensil device according to one embodiment of the present invention.

FIG. 2 illustrates various serving utensils that may be used with the serving  
5 utensil device of FIG. 1.

FIG. 3 illustrates various handle covers that may be used with the serving utensil device of FIG. 1.

FIG. 4 is a top plan view of the handle mechanism of the serving utensil device of  
FIG. 1.

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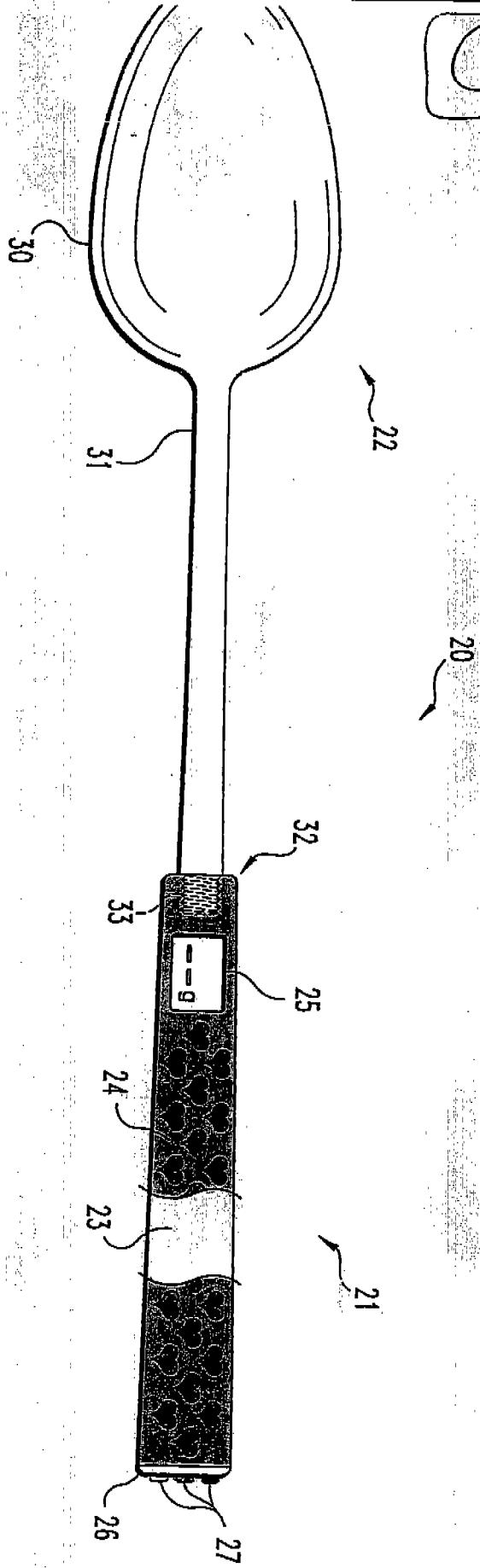
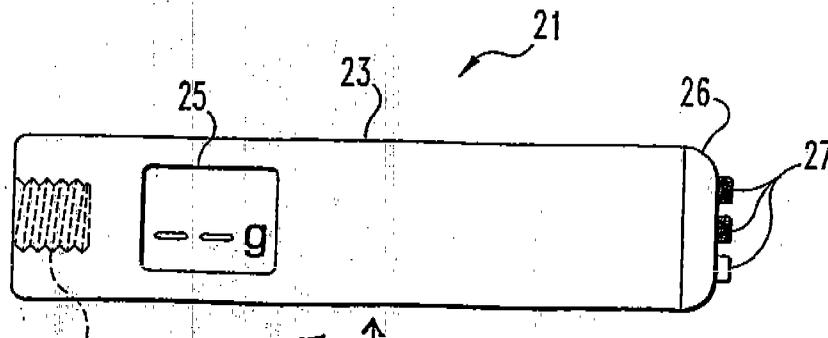
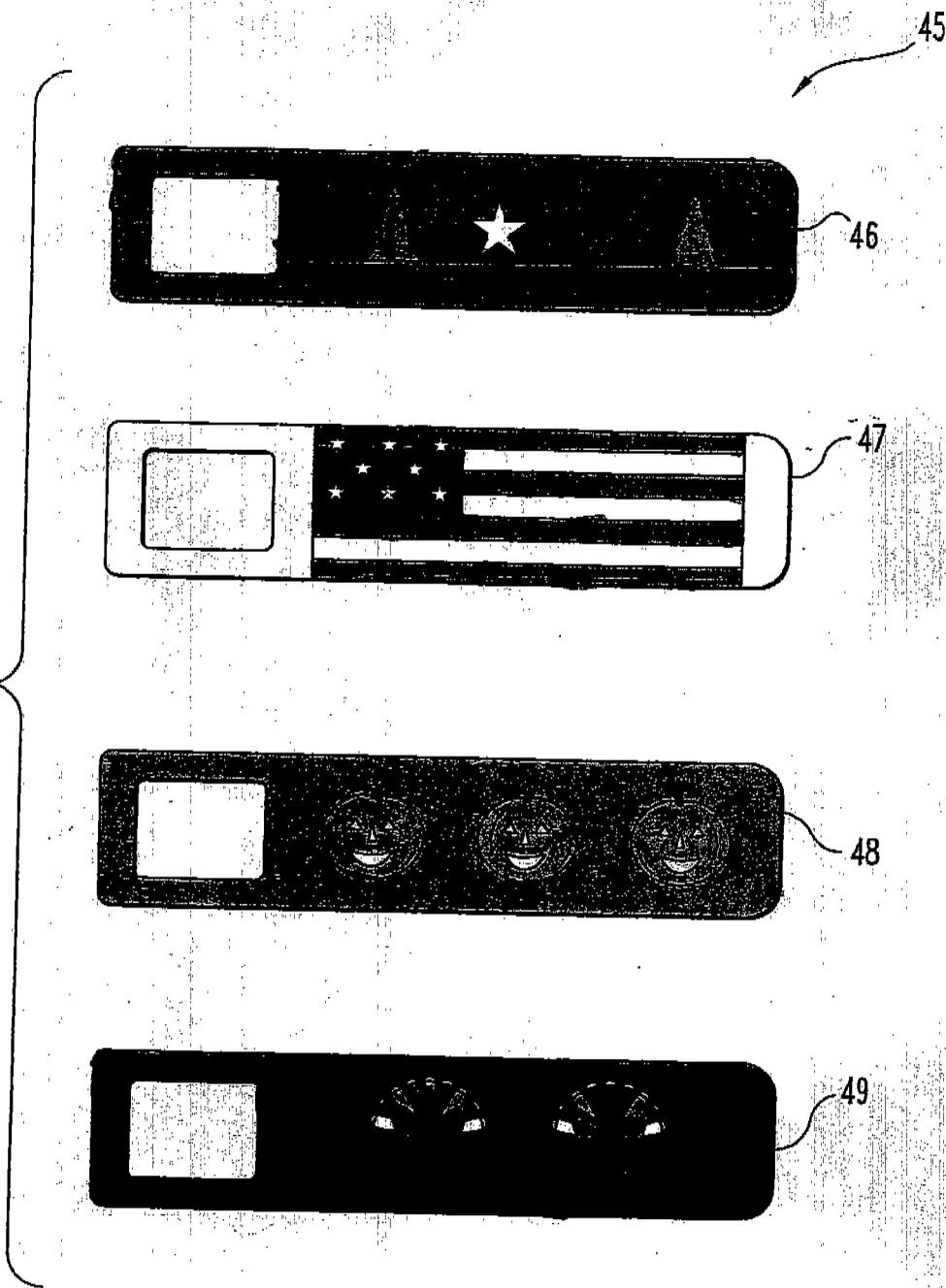


Fig. 1



Case 80F8

Fig. 3



US 8,000,000 B2

AUG 25 2004

joyce smith

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Graft 1 of 3

From: "Gideon Graft" <  
 To: "sproutrafood" <  
 Sent: Tuesday, August 24, 2004 9:51 AM  
 Subject: [Sprout] Proposals for the New Food Guide Pyramid - please forward

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

From: Jackie Graft

Roswell, GA  
 Ph:  
 Email:  
 Web:

By Jackie Graft, R.N., B.S.N.

The present food pyramid along with high powered advertising are part of the reason we are the fattest and most unhealthy we have ever been in this country. Immigrants from other countries who adopt our way of eating become overweight and get many diseases not common in their countries. The change is long overdue. People are getting diseases in their youth that they used to get as they aged. I see this in my work as a nurse.

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This change in the food pyramid should not be influenced by any special interest food groups. It should be based on how we should eat to get the

8/24/2004

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most nutrition out of our food choices. Our most nutritious foods are whole fruits, vegetables, nuts and seeds that do not come in packages. These contain a large amount of antioxidants, phytonutrients, omega 3 fatty acids, vitamins and minerals. These nutrients and antioxidants are protection for plants and will also protect us from chronic disease.

The nutrients we need to get from our food cannot successfully be obtained from a pill. The nutrients we get from food work synergistically with each other. To get enough of these nutrients we need to be eating a lot of fruits and vegetables.

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The base should be the maintenance of energy, having an exercise program and controlling calories and weight.

The next level should be a variety of organic healthy whole carbohydrates such as fruit and vegetables having color: green, yellow, orange, red, blue, purple, with a large portion of this uncooked to preserve the nutrients.

The next level should be whole grains and starchy vegetables.

The next level should be legumes, beans, peas, sprouted nuts and seeds.

The next level should be limited amounts of fats from fruits, vegetable, nut and seed sources. With no more than 20-30% of our calories coming from these healthy fats.

6. A strong notation should be made on the pyramid of foods that should be eaten rarely and eventually eliminated completely from the diet. These should be: salt (no more than 1000 mg /day or less), sugar, high fructose corn syrup, and other processed sugars, refined grains, trans-fatty acids, and saturated fat (all animal products have saturated fat). All of these foods need to be eliminated completely from the diet, not cut in half as proposed by the USDA.

7. What professional in the health and nutrition field is telling us that we are deficient in saturated fat, sugar, refined grains, or trans-fats and need to get them into our diet? These foods cause inflammation and can lead to many of the chronic diseases that plague our society. If these unhealthy foods are eaten then there would not be enough calories left for the fruits and vegetables containing a large amount of antioxidants, phytonutrients, vitamins and minerals which can keep the body healthy.

8. If enough of the levels two through five are eaten to maintain energy and a healthy weight there will be more than adequate protein, folate, calcium, omega 3 fatty acids, and other nutrients in the diet. (refer to the WHO's recommendations for protein needs). Animal protein and fat are not necessary for a healthy diet.

Groff 3 of 3

9. A plant based vegan diet with a healthy variety of uncooked fruit, vegetable, nuts, and seeds is the healthiest way to eat.

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AUG 26 2004

August 24, 2004

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

Crimi

1 of 1

To Whom It May Concern:

I am interested in people being encouraged to eat mostly vegetables and non-sweet fruits (such as tomato, cucumber, avocado, and squashes). Most preferable would be those that have deep coloration, such as purple, red, dark green, orange and yellow. Sea vegetables (seaweed) would be mentioned as an option..

Next in consumption would be other fruits, especially those with a low glycemic index, such as berries and whole grapefruits. Whole apples and citrus would also be good choices. And, of course, fruits with deep coloration, such as the berries, are preferred.

Next would be nuts and seeds, encouraging a wide variety.

Last would be a little bit of beans, corn, and other grains/legumes (not recommended in quantity).

Removed from the chart (not recommended) would be common irritants and allergens, as well as highly pathogenic foods, including animal products such as meat, fish and dairy, wheat flour, processed sugars and syrups (such as corn syrup and cane sugar), processed soy products, etc.

Thanks for asking!  
Celeste Crimi

Beaverton OR

# IDA

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AUG 26 2004

*Iowa Dietetic Association*

YOUR LINK TO NUTRITION & HEALTH<sup>SM</sup>

*Litchfield / OFS*

8/23/04

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

Dear Committee:

I would like to make the following comments regarding revisions to the Food Guide Pyramid on behalf of the Iowa Dietetic Association.

*Advantages and disadvantages of retaining current shape for graphic and other potential shapes to use as a representative of the overall Food Guidance System.*

Maintaining the current graphic is critical to prevent consumer confusion and build on the fact that 80% of Americans recognize the Food Guide Pyramid. The pyramid graphic correctly depicts the recommended diet composition for healthy, adult Americans. The Food Guidance System was not designed to prevent nor treat specific diseases and cannot do so without becoming overly complex and cumbersome. In doing so, a large segment of the population would become confused and ignore the Food Guidance System entirely.

While graphic recognition is high at 80%, understanding and use of the current Food Guide Pyramid is limited. The single most important lack of understanding is that of appropriate portions or serving sizes. The current Food Guide Pyramid does not address portion sizes adequately. The graphic refers to number of servings; however, the consumer is required to search for additional information to determine what is considered a serving. In addition, the Food Guide Pyramid does not graphically represent individual servings – whole foods such as a loaf of bread, bunch of grapes, and whole turkey DO NOT depict appropriate servings. Why not graphically depict single serving sizes within the graphic and the appropriate number of servings recommended? For example, in the bread, cereal, rice and pasta group graphically depict 6-11 individual servings of bread, cereal, rice or pasta.

The graphic needs to place more emphasis on the lower caloric levels – most consumers do not achieve moderate activity levels to support higher caloric intake. In light of the overweight/obesity epidemic it would seem prudent to omit high fat, high calories foods from the Food Guide Pyramid graphic (i.e. cakes, pies, donuts, etc...). In addition, these foods should be moved from the bread, cereal, rice and pasta group to the fats, oils and sweets. Greater emphasis on whole grains needs to be clearly indicated by the graphics.

Litzkyfeld 2 of 3

for this food group as well as the list of foods included in the group and any supporting materials

The nutrient needs of older adults are much higher than for most other groups. Additional support materials to work with this population are needed, particularly in light of the exponential growth in this age group. Research demonstrates that older adults probably have around 100 extra calories above and beyond what is needed to meet their nutrient needs. Meal patterns and sample menus would help communicate what they need to eat in a day to meet the recommendations. For older adults, the graphics will need to include a multivitamin and mineral supplement.

*Usefulness of the proposed strategies to highlight both motivational/awareness and educational messages.*

A graphic symbol with a slogan would be helpful to achieve brand name recognition for the Food Guidance System. Careful analysis of successful marketing campaigns used by industry and business entities could help identify key marketing strategies. Similar strategies and tactics should be employed for nutrition and health messages. The graphic should continue to depict easily identified general food guidance, do not separate the graphic from the educational message.

*Advantages and disadvantages of the plan to individualize guidance in contrast to generalized messages.*

Providing individualized recommendations is problematic. This would require the development of lengthy, complex materials, which can be difficult if not impossible for consumers to discern. Support materials should include sample menu patterns and menus. Individualized recommendations are not appropriate, and not the intent of the Food Guidance System. For individual concerns, consumers should be seeking out a Registered Dietitian.

*Advantages and disadvantages of the planned focus on core messages in contrast to use of a graphic to represent educational messages.*

The Food Guidance System should provide the guidance on recommended diet composition within graphic representation. The ability to convey a concept in an easy-to-interpret and easy-to-understand graphic is important to a successful educational message. The additional issues and messages that have been proposed for incorporation into the Food Guidance System tend to apply to specific, discrete audiences, and not the general public. These are the messages should be addressed in supporting materials and individually by a Registered Dietitian. A learning opportunity and teachable moment is lost by not tying a basic nutrition message with the Food Guidance System graphic. The basic nutrition message depicted in the Food Guidance System should complement the Dietary Guidelines. For example, with the current Dietary Guidelines the messages would be: 1. Aim for Fitness, 2. Build a Healthy Base, and 3. Choose Sensibly.

*Key components for effective interactive educational tools.*

Key to any successful learning is the engagement/interaction of the learner with the material. The Interactive Healthy Eating Index and the Interactive Physical Activity Tool

Litchfield 3 of 3

are appropriate for basic nutrition and physical activity messages. Interactive support materials should emphasize the level of physical activity and the meal pattern that could be eaten at that level of activity. The emphasis could be on increasing physical activity to be able to eat more and maintain a healthy weight. Although the messages may be more specific with respect to disease prevention than the Food Guidance System graphic, they will not be able to include complex medical conditions that some individuals may be experiencing.

However, providing individual guidance through a mass media channel such as CD ROM or World Wide Web is problematic from the standpoint of having complete and correct information upon which to base the individual guidance. There is also the element of liability to consider. Can a program delivered to the general public through these media possibly include every potential individual nuance that may impact nutrition recommendations? Providing individualized recommendations and personalized diets using CD ROM or World Wide Web technology is much like practicing medicine without seeing the patient.

*Channels of delivery for the Food Guidance System.*

The most efficient and effective ways to reach consumers will be a combination of print and internet-based materials. Although there has been an explosion of technology and internet-based information dissemination, segments of the population do not have access to this form of media. It is important, if not critical, to provide no- or low-cost print materials for agencies and professionals working with these populations. A careful assessment of accessing these populations needs to be done to evaluate appropriate channels to deliver the messages. With the advent of EBT cards and extended periods of enrollment for programs such as WIC and Food Stamps, other channels of contact must be found. Channels that might reach the target audience include grocery stores, gas/convenience stores, mass transit and television. A primary channel appears to be television and regardless of the expense is an important option to consider.

Sincerely,



Ruth E. Litchfield, PhD, RD, LD  
President, Iowa Dietetic Association

CC: Grassley, Harkin

AUG 26 2004

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Suvarna Ghaisas,

Lowell, MA

Phone:

Email:

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

Ghaisas / 1 of 2

August 23, 2004

Food Guide Pyramid Reassessment Team:

Hi, My name is Suvarna Ghaisas from Lowell Massachusetts; I would like to thank the *Food Guide Pyramid Reassessment Team* for giving the chance to provide opinion in revising on the Food Pyramid.

There are many diets coming in the food and nutrition market that often confuses many people. To choose a diet/Food that will blend easily with their current life style and help them loose weight or get fit is a challenge.

So I think, Food Pyramid should be designed in a way that

1. It should be simple and easy to follow.
2. It should be effective to people of all ages.
3. Including ethnic food would be a good option to consider.
4. It would be good, if food pyramid were based on the servings along with the food items.

Slogans:

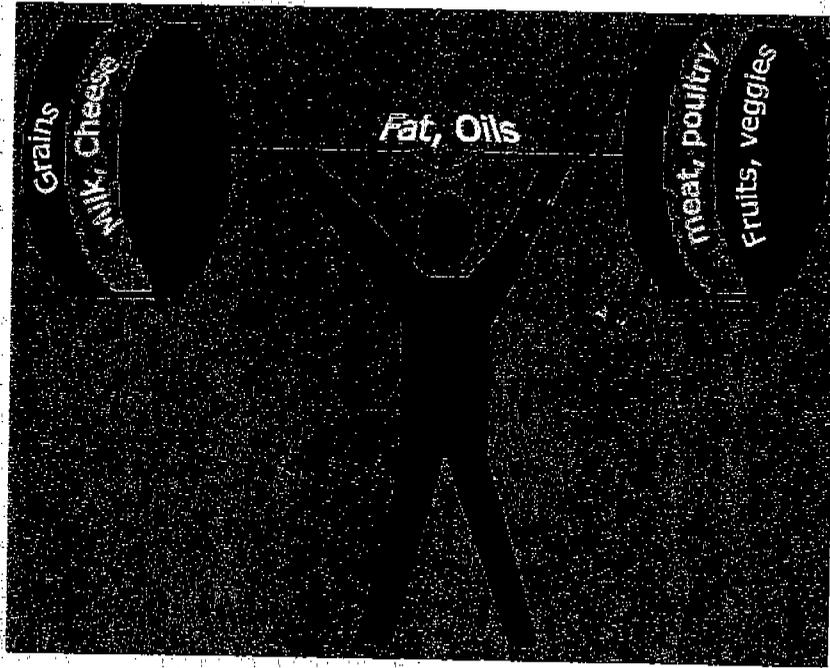
1. Good Food, Good Health  
Balanced Food, Better Life.
2. Balanced food is **ON THE WAY.**

Thank you for your consideration,  
Sincerely,



Suvarna Ghaisas

# Ghaisas Part 2



AUG 26 2004

~~22~~

Julie Swanson

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Dayton, OH  
August 22, 2004

Swanson 1 of 1

To Whom It May Concern:

My name is Julie Swanson and I'm writing to share my thoughts on the USDA Food Guide Pyramid.

I have high blood pressure and I was Insulin Resistant. On a diet which limited carbohydrates such as white flour, white sugar, potatoes, white rice and concentrating on whole foods such as vegetables, berries, whole grains, good oils like olive and canola and good sources of protein, I have lost weight and have my blood pressure under control. My husband was borderline diabetic and has improved his cholesterol count by eating the same diet.

I have many family members who have weight problems and need to loose weight but they look to the Governments Food Pyramid for guidance. Please consider changing the pyramid to reflect a more defined grouping for whole grains, good oils, vegetables and proteins.

Please take these comments into consideration as you re-evaluate and redesign the Food Guide Pyramid.

Sincerely,

*Julie C Swanson*

Julie C. Swanson

AUG 26 2004

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Mckinney

1 of 1

8/18/04

Food Guide Pyramid reassessment team  
USDA center for nutrition policy and promotion  
3101 Park Center Drive, room 1034  
Alexandria, VA 22302

To whom it may concern,

My name is Geji Mckinney and I am writing to share my thoughts on the US Food Guide Pyramid. As an African American I feel that the pyramid does not necessarily reflect our diets concerning our health needs. African Americans have different dietary habits than Caucasians do. As a society our culture has a lot to do with our food habits and customs. This is true of almost every culture in America including African American culture. African Americans are one of the largest cultural groups in the United States composed of about 30 million people. This is more than 12% of the total population in America. Millions of people suffer from lactose intolerance including myself. It is more common in African Americans. This results in lower intake of dairy foods in the diet. Millions of Americans are not aware of how important exercise is to their health or how much water they should be consuming daily. The Food Guide Pyramid should reflect these things. Times have changed greatly since the last time the Food Guide Pyramid was updated. The United States of America is made up of different people of different heritage, background, and culture. It is a new millennium and it's time for a change.

Sincerely,

Geji Mckinney

Eagan, MN

Kostas / of 3

AUG 26 2004

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

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August 20, 2004

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. 22 pyramid options seem too complicated for health professionals and consumers. Instead, 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!
8. Keep the proposed sugar goals of 6 - 13 % of calories, but tell the public 5-10% of daily calories (to make memorable).

Kostas JAF3

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*

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

KOSTAS | SUK

# BALANCE YOUR DIET

Meal visuals - as on a plate

LEAN PROTEIN (10-30% of calories)	COMPLEX CARBOHYDRATES (45-65% of calories)	HEALTHY FATS (20-35% of calories)	EXTRAS
<ul style="list-style-type: none"> <li>○ 4-8 oz. lean meat, poultry, fish daily</li> <li>○ Eat fish 2-5 times a week</li> <li>○ No more than 12 oz. of lean red meat/week (filet, sirloin, flank, etc.)</li> <li>○ 2-4 cups of fat-free/low-fat milk, yogurt, or 2 oz. cheese daily</li> <li>○ Beans and legumes 4 times a week</li> </ul>	<ul style="list-style-type: none"> <li>○ 5-10 fruits &amp; vegetables daily (2-3 large fruits + 2 cups veg.)</li> <li>○ 3+ wholegrain foods daily (100% whole wheat bread, oatmeal, brown rice)</li> <li>○ Leafy green vegetables daily</li> <li>○ Colorful produce daily</li> </ul>	<ul style="list-style-type: none"> <li>○ 1-4 Tbsp. healthy fats daily:               <ul style="list-style-type: none"> <li>○ Olive and/or canola oil</li> <li>○ Soft tub, squeeze or trans-free margarines</li> <li>○ Oil-based dressings</li> <li>○ Nuts, seeds or nut butters</li> <li>○ Benecol or Take Control spreads (regular or light)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ Limit sodium: (2400-4000 mg./day)</li> <li>○ Limit sugar and sweets: (1-3 desserts weekly)</li> <li>○ Limit alcohol: Men: 0-2 drinks/day Women: 0-1 drink /day</li> <li>○ Limit caffeine: (0-2 cups coffee/day)</li> </ul>

oz. = ounce, mg. = milligrams

## TO MAINTAIN OPTIMAL WEIGHT AND HEALTH:

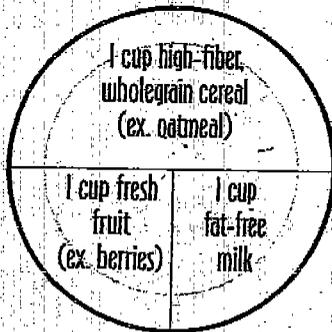
- 1 Maximize nutrient variety/color...select 25+ different foods daily and 3+ colors at every meal.
- 1 Choose fresh, wholesome and unprocessed foods.
- 1 Establish consistent eating habits. Consume 3 meals and 1-2 healthy snacks daily. Avoid skipping meals.
- 1 Include protein, complex carbohydrates and healthy fats at each meal to maximize energy and regulate appetite.
- 1 Emphasize fruits, vegetables, wholegrains, lean proteins, and low-fat or fat-free dairy products daily.
- 1 Consume sweets and alcohol in moderation.
- 1 Match calorie intake with calorie needs daily to maintain a healthy weight.
- 1 Adjust calorie intake and expenditure to lose weight.
- 1 Enjoy your meals and eat slowly in a relaxed environment.
- 1 Exercise aerobically 5 times per week (30-45 min.) and strength train 2-3 days per week (20-30 min.)

CALORIES Food + Exercise	CALORIES Saved Daily	CALORIES Saved Weekly	LOSE Weekly
↓250 + ↑250	= 500	= 3500	= 1 pound
↓750 + ↑250	= 1000	= 7000	= 2 pounds

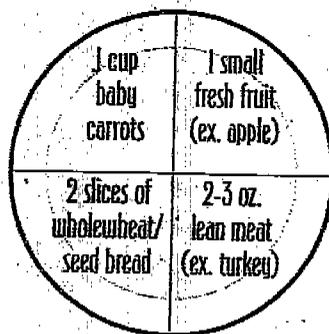
## SAMPLE HEALTHY MEALS

(Include 1-4 Tbsp. of healthy fats daily)

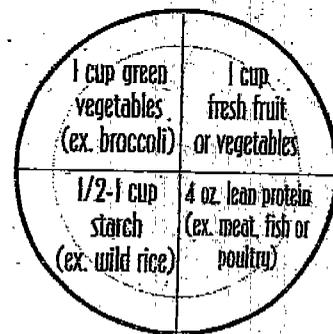
### BREAKFAST



### LUNCH



### DINNER



For information or to schedule an appointment with a Cooper Clinic nutritionist, please call 972.560.2655.

If you live outside of Dallas and need a nutritionist, contact the following:

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Pappas / AUG 26 2004

115 Old Meadow Road  
Dracut, MA 01826  
August 23, 2004

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

To Whom It May Concern:

Kudos to you for trying to get the country to eat healthier. It is normal for people to gain weight as they age, but what will happen to young people who are already obese as they age? It really is getting worse and something has to change.

People today do not take responsibility for their own actions, whether it is tripping on something in the street, drunk driving, and even poor eating habits. It's always someone else's fault: the town's for leaving a hole in the sidewalk; the pub owner's for serving alcohol; and even fast food restaurants for serving high fat food! It's time people see that it is their own actions - their own food choices - that affect how they look and feel.

I have an idea for a campaign that might help people see that the choice is their's. For a print ad, my idea would have an overweight/obese person on the left with an inverted food chart superimposed over the body. On the right would be a realistically fit person with the normal food pyramid superimposed over that body. In between the two would be the word "OR" and under or above them would be "It's up to YOU!" or "The choice is your's". On the pyramids, instead of the names of the food groups, perhaps actual foods could be shown - healthy foods on the normal pyramid (like the one already on the USDA website) and unhealthy foods on the inverted pyramid.

Pappas JFJ

Other ads could feature a person playing tennis, golf, soccer or even skateboarding and the other could be a heavy person lounging on the couch or struggling to go up the stairs. This campaign would lend itself to television as well as print advertising and can target any segment of the audience depending on the people/actions depicted.

Good luck in your quest for a healthier America!

Sincerely,

*Diane Pappas*

Diane Pappas

AUG 26 2004

North Carolina Cooperative Extension Service

NC STATE UNIVERSITY

College of Agriculture and Life Sciences

244

SOX 10F2

Polk County Center

Columbus, NC

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

Dear Team Members:

I am a Family and Consumer Science Extension Agent in Polk County North Carolina. I am responsible for community education in nutrition and physical activity. Teaching the Food Guide Pyramid is a regular and frequent activity for me. I am dismayed at the continuing increase in obesity and obesity-related illnesses in my county and nationally. I do not blame this on the Food Guide Pyramid.

Despite our burgeoning obsession with low-carb diets, I still believe that if people would follow the Pyramid and become physically active, they would increase their health and well-being and have a normal weight. The problem is that people don't follow the guidelines: we continue to eat way too much of the wrong foods and do not exercise.

I would like to offer my thoughts on changing the Pyramid, given this time for open comments.

- Keep the Pyramid. It is so well-recognized, and so much educational activity has been guided by the Pyramid, that we need to keep it. It is so easy to see what foods to eat more of and what to eat less of. It's an excellent guideline for meal planning.
- Move Fruits and Vegetables to the bottom – foundation – of the Pyramid. These continue to be the food groups of which Americans fail to meet their daily requirement. Fruits and vegetables need more emphasis, especially since they are the best source of so many needed nutrients. People need to eat more and they need to visualize this on the Pyramid. Moving grains up to the second level, would keep them in an important spot, with the recommended servings, and help to deal with the low-carb press of attention.
- Include an emphasis on physical activity with the Pyramid graphics, like the Children's Pyramid. Activity and nutrition go hand-in-hand for health and diet, and should be shown that way.
- Make every effort to market the Pyramid as the cool and successful way to diet. I think children's cartoon characters, day-time talk shows, and sexy, well-known models and movie stars should be touting the Pyramid as their secret to weight control, good skin, anti-aging, good health, etc. - but especially for weight-control.

Sox | 2 of 2

- Emphasize portion control. This is, I think, the biggest (no pun intended) problem with our diets. If people ate 6-11 helpings of grains, in the sizes we have become accustomed to, of course they would gain weight. Make the correct serving sizes very visible on the pyramid; i.e. show what  $\frac{1}{2}$  cup looks like, rather than simply stating that  $\frac{1}{2}$  cup is the serving size.

Thank you for considering my suggestions. I have made these based on working with real people in my community, who, while dazzled and confused by countless big-money diet-marketing promises, continue to struggle with obesity in themselves and their children.

Sincerely,

Sandra K. Sox

Sandra K. Sox, Extension Agent  
Family and Consumer Sciences

(Flyer)

Matthew Flyer

AUG 26 2004

High Point, NC

✍

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1 of 2

August 24, 2004

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

Dear Sir or Madam:

My name is Matt Flyer and I'm writing to share my thoughts on the USDA Food Guide Pyramid. My comments are based on my experience controlling carbohydrates, which have helped me to regain control of my health and my weight.

I am one of the growing number of individuals who has struggled with my weight for most of my life. In my particular case, I have been significantly overweight since the age of eight. About a year ago, my wife and I both decided that we needed to do something about our weight, which had been steadily increasing over the years. We had been growing concerned about our weight and the impact it would have on our future health. Consequently, we tried controlling what we ate, reduced our fat intake and watched our portion size. Our waistlines, however, continued to increase.

About a year ago we realized that we needed to do something different about our condition and we decided to try the Atkins approach. At the start of our change, my weight was 275 lbs. at 5' 10" and my wife was about 230 lbs. at 5' 0". I am presently 32 years of age and my wife is 31. I personally was very concerned about my health as I have a biological uncle who was recently diagnosed with Diabetes and desperately wanted to avoid this fate. In the past nine months, my wife and I, while living a low carbohydrate approach have each lost about 40 lbs. Though we still have a ways to go, the change to our lives has been remarkable.

Since adopting a low carbohydrate approach to the way we eat, we have noticed a number things about the food we eat and the food that I previously considered normal according to what I had been taught about dietary guidelines. I have listed some of my insights below:

- ◆ The food industry, apparently has decided that it necessary to put sweeteners in almost everything. My experience with food label reading has taught me that high fructose corn syrup and or corn syrup are probably the most commonly ingested ingredients in the American diet. Apparently there is a strong misconception that everything must be made sweet in order to be palatable.
- ◆ In response to the low carbohydrate movement, the food industry has responded by creating a large number of products that are supposedly low carbohydrate. I believe that these products are largely questionable with regards to their impact on health. I would like to stress that our approach has focused on whole natural foods rather than synthetic substitutes. My concern is that without proper regulation and education that the food industry will derail the low carbohydrate approach the same way that did the low fat approach.
- ◆ After removing the processed and refined carbohydrates from our diet, our appetites naturally decreased and our portion sizes automatically became smaller. For the first time since I can remember, I felt satisfied with a normal amount of food. While some argue that the cause of weight loss is due to reduced calories and not to the reduced carbohydrates the reduction in carbohydrates has greatly facilitated the calorie reduction. This is compared to my experience with the low fat approach which generally fueled my appetite for more food.

◆ Overall, we are consuming far more vegetables, mostly green ones, than we were when our diet consisted mostly of carbohydrates. The vegetables of choice include broccoli, squash, beans, .

Flyer 2 of 2

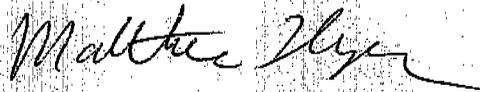
lettuce, cabbage, and mushrooms while potatoes and corn are largely avoided. We still consume fruits, though in moderation, and fruit juices are avoided due to their high sugar concentration.

- ◆ Another common food staple that we removed from our diet is refined white flour. Which we have found is also unfortunately included along with the corn syrup in most foods. I believe the inclusion of refined white flour and sugars into most foods to be the two biggest causes of our societies obesity epidemic.
- ◆ My reading and research has shown that not all fats are created equal. While I do not necessarily advocate a diet that is high in saturated fats, I believe that healthy fats and oils are required in our diets both to provide satiety and health. I feel that the low fat concept has done more harm than good as it I also believe that transfats such as margarine need to be avoided.
- ◆ I understand that there has been a lot of research into the biology of diet and metabolism in recent years and that this research has shed much light on the how and why the massive consumption of refined carbohydrates is causing health issues. While much of this information may not have been known when the dietary guidelines were last revised it should now be factored in.

While I do recognize that all individuals are different and have differing dietary needs, as a result of my experience, I believe that some fundamental changes are required to the way we as a society eat. I also believe that it isn't until the government adopts a new attitude and policy towards our societies health that real progress will be made. First, I believe that the amount of sugar and refined flour need to be drastically cut from our diets. Second our dietary focus needs to be on whole foods as opposed to processed substitutes. Third, the amount of sweeteners consumed, both natural and artificial needs to be dramatically reduced. I also believe that the food pyramid proposed by the Atkins center accurately represents these principles. I believe that the Food Guide Pyramid represents a model that is used by the government, individuals and the medical community in determining dietary recommendations for our society. Consequently, I believe that a dramatic change is required to the present Food Guide Pyramid. While changing the dietary guidelines will not cure the problem overnight, it will, however, help provide an impetus towards improving both the quality and quantity of food that we as society consume.

Please take these comments into consideration as you re-evaluate and redesign the Food Guide Pyramid.

Sincerely,

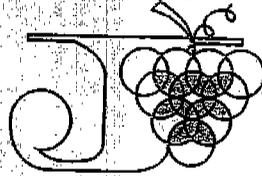


Matthew Flyer

Jasmine Vineyards, Inc.

AUG 26 2004

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Zaninovich 1 of 1

August 23, 2004

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

**Dear Team:**

**We strongly urge you keep the current "pyramid" shape with fruits and vegetables (only) at the bottom. Fruits and vegetables must have the most prominent graphic position in any representation because the science-based advice shows they should be the foundation of the diet and because they are underconsumed, and consumers need strong encouragement to meet this goal.**

**Yours truly,**

**Martin J. Zaninovich  
Chairman of the Board**

**MJZ:dc**

Ph

Fx

Delano, CA

email:

# American Institute for Cancer Research

Administrative Office

Washington, DC  
Telephone

AUG 26 2004

247

Prince 1 of 7

August 25, 2004

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

Dear Members of the Pyramid Reassessment Team:

This letter is responding to the July 2004 notice in the Federal Register re: USDA's solicitation of comments for revisions to the Food Guide Pyramid.

Our suggestion would represent a radical departure from the current, well-known Pyramid graphic, but one that has proven very successful for our organization: a plate.

In 1999, we at the American Institute for Cancer Research (AICR) were searching for a new way to present advice about healthy eating to the public. After much discussion, our experts felt that Americans simply do not think in terms of "servings per day," but instead tend to visualize the foods they eat over the course of a day as discrete meals.

At the heart of AICR's New American Plate is the admonition to "Start by taking a look at your plate." Thus, the New American Plate graphic shows – in a bold, pop-art style – what a healthy plate looks like.

It is a dynamic image that is deliberately simple to understand. Supplemental materials list recipes, discuss the importance of portion size, show how to make healthy substitutions, and provide general tips for making meals "that fit on the New American Plate." Brochures in the New American Plate series involve variations of this plate-focused graphic, tailored to different subjects like comfort foods, one-pot meals, breakfast foods, and vegetables.

We are enclosing five brochures and one poster that illustrate use of this image.

Prince JRF

We at AICR think it would possible to adapt such a meal-focused plate graphic to USDA's educational needs. We have enjoyed success with this approach, and believe it could aid in your distinguished efforts to improve American health.

Sincerely,

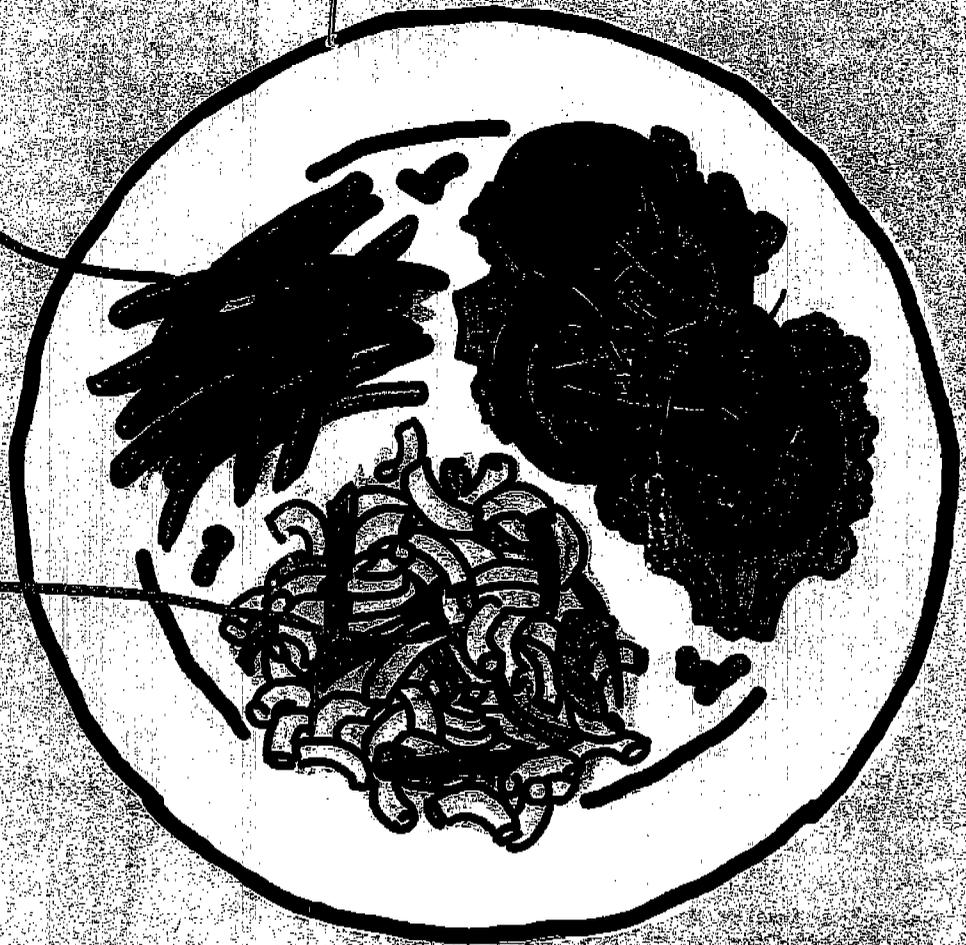
Jeff Prince

Jeffrey R. Prince,  
Vice President for Education,  
American Institute for Cancer Research

# Prince 3 of 7

$\frac{2}{3}$  (or more)  
vegetables,  
fruits, whole  
grains and  
beans

$\frac{1}{3}$  (or less)  
animal  
protein

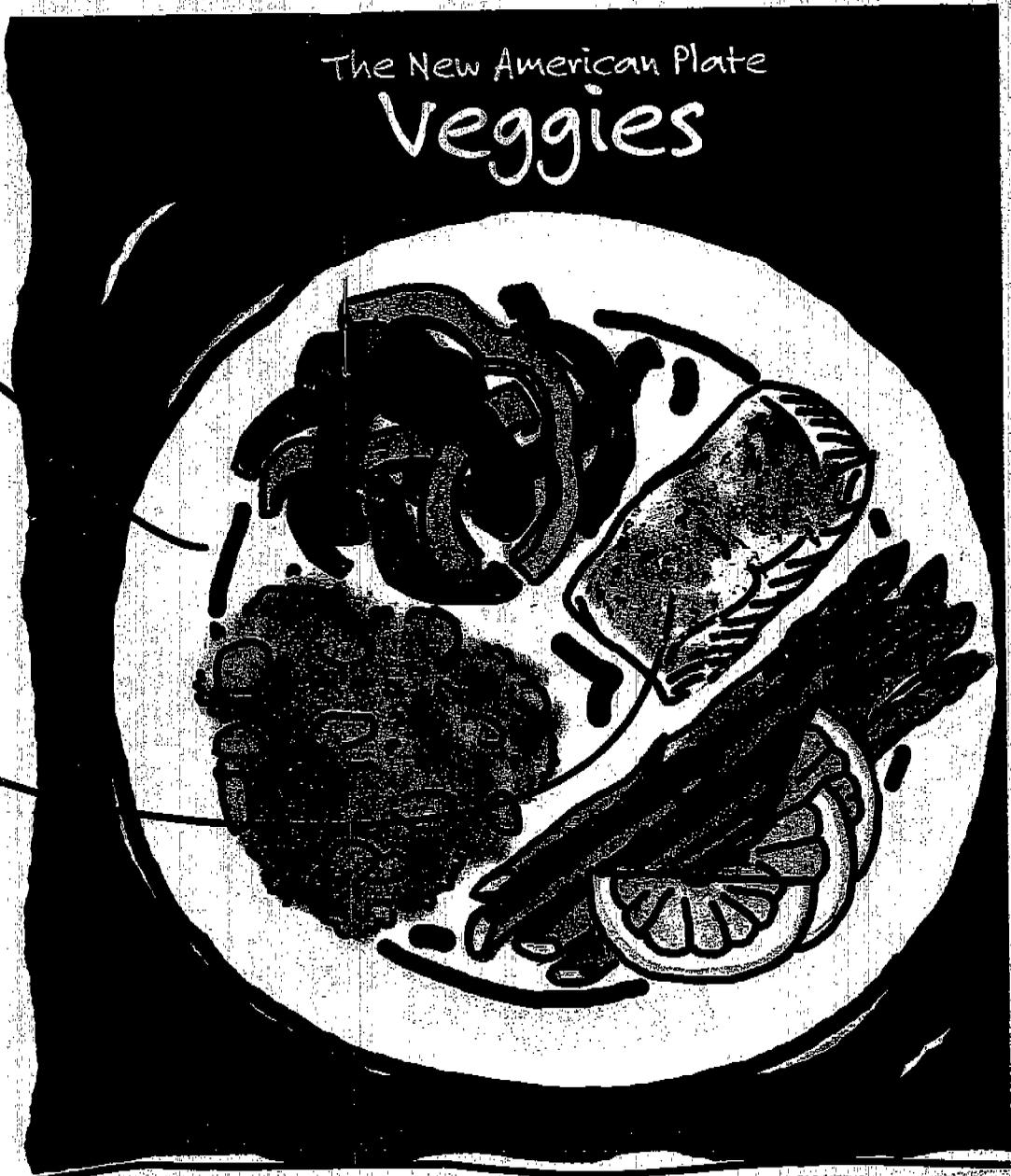


Start reshaping your diet by looking at your plate. Is the greater proportion of your meal plant-based? Are your portion sizes appropriate to your activity level? The recipes beginning on page 14 modify traditional comfort foods by adding health without sacrificing taste. Comfort foods can now have a place in a meal that is two-thirds vegetables, fruits, whole grains and beans and one-third fish, poultry, red meat or (in this case) cheese.

# The New American Plate Veggies

$\frac{2}{3}$  (or more)  
vegetables,  
fruits,  
whole grains  
and beans

$\frac{1}{3}$  (or less)  
animal  
protein

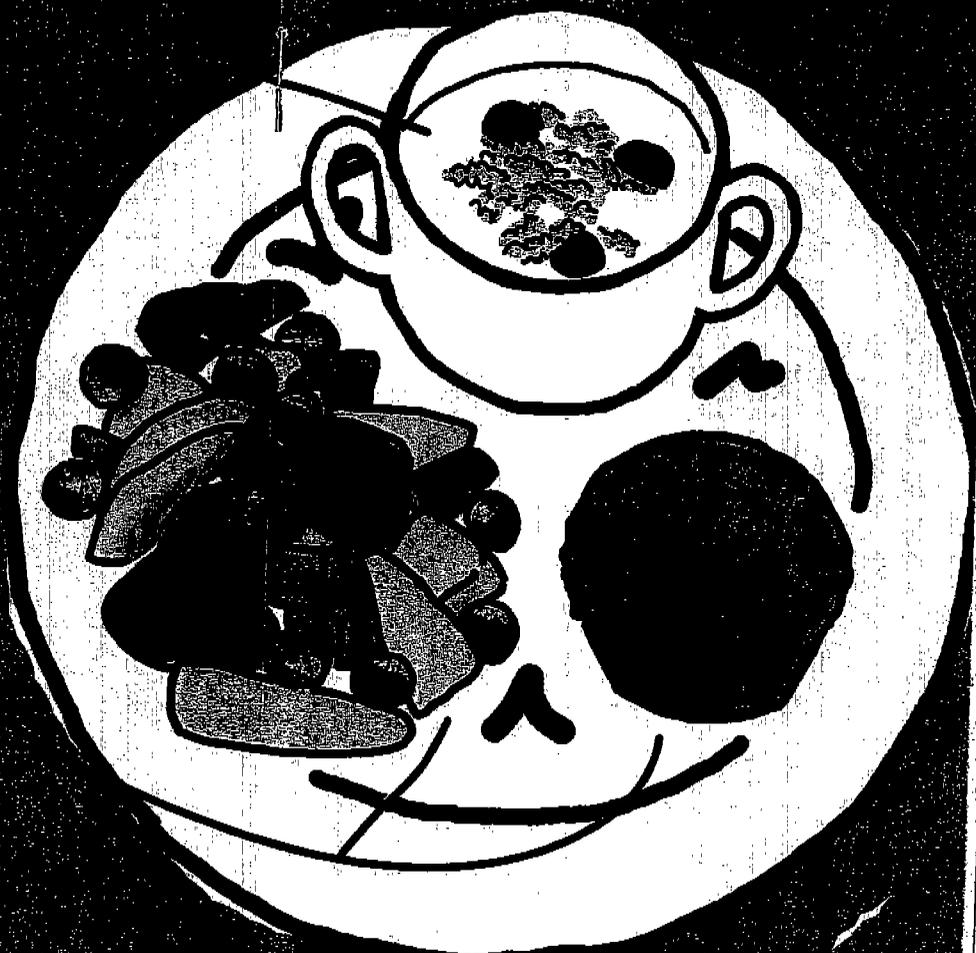


Start reshaping your diet by looking at your plate. Is the greater proportion of your meal plant-based? Are your portion sizes appropriate to your activity level? The vegetable recipes starting on page 20 offer great flavors with fewer calories. For a healthy weight and life, put lots of them on your plate and cut back on animal-based foods.

# The New American Plate for Breakfast

1/3 (or less)  
animal  
protein

2/3 (or more)  
vegetables,  
fruits,  
whole grains  
and beans



Start reshaping your breakfast by looking at your plate. Is the greater portion of your meal plant-based? (See page 5.) Are your portion sizes appropriate to your activity level? (See page 23.)

*This breakfast plate of yogurt, whole grain muffins and sliced fruit displays the right proportion of plant to animal foods.*



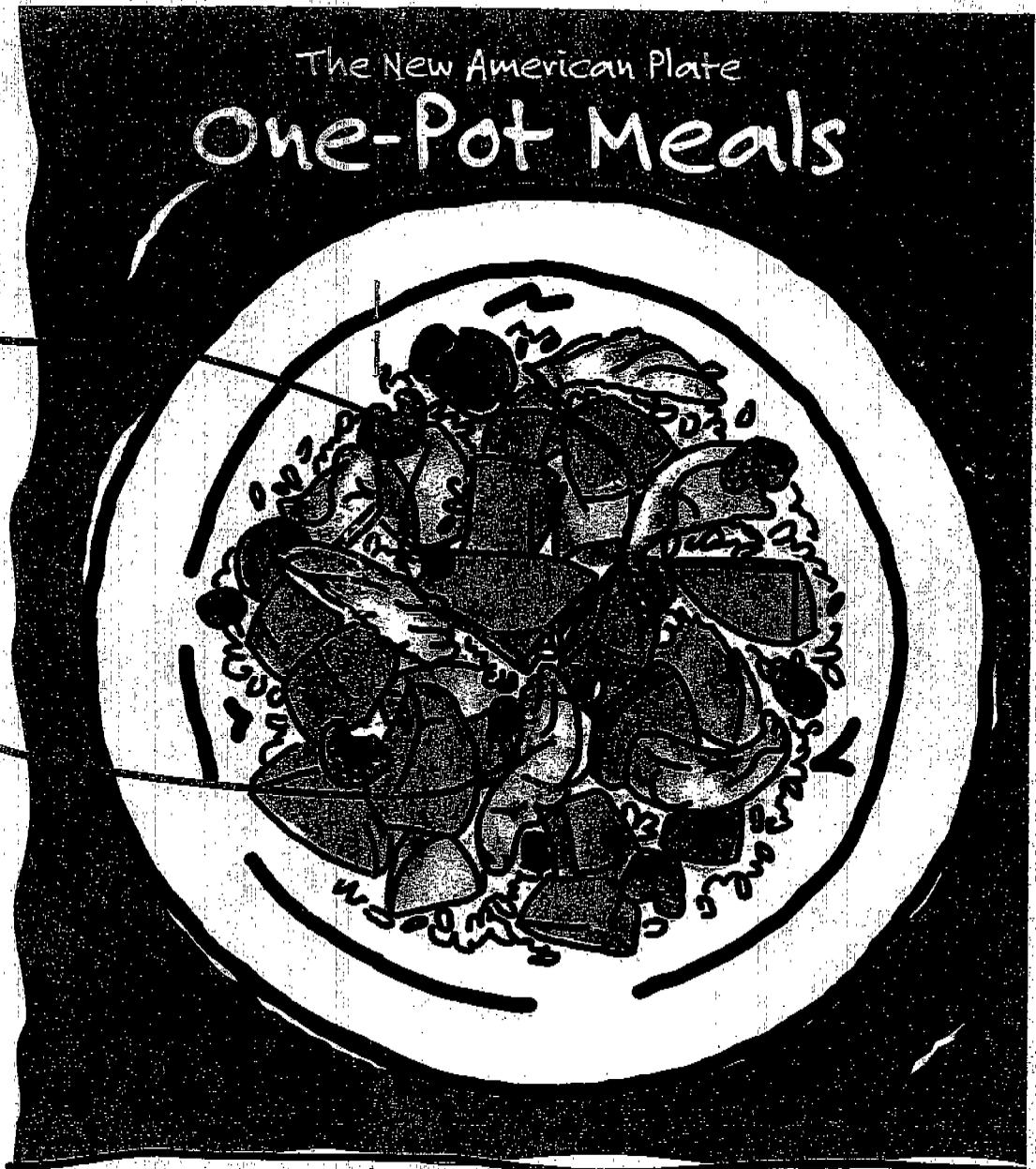
American  
Institute for  
Cancer  
Research

(Krinzel)

6 of 7

$\frac{2}{3}$  (or more)  
vegetables,  
fruits,  
whole grains  
and beans

$\frac{1}{3}$  (or less)  
animal  
protein



Start reshaping your diet by looking at your plate. Is the greater proportion of your meal plant-based? Are your portion sizes appropriate to your activity level? All the recipes beginning on page 12 are two-thirds plant-based and allow for more moderate portion sizes.

Princeton

7x7

$\frac{2}{3}$  (or more)  
vegetables,  
fruits,  
whole grains  
and beans

$\frac{1}{3}$  (or less)  
animal  
protein

# The New American Plate



Start reshaping your diet by looking at your plate. Is the greater proportion of your meal plant-based? (See page 5.) Are your portion sizes appropriate to your activity level? (See page 12.)



**Canned Food.**  
*The Easy Way to Eat Right.*

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August 25, 2004

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

To the Members of the Food Guide Pyramid Reassessment Team:

The Canned Food Alliance (CFA) applauds the commitment of the USDA Center for Nutrition Policy and Promotion to revise the Food Guidance System to make it more motivational for consumers. We also appreciate the opportunity to provide comments for your consideration. Given the nutrient density, availability, affordability and convenience of canned foods and the role they play in helping consumers to meet their dietary goals, we urge you to graphically represent canned products in the revised Food Guidance System for the following reasons.

The Canned Food Alliance is a consortium of steelmakers, can makers, select food processors and affiliate members that have joined together to promote the nutritional and convenience benefits of canned food. The primary mission of the CFA is to serve as a resource for information on the nutrition, convenience, contemporary appeal and versatility of canned food - more than 90 percent of which is packaged in recyclable steel cans. More than 1,500 food items are packaged in cans, ranging from tomatoes and peaches to beans and tuna. These foods, available year-round, can help people follow dietary guidelines and make food choices that contribute to the dietary recommended intakes for essential nutrients and fiber established by the Institutes of Medicine/Food and Nutrition Board.

Our goal for these comments is to highlight the need to keep canned foods top-of-mind as healthful, available and cost-efficient food choices for consumers to meet their dietary goals in the development of core messages and consumer educational tools. Our rationale is outlined below:

Nutrient Density

Most importantly, we think it is critical to stress that all forms of foods, including canned foods, be included in dietary guidance for healthful eating since canned foods have been shown to be nutritionally comparable to their fresh and frozen counterparts. Like their fresh and frozen counterparts, most canned foods are nutrient dense.

Since 1995, the Canned Food Alliance has been commissioning research studies to test the nutritional values (vitamins, minerals, fiber, etc.) of canned food alone to compare them with their fresh and frozen counterparts as ingredients and when prepared in a recipe. Studies are summarized below and the full studies are enclosed.

Fatzinger 2 of 36

The University of Illinois conducted the first two studies in 1995 and 1997. In 1995, the University of Illinois Department of Food Science and Human Nutrition did a comparative nutritional analysis of a number of canned, fresh and frozen vegetables and fruits. In 1997, an updated study provided information about 35 canned fruits, vegetables, legumes, poultry and fish, confirming that canned foods are comparable to, and sometimes better than, fresh and frozen varieties in their nutritional contribution to the American diet. The full study is enclosed.

The University of Massachusetts found that recipes using canned ingredients are similar in nutritional and sensory appeal to those made with their fresh or frozen counterparts. The research found similar nutrient profiles of dishes made from canned, cooked fresh and/or frozen ingredients. The study shows that the ingredients, not the form of the ingredients, determine a recipe's nutrient content; proper food handling is important. The research analyzed nutritional content of entire recipes, comparing such nutrients as protein, carbohydrates, vitamins and minerals. The study also conducted sensory analysis evaluating taste, appearance, flavor, aroma and texture of these dishes prepared with canned, cooked fresh and/or frozen ingredients. The full study is enclosed.

Critical Nutrition Needs

Canned foods offer consumers a convenient and affordable way to get critical nutrients for which many people are at risk, including fiber and potassium. Legumes, in particular, offer fiber-rich convenience. In addition, consumers do have a selection of nutrition-positioned varieties, including low-sodium and no-sugar-added products.

Affordable, Available and Convenient

In most cases, canned foods are more highly affordable than alternatives, like fresh fruits and vegetables, and the many varieties of fruits, vegetables and other products are available year-round. The low cost and wide availability can help to enable people to more easily get their total recommended amount of fruits and vegetables. Affordability, availability and convenience become critical considerations as the recommended intake of fresh fruits and vegetables increases to "five to 13" servings per day.

Safety

Canned food products are one of the safest forms of food. Canned products are heated and vacuum-sealed, destroying microorganisms that cause food borne illnesses, while locking in both flavor and nutrients in a recyclable steel can. Because the freshness of canned foods is sealed in naturally, no preservatives are necessary. The general rule of thumb is that canned foods have a shelf life for peak quality of at least two years, remaining safe for consumption after that, as long as the can's seal is intact and the can is not bulging.

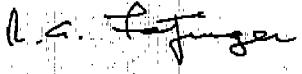
Shelf Stable

According to the Anderson Economic Group, during the August Blackout on the East coast in 2003, U.S. consumers and industry lost between \$350 million and \$1 billion in goods due to spoilage and waste – largely from perishable foods. These huge losses illustrate the importance of a well-stocked pantry and its role in nourishing the public for emergencies, and indeed, for every day.

Fatzinger 30436

We commend the USDA for their commitment of time and energy necessary to update and revise the current Food Guidance System. Consumers can make healthful food choices with canned products and we again urge you to depict canned products in the new Food Guidance System.

Sincerely,



Robert Fatzinger  
Executive Director  
Canned Food Alliance

Enclosures

*Fatzinger 4 of 6*

University of Illinois  
at Urbana-Champaign

Department of Food Science and Human Nutrition

Urbana, IL

College of Agricultural,  
Consumer and Environmental Sciences

Phone:

Fax:

E-mail:

**NUTRIENT CONSERVATION IN CANNED, FROZEN  
AND FRESH FOODS**

**Conducted by:**

**The University of Illinois  
Department of Food Science and Human Nutrition  
for the Steel Packaging Council**

**October 1997**

# NUTRIENT CONSERVATION IN CANNED, FROZEN AND FRESH FOODS

Fatzins  
5/06

## SUMMARY

Americans' food choices have changed in the last 20 years, reflecting health issues that have been reported in the media. While health professionals recommend an increase in the amount of fruits and vegetables eaten by all segments of the population, it appears these recommendations have not been acted upon by the American public. Nutritional labeling has made more information available to consumers, but provides no comparative basis for making choices. The safety of canned foods is unquestioned, but their nutritional value is underestimated by consumers and health professionals alike.

In 1995, the University of Illinois Department of Food Science and Human Nutrition did a comparative nutritional analysis of a number of canned, fresh and frozen vegetables and fruits that received a great deal of attention. We have updated that study and provided additional information that can be used for consumer education and to answer the questions posed by the media, as well as health professionals.

In this current study, we have provided information about 35 canned fruits, vegetables, legumes, poultry and fish. The nutrient listings have been expanded and now include folate and fiber values for all of the products, as well as thiamin for the legumes. Canned foods can provide substantial contributions of folate, an essential vitamin that is not included on the nutritional label, but is present in fruits and vegetables. Fiber, another essential nutrient provided by fruits and vegetables in the diet, is as high in canned products as in its fresh counterparts. **Our study confirms canned foods are comparable to, and sometimes better than, fresh and frozen varieties in their nutritional contribution to the American diet.**

Key findings contained in this study include:

- **Dietary Fiber** – Many fruits and vegetables are important sources of dietary fiber. The canning process does not affect fiber content, making them comparable to fresh and frozen varieties. In fact, the heating process appears to make the fiber more soluble and, therefore, more useful to the body.
- **Vitamin A** – Many canned fruits and vegetables are high in vitamin A. Since little of the vitamin is lost during the canning process, canned products have vitamin A levels similar to their fresh and frozen counterparts. In some cases, such as canned pumpkin, the vitamin A levels actually are higher.

(Fatzinger) 6/26

- **Carotenes** – Vitamin A is present in many fruits and vegetables as carotenes – antioxidants that provide protection for the body's cells. Tomatoes, in particular, contain an important carotenoid called lycopene, which appears to be effective in cancer prevention. Some analyses show lycopene is effective when consumed after it is heated or canned.
- **Folate** – Beans are an excellent source of folic acid, which recent studies indicate plays a critical role during pregnancy. Since folate holds up well during the canning process, making them similar to dried varieties that are cooked from scratch.
- **Vitamin C** – Apricots, asparagus, oranges, grapefruits, pineapple, strawberries, spinach and tomatoes are all significant sources of vitamin C. Although small amounts of the vitamin are lost during heat treatment, most of what is lost ends up in the liquid in which the product is packed. The vitamin C retained after canning remains stable during the one to two-year shelf life of the canned product.
- **Protein** – Canned poultry and fish – considered protein foods – are comparable to their fresh-cooked counterparts in nutritional value, since protein is not affected by heat treatment. This makes the canned varieties convenient alternatives to fresh-cooked, since they require much less preparation time.

Other advantages of canned foods are their convenience, as well as their safety. Knowing their nutritional value is as high as their fresh or frozen counterparts, we can use them with confidence either straight from the can or in recipes. We have provided five recipes for popular foods made with fresh or canned ingredients. The nutritional analyses for *Chili, Tomato Vegetable Soup, Spaghetti Sauce, Peach Cobbler* and *Pineapple Upside-Down Cake* show you can take advantage of canned foods' convenience and safety to make delicious and nutritious recipes quickly.

Barbara P. Klein, Ph.D.  
Professor of Food Science and Human Nutrition  
University of Illinois at Urbana-Champaign

Rhonda Kaletz, M.S.  
University of Illinois at Urbana-Champaign

August 25, 2004

249 Anderson  
TOPY

AUG 26 2004  
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Food Guide Pyramid Reassessment Team  
USDA Center for Nutrition Policy and Promotion  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22302

To Food Guide Pyramid Reassessment Team:

Thank you for the opportunity to provide comments on the "Proposal for Food Guide Graphic Presentation and Consumer Education Materials" provided in the Federal Register on July 13, 2004. The following comments are organized according to the questions posed in sections A through F under "VI. Topics of Particular Interest To CNPP for Comment" of the notice.

**A. Advantages and disadvantages of retaining current shape for graphic and other potential shapes to use as a representative of the overall Food Guidance System.**

A major advantage of retaining the pyramid shape is that it has been adopted and changed by numerous organizations and experts to essentially alter but build on its high level of recognition in relation to food guidance. Many in the food industry have adopted it primarily to promote the benefits of their products. A disadvantage of the current graphic is failure to get the message across that the ranges of servings depicted were meant to provide the foundation number of servings that apply to three levels of calories for specific groups of individuals based on age, sex and activity levels. Not only does the individual miss/misapply this information, but in some cases the food industry has used the ranges to promote the maximum number of daily servings to everyone.

Given the new emphasis on energy balance and healthy weight management, I propose a new graphic with a minimum of three pyramids of increasing size that cascade from smallest to largest (left to right, top to bottom, or even one inside the other). Each pyramid would provide the appropriate number of servings for a specific grouping to be decided finally by a caloric range based on numbers of servings and food choices. Above the cascading pyramids would be a beam of light which is intense in the center (spotlight) and grows dimmer toward the outside borders. The most intense beam of light would symbolize the foods with the richest sources of nutrients to make up a central/core/foundation dietary pattern, and the dimmer light the foods with less nutritional value that can be added to fill out energy needs (discretionary calories). The "spotlight" is on the whole grains, deep orange, yellow and green vegetables and fruits, legumes, lowfat animal products, healthier fat choices in both foods and oils, etc.

On page 42031 of the notice (B. Educational Components) it states "Daily Food Intake Patterns: CNPP proposes using the revised Daily Food Intake Patterns to identify appropriate food choices and amounts, based on age, sex, and activity level." Since these are the same three parameters used with the old graphic that have pretty much been ignored unless the reader is motivated to refer to adjunct information ("How many servings do you need each day?"), the new system

needs to motivate the reader to identify the pyramid that applies to them: They need to find the "starting point" pyramid (age, sex, activity level) and then have tools to create "My Pyramid" based on additional parameters.

The new system proposes to better assist individuals with energy balance and weight management. Individuals who look to the new graphic and food guidance system to find a food pattern that FITS THEM will need an additional parameter to zero in on an appropriate caloric level or range to meet their individual needs based on their own varying activity levels and changing weight goals. To develop an individualized daily food intake pattern, some element of BODY SIZE needs to be provided to assist after finding the appropriate pyramid based on age, sex and activity level. One idea for adults would be to take the table used to assist in locating BMI based on weight and height and create a similar table showing calorie ranges. The table could be designed to depict calorie ranges for male and female, weight management goals (gain, maintain, lose) and activity levels (sedentary, moderate and vigorous, or some such nomenclature to be decided by physical activity experts). Shading of cells of the table similar to and based on BMI cut-offs would be included.

USDA could best capitalize on the recognition the original Pyramid has attained by adding some stamp or logo to affirm that the "NEW and IMPROVED" graphic guide is the REAL THING, i.e., not one of the altered versions. In addition to the recognition it now has, there is consumer confusion about whether it has already been updated since several versions have gotten a lot of press. Having a web address (a very short one) under the graphic would be another way to get folks to the additional information you will be building.

**B. Usefulness of the proposed strategies to highlight both motivational/awareness and educational messages.**

Social marketing methodology with intended audiences should be undertaken to identify other strategies to better communicate the multiple consumer messages of the food guidance system. Team up with the Dietary Guidelines for Americans to assure harmony and linkage among efforts to disseminate messages in a targeted fashion.

**C. Advantages and disadvantages of the plan to individualize guidance in contrast to "generalized" messages.**

A major pro for attempting to provide individualized rather than general guidance is that motivated individuals will find the guidance more credible and useful. A major con is that it is difficult to motivate individuals to take all the steps necessary to get to the point where the guidance fits.

Appropriate general guidance messages have been a part of dietary guidance over time and should not be dropped unless the science changes. One appropriate message that needs to be added is that there is a lot of room within any daily food pattern for substitution. Messages that start with "consume" or "add" or "eat more" should be carefully reviewed to see if the terms "substitute," "exchange" or "replace" would be a better choice. Energy balance should be a guiding principle for messages.

**D. Advantages and disadvantages of the planned focus on core messages in contrast to use of a graphic to represent educational messages.**

The plan to brand a set of core messages is feasible. One key to the branding is how the brand is adopted and used by others. A service mark with legal clout needs to be established to discourage misuse of the brand.

Core messages should link directly to the Dietary Guidelines 2005 and hopefully be supported by updates of food labels. The graphic, if used as a branding logo, should be a mark of authenticity to be trusted.

**E. Key components for effective interactive educational tools.**

"MY PYR▲MID" could be the name of an interactive paper or web-based system that allows the individual to plug number of servings into appropriate cells of the pyramid. Guidance would be offered to assist the individual in reaching a starting point based on the existing (or upcoming new) age, sex and activity level guidelines, then allow them to make adjustments based on a series of questions that lead to decisions related to goals for weight (maintenance, gain or loss), special dietary considerations (vegan, other types of vegetarian diets, cultural/ethnic, intolerances (e.g., lactose), and significant individual variations in activity level at different times.

A professional version could be used to further adjust the "MY PYR▲MID" for allergies, special therapeutic diets, etc. An on-line version could do calculations and interact to reach the goals set by the individual or professional assistant to get to the answer. One individual could continue to make adjustments based on varying needs (big changes in activity levels such as marathon training; active vacation versus sedentary office life).

Adjunct guidance materials would be linked to foods that fit into each of the food groups aligned with similar foods based on energy density or nutrient density. These lists could be used for menu planning or food recall purposes when the individual wishes to plan or track intake over a period of time. The current Healthy Eating Index allows this, but it is labor intensive (three or four steps to enter each food item); it does allow saving over time of food records and spits out analyses in a variety of formats. The wonderful graphic output of the pyramid shape based on servings eaten that the HEI provides is good, but fails to provide feedback on sugar, fat (quantity and types), alcohol, sodium, fiber, etc. A new system should at least show the proportionality of the top of the pyramid (approximate calories alone would be helpful).

An effective personalized or interactive tool would have guidance and calculators WITH REFERENCE links for those who want to know the science or basis for the calculations. BMI, calorie range charts linked to the standard recommendations for age, sex and activity level, quick food pattern builders with drag and drop capabilities of reference foods, food lists for exchanges (e.g., starchy veggies, non-starchy veggies, juices of equivalent nutrient values with appropriate portion sizes or standard calorie groupings).

Any new interactive site needs to assist the user in looking at the top of the pyramid: sweets and fats, in more detail. Both the position and the caloric contribution of alcohol need to be accounted for as well.

Another element of an interactive system to assist in personalizing the diet would be assistance in developing a pattern such as a vegetarian (vegan, lacto-ovo, etc.) or lower fat or higher protein, always helping with calories, nutrient balance and meeting basic recommendations. Have a system that recognizes when the user leaves out an important nutrient and helps them recognize foods to get it (e.g., calcium, no milk products due to an intolerance, so what are other sources of calcium, and now that we got that right, do you have enough protein?).

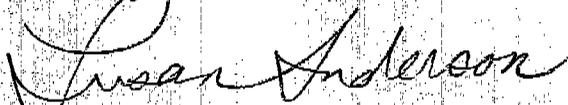
One caveat is that interactive tools and guidance are not a substitute for professional assistance for therapeutic needs. If your doctor makes specific recommendations for treating a medical condition, seek a referral for a registered dietitian or other medically trained health professional to get you started on the right track and answer your questions.

#### **F. Channels of delivery for the Food Guidance System.**

The social marketing approach would be best to identify the most efficient and effective ways to reach consumers. Which consumers do you want to reach and what are the best channels for each type? Research is also recommended to identify how to reach consumers without internet or traditional education channels. Advertisers and marketers usually find a way to assure awareness of, demand for and access to products for most segments of the population. For example, quick service restaurants will locate in a decaying urban neighborhood while supermarkets will not, making healthier alternatives less accessible and more expensive in the short term. Another example is that companies reach school children to create brand loyalty with product placement and gain dependence of the administrators on income from sales for school activities. Social marketing can assist in identifying methods for reaching consumers with targeted dietary guidance.

Again, thank you for the opportunity to provide comments on the proposed food guidance system.

Sincerely,



Susan Anderson, MS, RD

Decatur, GA

Chairman of the Board  
Stephen Barnard  
Mission Produce, Inc.



# Produce Marketing Association

• Newark, Delaware • USA  
• Newark, Delaware • USA

Chairman, Executive Committee  
Bruce Peterson, Jr.  
Wal-Mart Stores, Inc.

Address:



Phone:  
Fax:

Chairman-Elect  
Steve Junqueira  
Save Mart Supermarkets

250

Means 1 of 2

AUG 26 2004

Secretary/Treasurer  
Janet Erickson  
Del Taco, Inc.

August 25, 2004

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

Chairman, Retail  
Peter Goulet  
Hannaford Bros. Co.

Chairman, Foodservice  
Dave Murphy  
Yum! Brands, Inc.

Dear Reassessment Team,

President  
Bryan Silberman, CAE  
Produce Marketing  
Association

The Produce Marketing Association is pleased to offer comments on the new Food Guidance System, including updating the graphic representation of the guidance, currently the Food Guide Pyramid.

David Corsi  
Wegmans Food Markets

Steven Daum  
Floralife, Inc.

PMA is the largest global not-for-profit trade association representing companies that market fresh fruits and vegetables. Our 2,400 members range from grower-shippers and supermarket retailers, to hotel and restaurant chains and importers. Within the United States, our members handle more than 90% of fresh produce sold at the consumer level.

Bud Floyd  
Robinson Worldwide, Inc.

Gary Gionnette  
SUPERVALU, Inc.

Ken Green  
A&P Tea Company, Inc.

PMA's purpose is to sustain and enhance an environment that advances the marketing of fresh produce and related products and services. The association is funded primarily by members' dues, revenues from exhibits, product sales, and meeting registrations.

Reggie Griffin  
The Kroger Company

Gene Harris  
Denny's, Inc.

Danie Kieviet  
FreshWorld (Pty) Ltd.

We applaud the agency for this timely review of the graphic and communications options available to deliver much-needed dietary advice to U.S. consumers. With diet-related or diet-influenced illnesses on the rise and an obesity epidemic threatening public health and a proliferation of diet advice in bookstores and on the airwaves, consumers need science-based information they can trust delivered in motivational and actionable ways.

Stephen Martori  
Martori Farms

Wayne McKnight  
Sobeys Canada, Inc.

Joseph Nucci  
ann Packing Company, Inc.

Francisco Obregon  
Obregon and Associates, Inc.

## Graphic Presentation

The agency asked for comments on whether it should retain the pyramid shape and build on the existing visibility/equity or choose a new shape to attract more attention. As the agency noted, the pyramid is well-recognized and consumers grasp several of the messages it strives to deliver, so abandoning that type of equity should be undertaken with great caution. Striving to improve the pyramid so that it more simply and accurately delivers the desired messages would be a better use of resources than developing an entirely new image.

Michael O'Brien  
Schnuck Markets, Inc.

Larry Otto  
L&M Companies, Inc.

Patsy Ross  
Christopher Ranch, LLC

Bill Schuler  
Castellini Company

Rick Smith  
Safeway, Inc.

Bruce Taylor  
Taylor Farms California, Inc.

Mikel Weber  
Golden Corral Corporation

Means for J

Whatever graphic image the agency chooses to use, it is essential that fruits and vegetables have the strongest representation within the image. Currently, the strata of the Food Guide Pyramid are of equal height. To further reinforce the importance of the lower strata (fruits and vegetables and grains), the agency could make those strata deeper.

The Dietary Guidelines Advisory Committee is expected to recommend that Americans consume five to 13 servings of fruits and vegetables a day. In addition, the fruit and vegetable category in the pyramid is currently underconsumed (even at five to nine servings). Fruits and vegetables must be emphasized, even overemphasized, to convey their dietary importance to the public.

Because of this new recommendation, we believe fruits and vegetables should form the base of the pyramid as the foundation of a healthful diet. And, as recommended above, the fruit and vegetable base should be deeper than the strata above it.

The agency notes that within the *Core Messages and Framework* of the educational component, messages will be intended to result in behavioral changes that will balance calories in and out; promote nutrient-dense foods to increase the intake of vitamins, minerals, fiber and other key nutrients; lower chronic disease risks by lowering intake of saturated fats, trans fats, cholesterol, sodium, and other food components that are consumed in excessive amounts. Fruits and vegetables fit each of those. They are low in calories, with little sodium, no saturated fat, trans fat, or cholesterol, and they are full of vitamins, minerals, phytonutrients, and fiber. This educational component further underscores the need for a much stronger representation of fruits and vegetables on the graphic.

Delivering science-based, actionable dietary guidance to consumers is a challenge when society is barraged by over-communication, a new diet craze every few months, on-the-go eating, ever-increasing portion sizes, and intense marketing from food companies. Yet the former are the messages the public must hear if we are to make progress against obesity and many chronic diseases. The agency's plan to use the graphic, a slogan ("fruits and vegetables first" would be a good one), and educational tools and outreach are smart. Communications and behavioral science experts can better help the agency determine the best messaging and the most effective means of delivery.

In marketing, repetition is a key tactic. PMA is ready to assist in any way possible to deliver sound food guidance to the public. Please call on us at any time on this important public health and communications effort.

Sincerely,



Kathy Means, CAE  
Vice President of Government Relations

Ph:

Fx:

Email

AUG 26 2004

Beans   
For Health

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Partnering to fund research and to promote the health benefits of beans around the world.

August 24, 2004

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

RE: Notice of Proposal for Food Guide Graphic Presentation and Consumer Education Materials

To Whom It May Concern:

The Beans for Health Alliance (BHA) appreciates this opportunity to respond to the United States Department of Agriculture's (USDA) request for comments on the Food Guide Pyramid Presentation and accompanying Consumer Education Materials.

The BHA is a non-profit organization whose goal is to promote the health benefits of beans and other pulses world-wide through scientifically-based nutrition research. Founded in 2003, the BHA is supported partially by a two-year \$1.5 million U.S. Agency for International Development (USAID) Global Development Alliance grant. BHA members include national and state bean associations, bean growers, processors and packers, shippers and distributors, as well as non-governmental organizations such as Catholic Relief Services and World Vision.

The comments herein relate to a fundamental aspect of the Food Guidance System, namely, consumer understanding. The BHA believes that any information provided to guide and influence consumer dietary choices must be presented in easily understood "consumer language" to be effective.

**Summary**

Beans, and their cousins, are referred to throughout the world using many different terms, including "pulses" and "legumes". The USDA's Food Guidance System uses the term "legumes" to describe beans and their cousins. In the United States, consumers most commonly use the term "beans."

**Based on extensive consumer research, the BHA believes the USDA should not use either the term "legumes" or the term "dry beans" in their Food Guidance System because U.S. consumers lack an understanding of both of these terms. Instead, the BHA believes the USDA should use the term "beans" to refer to these foods.**

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USA

## Supporting Consumer Research

### *Issues with the term "Legumes"*

Results of a recent consumer research study, sponsored by Bush Brothers & Company, concluded that many **consumers are not familiar with the term "legumes."** Almost 40% say that that nothing comes to mind when they think of the term "legumes" or that they "don't know."

In addition, **consumers don't understand which foods constitute the legume category of foods.** The category of "legumes" includes beans, lentils, peas, and peanuts. Research shows, however, that less than 40% of respondents correctly identified green peas and peanuts as legumes, while about 16% incorrectly identified zucchini squash, pumpkins and potatoes as legumes.

Based on consumer's lack of familiarity and confusion and misunderstanding about the term "legume," the BHA believes that use of the term will undermine even the best attempts at effective dietary guidance.

### *Issues with the term "Dry Beans"*

**Research shows that consumers are not familiar with the term "dry beans"**, as referenced by the fact that 70% have never seen, read or heard about the term.

**Moreover, consumers are confused about the term "dry beans" and think there is a difference between "dry beans" versus "beans."** The research shows that only 17% of consumers say that the first thing that comes to mind when defining "dry beans" is "beans or a classification of beans." It also shows that about half of US consumers believe that there is a difference between "dry beans" and "beans." This difference is typically described as related to the bean product's packaging (canned versus bagged.) **Thus, characterizing this food group as "dry beans" would lead many consumers to reject nutritious beans packaged in other ways (canned, frozen, etc.) from consideration.**

While "dry beans" is a term used in the "bean industry," these data conclude that consumers do not commonly use the term. Rather, the term "beans" is more commonly used and represents all beans - regardless of packaging type. Proper consumer guidance should suggest that consumption of all beans are important to include in a healthy diet.

### *"Pulses" is a meaningless term*

The term "Pulses" was shown not to be a consumer-friendly term for identifying this food category. Almost two-thirds of consumers tested associate the term "pulse" with the circulatory system/heart beat. Less than 5% of all consumers asked could identify pulses as a bean, vegetable or even a food.

Zawel Back

### **Study Background**

These data were collected through two omnibus studies among separate, but nationally representative samples of 500 consumers in the continental United States. One sample was asked questions about dry beans and pulses. The other sample was asked questions about legumes and pulses. The resulting data sets were weighted to reflect national percentages. The range of error on a sample of 500 is plus or minus 4.4%

A copy of the supporting research data is included as substantiation for our recommendations.

\*\*\*

The BHA appreciates this opportunity to provide comments on the Food Guidance System and would be pleased to discuss this information and points provided herein upon request.

Sincerely,



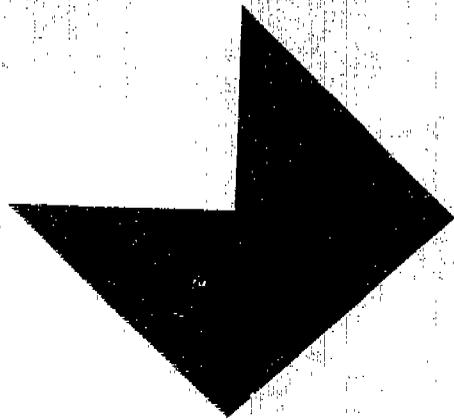
Stacey A. Zawel, PhD  
Executive Director

Attachments

Janal Fox

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# StrategyOne



**To:** Lori Johnson / Bush Brothers  
**From:** Peter Mitchell, Betsey Siska / StrategyOne  
**Re:** Dry Bean/Legume Omnibus Topline Observations  
**Date:** October 31, 2003  
**Copies:** Jill McDonough, Susan Peters

Attached are the summary findings from the omnibus studies to assess consumer awareness and recognition of the terms: dry beans, legumes and pulses.

## Overall Findings

- There is no clear recognition for the terms dry beans, legumes and pulses. However, whereas dry beans and legumes are defined largely as beans or vegetables by most, but not all consumers, pulses are unilaterally misconstrued as something having to do with the circulatory system/heart beat.

## Dry Beans Findings

- Consumers lack a well developed singular understanding of the term dry beans. Nevertheless, most associate it as a bean or food and can classify many types of beans as a dry bean. However, only about half think there is a difference between a bean and a dry bean. And, among those the majority associate this difference as having to do with the state of the bean as dry/not fresh and/or having to soak/prepare dry beans specially.

## Legume Findings

- Consumers also lack a well developed singular understanding of legumes. About 40% claim nothing comes to mind when they think of the term or don't know. This lack of understanding is echoed by the percentage of consumers who incorrectly identify many beans as legumes.

## Dry Bean/Legume Classification

- At least two-thirds, but not all, of each sample associate dry beans/legumes as a protein, a starch or carbohydrate and a vegetable.

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### Pulses Findings

- Less than 5% of all consumers asked could identify pulses as a bean, vegetable or even a food. About two-thirds associate it as having to do with the circulatory system/heart beat.

### Meat and Beans Group

- About 70% of consumers support a change in how proteins are classified in the Food Guide Pyramid -- from the meat group to the meat and beans group.

### Method

Two omnibus studies were conducted among separate, but nationally representative samples of 500 consumers in the continental United States. One sample was asked questions about dry beans and pulses. The other sample was asked questions about legumes and pulses. The resulting data sets were weighted to reflect national percentages. The range of error on a sample of 500 is plus or minus 4.4%.

AUG 26 2004

THE STATE UNIVERSITY OF NEW JERSEY  
**RUTGERS**

Paul A. Lachance, Ph.D., FACN, CNS  
Founding Director, The Nutraceuticals Institute  
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New Brunswick, NJ , U.S.A.

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• Fax • e-mail:

26 August 2004

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

Dear Team:

These written comments are submitted in response to the Federal Register Vol. 69, #133, pages 42030-42033 of Tuesday July 13, 2004.

Enclosure one is a document entitled "Re-Invention of the Food Guide Pyramid to Promote Health" authored by Paul A. Lachance and Michele Fisher. It is an abridged pre-print draft, accepted for publication, as a chapter in the next issue of ADVANCES IN FOOD AND NUTRITION RESEARCH, a publication of Academic Press. The copyright obviously belongs to Academic Press; however in the interest of the Public Health, we realize that this abridged version will be included in the record and made available to the public. The "quid quo pro" is that the chapter will call attention to the series "Advances in Food and Nutrition Research" which enjoys a high impact factor.

In the document we propose and argue for a re-invention of the food guide pyramid and expand upon our 1986 publication, which we are providing as enclosure two - since the journal is now defunct. The CFN is an acronym for "Calories For one percent average Nutrient daily value per serving". We have updated the concept in the abridged chapter identified as enclosure one. Enclosure three is a presentation that expands on the CFN concept by providing illustrations of the CFN by food items meals; and its' applicability in Nutrition Facts labeling for four foods is included.

We note that the first draft of the Dietary Guidelines (Nutrition Today 39(4) 151, 2004) includes a specific guideline to increase the intake of fruits and vegetables, whole grains etc. The pyramid re-invention we are suggesting supports this draft dietary guideline.

We do not envy the task you have been assigned and wish you well in this critical facet for the education of the consumer and thus to the benefit of the public health.

Sincerely,

*Paul A. Lachance*

Paul A. Lachance, Ph.D., CNS

cc: Michele Fisher, Ph.D., R.D.

ENCLOSURE ONE

Re-Invention of the Food Guide Pyramid to Promote Health

LaChance 2005

# **Re-Invention of the Food Guide Pyramid to Promote Health**

Lachance  
3/26/50

**Dr. Paul A. Lachance, Ph.D., CNS**  
Department of Food Science  
Rutgers, the State University of New Jersey

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Tel:

Email:

**Dr. Michele C. Fisher, Ph.D., R.D.**  
Nutrition Consultant

Mullica Hill, NJ

Tel:

Abridged Version of **“Re-Invention of the Food Guide Pyramid to Promote Health”**, copyrighted by Academic Press in forthcoming issue of  
**ADVANCES IN FOOD AND NUTRITION RESEARCH**

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Food guides have existed in the USA since 1916 and have evolved as knowledge reflected in the periodic issuances of the Recommended Dietary Allowances since 1943 and food security policy during war increased. (For example, over several decades, the Basic Five food groups became the Basic Seven, which became the Basic Four. See Table 1.) In 1980, the Dietary Guidelines were released by the USDA/DHHS, first driven by the Dietary Goals of the McGovern Senate Select Committee of the 60s. The Food Guide Pyramid was first issued by the USDA in 1992. The intent was to graphically display food groupings in proportions and in the number of servings to be recommended in the daily dietary.

Why re-invent the pyramid? The various food groups of the pyramid do not distinguish caloric differences or nutrient densities within each food group. The actual practices of Americans as to food choices made, relevant to the recommendations of the Food Guide Pyramid, are poor and very likely have contributed to the dramatic increase in the rate of obesity during the last two decades. Adult Americans consume and additional 12-14% more Calories than needed each day mostly as food eaten or purchased away from home. Two major changes in the current pyramid need to occur. The First is that the base (foundation) of the pyramid must be changed in order to promote the health promoting properties of vegetables, legumes, nuts, seeds and fruits. Secondly, the cereal grain category needs to distinguish between the health benefits of whole grain foods vis-à-vis the marginal health benefits of refined grain products, such as pastries, which must be relegated to the peak of the re-invented pyramid. The recommendation is driven by significant scientific information supporting health claims; and the increasing knowledge about the health benefits of nutraceutical bioactive non-

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nutrient compounds, as well as, the nutrient density of food portions. These factors support a change in the pyramid such that major emphases are placed on vegetables, legumes, nuts, seeds and fruits and these become the foundation of a re-invented pyramid. Cereal grain foods, in particular products with 51% or more whole grain ingredients become the second tier of the pyramid. The re-invention of these two tiers provides for sustaining the requirements of the vegan.

A nutrient density index (per serving cost in Calories for each percent of nutrient needs) must be pre-calculated and printed on the Nutrition Facts label of all processed foods and fast food containers, replacing the current emphasis on "Calories from fat." The consumer needs this information to decide whether their waistline can afford servings of food with poor nutrient density vis-à-vis Caloric content. A concept described as Calories for Nutrient (CFN) is suggested as such as solution.

Dietary guidelines and dietary food guides are tools used to educate the public about diet, nutrition and health. The quality of an individual's nutritional status is directly dependent upon the quality of the input into nutrition, namely food, and applicable dietary supplements. Food is defined as any substance that is eaten to sustain psychological and physiological life, provide energy, and promote nutrition. It should be evident that dietary guidelines involve terms and goals pertaining to the intake of certain food components with the objective being to either strive to meet a certain set of dietary goals or strive to not exceed another set of goals (e.g. cholesterol intake). However, dietary food guides (e.g. pyramid) are food based but aimed at meeting and/or enhancing nutrition and therefore health. The consumer understands a dietary food guide because they eat food and not nutrients/nutraceuticals per se. Food is visible and nutrients are

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essentially invisible components of food. Food satisfies the palate and the psyche and provides satiation, whereas nutrients do not. For these reasons food education should be distinguished from nutrition education. It is a major flaw of the education scheme that food has not been differentiated from nutrition and health outcomes. The purpose of this chapter is to foster and make more consumer relevant the Food Guide Pyramid approach to food selections and combinations aimed at enhancing the nutrition and health of the consumer.

### **Dietary Guidelines**

The Dietary Guidelines for Americans have been published every 5 years since 1980 by the U.S. Department of Agriculture and the Department of Health and Human Services. The purpose of the Dietary Guidelines is to provide Americans aged 2 years and older with information on diet choices that will promote health and prevent disease (USDA, 2000). The Food Guide Pyramid is a graphic illustration of the Dietary Guidelines and was first issued in 1992 (Figure 1) (USDA, 1992). The current Food Guide Pyramid organizes foods according to a category (e.g. cereal, fruit, dairy etc.) and nutrient content. For example, in the USDA Food Guide Pyramid all fruits are grouped together and it is recommended that one select 2 to 4 servings from this group each day. Consumers are expected to select a recommended number of servings from each group to plan their diets.

Internationally, food guides come in three major shapes: circular plate, oriental pagoda and pyramid (Painter et al., 2002). The pyramid approach to food group guide combinations is utilized primarily in the USA, Puerto Rico and the Philippines. In North

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America, Canada utilizes a Rainbow concept, whereas Mexico and Central America utilize the most common and worldwide approach of a circular plate of food groupings. Whereas the emphasis of this chapter is to reconsider and re-invent the USDA Food Guide Pyramid, the recommendations for change must be science based. Yet the changes must not lose sight of the intended audience, which is John Q. Public with essentially no education in science. Further, the recommendations made for the pyramid should be applicable as well to other food guide presentation approaches (e.g. circular, rainbow etc.); however, this chapter focuses on the pyramid approach as a food guide because it serves well as a model system.

**WHY RE-INVENT THE PYRAMID?**

Why re-invent the Food Guide Pyramid? A major drawback of the various groupings of the pyramid is that they do not distinguish caloric differences or nutrient densities of the various foods within each grouping. Given the epidemic rise in obesity in America, one of the greatest challenges facing the Food Guide Pyramid is a plan for realizing nutritionally balanced diets that are low in energy.

The USDA Center for Nutrition Policy and Promotion rightfully sees a need for the revision of the Food Guide Pyramid. The proposal of the USDA recognizes that the Estimated Energy Requirements (EER) of the Dietary Reference Intakes (DRIs) to maintain weight is based on: gender, age, height, weight, and activity level. The EER for men and women of reference body size decreases with age in years; yet it increases for children up to the age of maturity. However, what plagues the USA is overweight and obesity in both children and adults. Some of the consumer issues of the Food Guide Pyramid elicited by the USDA pertain to perceptions of the difference between servings

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and portions, and also serving size as related to number of servings recommended. The fact is that few consumers use the current food guide pyramid consciously, finding it to have too many details to follow.

Another drawback to the current Food Guide Pyramid (Figure 1) is that the actual practices of Americans as to choices made relative to the recommendations of the Pyramid are poor. Most Americans do not ingest and thus meet the recommended food proportions of the Food Guide Pyramid. Americans consume too many servings of foods with added fats and sugars and do not eat enough fruits, vegetables, dairy products, lean meats and foods made from whole grains (Kantor, 1998; Kantor, 1999). Based upon two different estimations (Anonymous, 1994; USDA, 1998) of data on actual consumer practices vis-à-vis the recommendations of the Food Guide Pyramid (Figure 2), one can graphically portray and contrast the food choices adult consumers have made. The "reality" pyramid reveals that the foods preferred and eaten are of the type best fitting the peak of the pyramid. For products with added sugars and discretionary fats, the estimated maximum that should be incorporated into the group at the peak is 27% of total food energy. However, "in reality" the average adult American chooses as much as 41% of their Calories from this one food group! (Consumer Reports on Health, 2000). The consequence is that their total food energy is substantially derived from selecting poor nutrient dense food. It thus creates the question as to whether the current pyramid as a food guide should be modified to increase the awareness of its intended capability to effectively lead to better food choice practices. The "reality" of this finding cries out for a missing indicator of nutrient density being made available to the consumer. Consumers have no other reference point as to which foods, in what proportion, can sustain and enhance health. The "Nutrition Facts" panel on packaged foods of the Nutritional

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Labeling and Education Act of 1990 (NLEA) (FDA, 2003) serves the purpose of describing the Calories per serving. It also provides information as to what to avoid in terms of fat, cholesterol and sodium. There has not been a marriage of the provisions of the NLEA, the Dietary Guidelines and the Food Guide Pyramid. The E in NLEA has not really occurred. The NLEA is "regulated" by the FDA which has sufficient regulatory crises to ever get around to be involved in Education, but to its credit it has tried on at least two occasions, only to have to set education plans aside as a major regulatory based crisis erupted. The Dietary Guidelines are a joint HHS/USDA undertaking and the Food Guide Pyramid is a USDA education effort.

### **HEALTH CLAIMS**

Meanwhile, and more importantly, the more recent scientific evidence supporting health claims and functional foods promotes the concept that benefits can be derived from the proper choices of foods. This concept has reached a point where one cannot deny the need to reappraise the pyramid and thus the health benefits that should accrue should one elect to follow a food guide and maximize the health benefits of the resultant food and meal combinations.

For reasons that are not clear, consumers believe they are actually following a relative balance of the pyramid food groupings. They are confused because they observe that overweight and obesity are on the rise and they have been eating less visible fat but do not realize that in avoiding only fat (that is, consuming a lower percentage of fat as a source of energy) (Chanmugam, 2003) they have increased their energy intake overall by up to 12-14% percent during the last two decades. It does not take long at that rate of

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excess over need to become overweight and later obese; and for the phenomena to begin at younger and younger ages (Zizza, 2001).

Since 1975 or so, adult Americans have consumed an additional 12-14 % more Calories daily, which alone could help explain the epidemic rise in obesity. Over a span of about one generation, the increase in obesity has become a readily apparent association with increasing expenditures for eating away from home or purchasing food to take home (Lachance, 2000). The consumer concern for health becomes subservient to the need for convenience and rapid preparation, and is also influenced by the perception of the value in the amount of food for the cost.

#### **PHYSICAL ACTIVITY AS A VARIABLE**

The issue of the many facets of physical activity is not in the purview of this chapter. In terms of every day physical aerobic activity many factors other than food intake are overlooked. Security concerns bar re-entry from stairwells of multi-story buildings. Elevators are routinely used, even by college students, to escape a single flight of stairs. The computer age ties the individual to the screen, be it a game toy, Email or serious research work. Living in air-conditioned environments lowers energy demand. What is eaten during say "Monday Night Football" is no help in a milieu of boisterous but limited opportunity for exercise. Of concern is the emulation by children. There has been a significant increase in the snacking of young adults (Zizza, 2001). Other lifestyle practices also are variables. The solution to obesity is multi-faceted (Lachance, 1994) but expecting the Food Guide Pyramid to deal with energy output factors as well as the obvious energy inputs is naive. More effective would be providing the consumer with an indicator of the nutrient density of packaged and fast foods and thus help the consumer

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make more uncomplicated but sophisticated choices. We are proposing that an indicator of calorie density (cost) per one percent averaged daily value of 13 nutrients would help consumers realize when a food product is excessive in Calories and/or unclassified as to location in the pyramid. The concept - Calories for Nutrient (CFN) - is presented later in this text and its application illustrated with example figures.

The USDA pyramid recommends six to nine servings a day of vegetables and fruits, however only 24% of Americans consume five or more servings of fruits daily and only 50% consume 3-5 servings of vegetables per day (Katz, 1996). Federal agencies complicate the issues when they promote dietary interventions that emphasize deviating from the recommendations of the various food groupings. An example is the Five-a-Day program of the National Cancer Institute (NCI), which promotes the daily consumption of at least 5 servings a day of fruits and vegetables (National Cancer Institute, 2003). It is an admirable goal but self-evidently not the official recommendation. Even with the Five-a-Day serving promotion, an increase in the daily eating of vegetables and fruits has been exceedingly poor (less than one percent a year!).

The low intakes of fruits and vegetables result in nutrients such as the carotenoid precursors of vitamins A, vitamin C and fiber, being low in many diets. The three most popular fruits consumed by Americans, namely oranges, apples and bananas, account for half of the fruit eaten by Americans. As for vegetables, Americans prefer "head lettuce (mostly iceberg), frozen and fresh potatoes, potato chips and "shoestrings," and canned tomatoes (Kantor, 1999). These "vegetables," really one vegetable, one tuber and one fruit, accounted for almost half of the vegetables consumed in America in 1996 (Kantor, 1999). Intakes of fruits and vegetables are better in households with a higher educational level (Roos et al., 2001)

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## RE-INVENTING THE PYRAMID

Two major changes in the current pyramid need to occur. The first is that the base (foundation) of the pyramid must be changed to foster the meal-by-meal selection and ingestion of vegetables, legumes, nuts, seeds and fruits. Secondly, the cereal grain category needs to be acknowledged for its whole grains for which, in contrast to refined grain products, there is scientific evidence of health benefits (Liu et al., 1999; Liu et al., 2000; Thompson, 1994; Slavin et al., 1999; Miller et al., 1999; Jacobs et al., 1998; Jacobs et al., 1999). But because only 20 to 30% of the cereal grain foods category is whole grain (with the associated health benefits), it can no longer serve as the base of the pyramid, but can continue to serve as a primary source of whole grains and energy and as a mainstay carrier for public health enrichment practices. The cereal grains should be moved up the pyramid from the foundation to the second tier and thus serve in bridging the cereal grain product source foods of the base with the dairy and protein sources just above them – where all the makings of many types of sandwiches take place be it cream cheese or lox on a bagel to cheese and various meat sandwiches or the adding of milk to ready to eat cereals.

Based upon the science we now have available in terms of dietary sources of recognized recommended dietary allowance nutrients and health promoting non-nutrient bioactive phytochemical factors (i.e. nutraceuticals), the foundation of the pyramid should be re-invented (Figure 3) and constructed of vegetables (Figure 4); fruits (Figure 5) and legumes nuts and seeds (Figure 6).

The second tier becomes the next most important source of nutrients, nutraceuticals, and in particular sources of cereal grain energy (Figure 7). Not included in this tier are cereal grain based products that have a Calories for Nutrient (CFN) content in

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excess of 50 Calories per averaged one percent of 13 essential nutrients expressed in Daily Value (DV) per serving. These dessert type foods ranging from apple pie to sherbets and croissants to donuts, are as much a concern as discretionary fats and added sugars and thus must be relocated to the peak tier of the pyramid (Figure 3).

Figures 8A and 8B describe the third tier of the pyramid containing a grouping of the high quality nutrient and protein sources of dairy products (8A) and a grouping of the classical animal protein sources as meat, fish, and poultry and eggs (8B). The protein food group relinquishes legumes, nuts and seeds to the foundational tier and makes possible the provisioning of all the basic food needs of the vegan and also provides key nutrients and nutraceuticals such the rich source of vitamin E in nuts.

Figure 9 illustrates that not only sweets, fats and oils belong in this peak of the pyramid, but also any foods, such as doughnuts, that have a poor nutrient density, that is a high cost in calories for a low input of essential nutrient (e.g. high CFN) and are foods essentially devoid of nutraceuticals.

A further obvious benefit of the combination of a new base (foundation) to the pyramid of vegetables, legumes, seeds, nuts and fruits, coupled to a cereal grain array of basic traditional grain foods such as breads, pastas, rice, etc. is the fact that the two tier combo provisions all the nutrient and energy needs of the vegan. The lacto and ovo food products can be tapped as needed by the lacto and/or ovo-vegetarian. By moving legumes and nuts from a protein content categorization in the current pyramid to a functional food categorization coupled with vegetables and fruits -- (in a culture that consumes excess protein) - the potential for superior nutritive balance and health benefits emerges. Cereal grains around the world are the major source of energy and protein complementation needs, as well as the nutrient needs of concern to the vegan through the combination of

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lysine limiting cereal grains with methionine limiting legumes, nuts, and selected other foods.

### **THE CFN (Calories For Nutrient) TO ASSESS CALORIC DENSITY**

The CFN of a serving of any food can be ascertained from a food database (e.g. USDA – <http://www.nal.usda.gov/fnic/foodcomp>) by determining the average of the DVs of 13 key nutrients (protein, thiamin, riboflavin, niacin, folate, vitamin B6, vitamin B12, vitamin C, vitamin A, calcium, magnesium, iron and zinc) divided into the Calories per serving (Table 4). The concept of the CFN, that is, Calories required to deliver one percent of the averaged DV of thirteen indicator nutrients is a criterion for assisting choices based upon the cost in Calories for one percent averaged nutrient per serving. It was conceptualized in 1986 (Lachance and Fisher).

We are proposing that the CFN information be pre-calculated for the consumer and placed on the Nutrition Facts label in lieu of “Calories from fat.” The FDA has determined that this latter calculation has little or no meaning to the consumer (Crawford, Acting FDA Commissioner @ 16 March 2004 NNR Symposium, Washington, DC). The CFN would assist consumers with the overall implication of their choices in terms of Calorie density for nutrient content (CFN) per serving, and not just the contribution of fat and/or sugar stated on the label. The CFN informs one about the cost in Calories to deliver one percent of the Daily Value (DV) of an average of 13 nutrients. (The Daily Value is currently derived from the U.S. RDA developed by the FDA for Nutrition Labeling.) Even when the FDA elects to update the DV so that they are based upon the recent RDIs (Institute of Medicine, National Academy of Sciences), the nutrient

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component of the CFN ratio will shift accordingly and there will occur a one time change in the CFN numerical value. The Nutrition Facts information panel changes can be made to coincide with packaging changes.

Conceptually, if one percent of the recommended nutrients for the day cost 50 Calories – the CFN label reads 50 - it means that the consumer has elected a 5000 (50x100) Calorie per day lifestyle food energy intake in the choice being made to meet an array of all recommended nutrients. Even at a lifestyle goal of fulfilling 70% of daily recommended nutrient intake adequacy, it would mean choosing to ingest a 3500 Calories per day lifestyle and thus the food choice serving(s) may be contributing Calories in excess of need. The frequency of servings of poor choices of foods with a high CFN points to the excess Calories that contribute to overweight and obesity. Human beings need “fun foods” in their everyday lives but decisions as to whether it will be a fruit or a chocolate donut are necessary to control body weight gain. Unless the person is a lumberjack or a marathon runner or expends over 5000 Kcal per day in routine physical activity, the penalty over time of consuming foods with a high CFN will be overweight and obesity (bodyweight exceeding 20% of the ideal weight for height and body type). Requiring a CFN calculation to be displayed on the label of each product would aid consumers to ascertain the Caloric cost consequences of each food. Food energy sources are no longer scarce in the diets of most Americans because if they were scarce, obesity would not be on the rise.

Figures 10, 11 and 12 provide illustrations of the CFN concept in a given food as altered by the choice of the processed version chosen. For example of apples, and boiled potatoes as compared to apple juice and french fries; or the choice of product because of changes in one ingredient (e.g. fat content of fluid milk). The CFN can be used to make

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choices between foods within a category or different types of foods or beverages or combinations of food such as a Bagel with cream cheese (Figure 13). Representative CFNs for each food group of the re-invented pyramid are given in Figure 14. The CFNs rise accordingly as food groups move to the top tier. We suggest that the consumer will look for these low CFNs, and also understand that one serving per day of legumes, nuts and seeds with a CFN of 20 in the foundation tier is diluted by the much lower CFNs of vegetables and fruits.

A question can be how to differentiate between products that are truly whole grain (51% or greater whole grain flour) and traditional refined cereal grain products such as white bread, corn meal and rice, in comparison with those products containing some fraction of cereal grain ingredients but which are "fun" foods more in line with desserts. These "tasty" cereal grain products (e.g. croissants, donuts, danishes and pastries, cookies and cakes, etc) which have a cost of 50 Calories or more per average one percent of the daily RDA (Recommended Dietary Allowance) must be booted up to the fun/dessert category at the top of the pyramid. This means that the cereal grain tier has the whole grain and the basic cereal food products such as enriched bread but that those foods that are not 51% whole grain and have a high Calorie for Nutrient content because of added sugars or fat or both (such as apple pie) also automatically qualify for the peak tier of the pyramid.

Beverages such as water, milk and tea or an occasional glass of wine may be sources of caloric energy but with other health benefits because of their role as functional foods. Carbonated beverages and drinks with low juice content (e.g. token 10% or less) are recreational and belong in the peak of the pyramid.

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**INDEPENDENCE OF "ORGANIC" and "non-GMO" CLAIMS**

As consumer acceptance of the "Organic Food" increases, it also is repeating the phenomena of shifting business away from Mom and Pop health food stores to specialty corporate market chains (e.g. Wild Oats Natural Marketplace). Classic supermarkets also are purveyors of the standardized (meeting criteria established by USDA) organic products including an increasing array of combined "organic" and "non-GMO" (genetically modified organism) fresh and snack foods. In terms of the food guide pyramid, no changes are needed because these factors are independent variables offered by the purveyors and the purchase decision chosen by the consumer.

**FURTHER RATIONALES FOR RE-INVENTING THE PYRAMID**

Equally important justifications for the modification of the foundation of the Food Guide Pyramid is the data of the consistent coherent tradition of emerging scientific activity pertaining to (1) the scientific agreement that underlies the approval of positive health claims and (2) nutraceutical content.

Our attempt to justify the various food groups by the "glycemic index" and "dietary fiber" content of a set of representative foods fails because the data are too limited. In general the hypothesis was that foods in the "fun food" peak would be low in fiber and be higher in glycemic index whereas the foundation foods of vegetables, legumes, nuts, seeds and fruits would be sources of dietary fiber and have lower glycemic indices. The available glycemic index data (Foster-Powell, 2002; Anderson and Kimura 2003) is too limited to use at this time.

What does emerge is the need to re-emphasize the importance of plant foods, and the concurrent density of bioactive phytochemicals (nutraceuticals) which are in addition

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to the density of nutrients in vegetables, legumes, nuts, seeds and fruits as well as whole grains in the food choices that are based upon the re-invented pyramid. The findings of the scientific literature (Hebert et al., 1998; Jian et al., 1999; Albert et al., 2002; Verhoven et al., 1996; Cohen et al., 2000; Michaud et al., 1999; Zhang et al., 1992; Finley, 2003; Kris-Etherton et al., 1999; Tsai, et al., 2004) relative to realizing health benefits transcend the "nutrient-nutritive value" rationale and food group classification of the current USDA pyramid.

### **HEALTH CLAIMS SUPPORT THE RE-INVENTION OF THE PYRAMID**

As mandated by the 1990 NLEA, health claims in food labeling can be petitioned from the FDA. The intent is to educate the public about recognized diet-disease inter-relationships. Several relationships with significant scientific agreement have been identified and several have been issued. Many of the official health claims have a direct association with one or more of the plant food groups (Table 2). There are now 15 or more health claims, which are based upon "significant scientific agreement." In the interim, an FDA proposal was issued permitting the placement of a health claim on the label but identifying one of four categories (A, B, C, D) of scientific rigor substantiating the health claim. Purveyors do not desire to have a "qualified" product claim in a B, C, D, format to be misconstrued by the consumer as an overall product rating and the proposal is unlikely to survive.

The following discussion is offered as evidence of the need (based on the scientific agreement of the health claim) to re-locate the food guide pyramid base, or foundation tier, from cereal grains to vegetables, legumes, seeds, nuts and fruits (citrus and berries). Some health claims point to particular body systems (e.g. bone) or

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biomarkers (e.g. blood cholesterol), however the irrefutable observation can be made that the greater the number of different health claims that are positively associated to a particular food grouping, the stronger the emphasis should be to advocate choosing and consuming foods from particular food grouping(s) (see Table 2). Thus one could argue that the emphasis on the health claimed benefits of fruits and vegetables in "reducing the risk of cancer" or the role of leafy vegetables as a source of food folate and thus neural tube defect prevention; and further the role of soluble fiber in disease prevention gives priority to the foundational position of vegetables, legumes, seeds, nuts and fruits great merit. In contrast, a health claim for the "fun foods," as well as sugars and oils at the peak of the Pyramid, have not been forthcoming and the likelihood that a health claim would emerge for foods within this category is practically nil. Of the twelve functions of food, nine are psycho-social. It makes both psychological, social and hedonistic common sense that foods with poor nutrient density should reside in the peak of the pyramid and that most foods chosen as a finishing touch to a meal invariably have a high caloric density.

Of intermediate recognition in the third tier are dairy products as a major source of calcium-rich and vitamin D enriched foods and "the reduced risk of osteoporosis." The meat group, also on the third tier offers high quality sources of protein and other nutrients. But note that the health claim benefits of soy and soy products are properly placed as "legumes" in the foundation tier of the re-invented pyramid.

## **FOODS PROVIDING THE MOST NUTRACEUTICALS ARE FUNCTIONAL FOODS**

Fruits and vegetables per se are recognized as being associated with a reduced risk of cardiovascular disease (CVD) and cancer. In fact, practically all the "approved"

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health claims can be associated with the base of the re-invented pyramid and the number of qualifying food diminishes as one moves up the pyramid. For example, vegetables, legumes, nuts, seeds and fruits are all sources of dietary fiber and thus “a reduced risk of cancer and a reduced risk of coronary heart disease.” (FDA, 1998; Rolls et al., 2004)). In fact, if one searches for the food combinations with the most benefit in thwarting both cancer and CVD, then it becomes evident that the composition of the vegetables, legumes, seeds, nuts and fruits delivers certain health attributes (Dragsted et al., 2004). These include high potassium, low sodium (unless added), an array of antioxidants including the vitamin E of tree nuts, a naturally occurring selection of monounsaturated and polyunsaturated lipids, and a number of vitamins, such as folates, and minerals such as magnesium, manganese, zinc, etc. The array of nutrient dense foods including legume (especially soy and peanut) proteins coupled with whole grain products makes protein complementation fully satisfactory for the vegan. The synergy in the function of these nutrients with the bioactive properties of phytochemicals such as the non-vitamin precursor carotenoids and the flavonoids, to name a few, confirms the powerhouse of the re-invented pyramid by making the base of the pyramid a source and density of health promoting factors rather than as a source and density of macronutrient Calories.

### **PYRAMID MUST RECOGNIZE BIOACTIVE NUTRACEUTICALS**

The results of recent and emerging science substantially supports a strong association between certain foods and their phytochemicals or biomarkers and the thwarting of actual chronic disease. An estimated 40% of all human cancers are believed to be related to diet (World Cancer Research Fund, 1997). Finley proposed that the “antioxidant responsive element” may explain the protective effects of cruciferous

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vegetables on cancer and observes that "the relationship of diet to cancer is not necessarily because of the inclusion of carcinogens in our diet, but maybe a consequence of the exclusion of anti-carcinogens from our diets" (Finley, 2003). One can make the analogous arguments relative to the exclusion of dietary hypocholesterolemic compounds and the risk of cardiovascular disease. This is a new and vital rationale for the role of diet in chronic disease prevention. For the consumer, this premise moves away from foods "to avoid" to a positive message of which foods "to emphasize." Therefore, it is imperative to make appropriate changes in the Pyramid array and therefore evolve an improved guidance as to (a) what foods and food groups (categories) to emphasize on a daily/frequency basis and (b) to re-educate the public as to the major rationales in the pyramid and the consequential health benefits.

Whereas all foods are invariably sources of energy, not all foods are substantial sources of nutrients and complimentary bioactive nutraceutical compounds that thwart the pathogenesis of chronic diseases. The phytochemicals that have been found to be beneficial can be categorized into several chemical composition groupings (Guhr and Lachance, 1997). These are fiber, antioxidants, allylic sulphides, isothiocyanates, indoles, terpenes, flavonoids, phytoestrogens and saponins. The flavonoids have many sub-groupings such as catechins (e.g. in tea) and proanthocyanidins (e.g. in purple grapes). If one desires to arrange these phytochemicals by food sources then the categories are simpler and recognizable. These are five: dark green and yellow vegetables, legumes (including soy bean products and peanuts) and tree nuts, citrus and berries, the cruciferous vegetables such as broccoli, cabbage, cauliflower, kale, turnip etc., and the sulphur rich vegetables garlic, onion, leek and chive. Both black and green tea may be the beverage of choice.

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The consumer further needs to realize that if a fruit or vegetable is not part of the breakfast habit, the probability of obtaining 5 to 7 servings of fruits/vegetables in a given day is practically nil. Needless to say, that if the consumer does not have a breakfast habit, other changes in diet choices will be needed.

Innumerable scientific studies (Bidlack et al., 1998; Bidlack et al., 2000; Ho et al., 1992; Ho et al., 1993; Lachance, 1997) have been published on various aspects of these nutraceutical phytochemicals. These studies range from epidemiological studies, clinical trials and basic *in-vitro* and *in-vivo* cell line and animal and related mechanistic investigations. The end-points of these trials have been aimed at thwarting the pathogenesis of major chronic diseases such as CVD, cancer, and diabetes. The most coherent, consistent beneficial results have been those in which the conditions were preventative and or ameliorated by distinct foods or the combinations of whole foods. It is again clear therefore that the base of the Pyramid must be allocated to the promotion of the daily intake of vegetables, legumes, seeds, nuts and fruits in order to emphasize the importance of these foods for their health benefits.

#### **ADDRESSING THE ENERGY INTAKE ISSUES**

Can one expect the Food Guide Pyramid to assist in helping the consumer with their Estimated Energy Requirements (EER)? Without separate guidance on the cost in Calories needed for meeting the RDAs and access to the health benefits of the nutraceuticals of functional foods, the Food Guide Pyramid has limitations. The irony is that nutritionists conducting nutrient assessments know that the most highly variable diet analysis data is that of energy intake, yet it is the only "nutrient" which the consumer can measure for themselves as often as they wish by stepping onto a scale, preferably in the

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nude and facing a full length mirror. The key question the consumer needs to answer is “did this amount of Calories cause a change, up or down, in body weight?” Without a change in choices made, serving size and activity levels the outlook for a change in body weight occurring is low. Poorly recognized is the role of “where” the choice of foods is made and the impact of serving size. There is increasing evidence that the consumer making purchases away from home (not where they are eaten) “disinhibits” their health concerns and practices in favor of the economic or emotional value of the food eaten. The correlation of rate of increase in obesity with the rate of spending for food purchased away from home is startling (Lachance, 2000). This observation brings in question the limitation of the CFN (Calories for nutrient) concept if it were to appear only on packaged foods. A solution would be the requirement that the first level packaging of each fast food item should be required to include the imprinting of total calories for the particular serving size purchased and the CFN. On cups and beverage containers three sets of the CFN could be easily imprinted in advance for carbonated beverage, milk shake and Slurpee®.

The proposed re-invented pyramid is a simpler presentation for addressing the energy intake concerns faced by consumers. It brings up the issue of whether the presentation of food groups should return to the plate configuration rather than the pyramid. In initial studies the USDA claims that the pyramid was favored over the plate, however the official plate displayed equal proportions of four major food groups. Partitioning the plate into a “peace” symbol presentation with emphasis on two-thirds plant foods to one-third animal foods is OK but “hungry” portions can still defeat the control of calories. At a steak house the proportions would obviously be reversed. The pyramid does add an additional segment at the peak for discretionary fats and added

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sugars. We again propose that any food with a CFN higher than 50, such as donuts and various desserts or snacks should be parked in the peak tier of the pyramid. National survey data (NHANES) has revealed that this "peak" segment is toppling with the provisioning of about 40% of the energy intake because so many food choices with a CFN of 50 or greater make up this upper tier of the pyramid.

The re-invented Food Guide Pyramid as proposed makes the low CFN foods the primary (e.g. foundation of the pyramid) source of nutrients and nutraceuticals at low energy cost, and depending upon the choice of preparation selected (steamed versus deep fried) highly likely to be effective in the control of body weight. One can couple the advantage of products of high health benefit and low CFN, with the third dimension being the adoption of routine physical activity levels such as walking stairs to walking miles indoors (as on a treadmill) or out of doors. There may also be a spiritual dimension because, in theory, regular church-goers have a lower rate of obesity than observed in the general population.

### **REVAMPING THE CEREAL-GRAIN BASED FOOD GROUP**

Bread is the staff of life but donuts are not. People rarely eat one-half of a croissant or a danish. The vending machine dispenser has a package of four Oreos, not two medium cookies. There is no serving container for sale at the Cinema that provides only one cup of popcorn but that is the official USDA/FDA serving size!

On the other hand, cultures that eat tortillas rather than bread, eat several tortillas. A Chinese meal is understood to include rice, unless other versions of the food (e.g. pork fried rice) are requested. In Italian restaurants, a pasta side-dish is automatic, the choice

being what style of pasta is preferred. Croutons may or may not be included in the salad provided as part of the meal or ordered ala carte.

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Whole grain flour is defined as having the compositional ingredients of bran, germ and endosperm being present in the flour as is present in the native state. For health claim purposes, the food must include 51% whole grain flour by weight. In addition to dietary fiber, whole grain flour also has considerable antioxidant properties, as well as an array of B vitamins and key minerals which are over and above providing dietary fiber.

There is no question that whole grains exert health benefits, however the American intake is about 20-30% of the cereal grain category. There is a long history of cardiovascular health benefits associated with the routine consumption of whole grain products (Liu et al., 1999; Jacobs et al., 1998; Jacobs et al., 1999). In recent years, evidence of benefits of whole grains in diabetes has emerged (Liu et al., 2000).

The foundation of the classic USDA pyramid is based on cereal grain foods serving as energy sources. But energy sources are no longer limiting in the dietary. Only whole grains and the products thereof have shown significant health benefits. Since the whole grain cereal products exert the scientifically derived health benefits, these foods must become the second tier of the pyramid. Interestingly, the foods of these bottom two tiers are able to provide for the complete sustenance of the vegan. This fact demonstrates the essentiality of the bottom two tiers of a revised pyramid of food guidance. It should be noted that those cereal grain products that have a CFN of 50 or over should not be accounted for in this tier, but moved to the peak of the pyramid as foods to use sparingly.

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## HOW SHOULD THE CONSUMER APPROACH THE PYRAMID FOR FOOD CHOICE GUIDANCE?

The consumer wants to eat "healthy." There is no way to explain the plethora of print and some electronic media that promotes a proper diet. Dieting and cookbooks pervade the non-fiction bestseller lists and other indicators of concern. They are trying to understand why certain foods are acceptable in one culture and not in another e.g. white rice. Is eating pasta really all that bad when there are so many Italian restaurants? Some foods have a historical documentation of sparing diseases and death e.g. potatoes. But why are high CFN "potato chips" on the diet plate? The consumer has been eating less red meat than in the days after World War II. Fish is very expensive and the controversy of over fishing and mercury/dioxin contamination makes the consumer hesitant to purchase. Consumers drink less fluid milk than decades ago and they wonder if that is smart in view of the numerous osteoporosis stories found everywhere. They are slowly switching from drinking considerable amounts of carbonated beverages to bottled waters. Tea remains the beverage of choice but not to the young. Are we really being honest with ourselves when we are told in various ways that there are three meals a day and two snacks? How important is it to eat a healthy breakfast? Are the home fries along with the eggs really all that bad? (this combination, in terms of protein quality, is superior to eggs alone).

Unequivocally, for a guaranteed amount of the most nutrients and the benefits of protective compounds in the foods, we should plan on plant foods dominating, at least 2/3, of the plate (the lower two tiers of the pyramid) and most of that should be vegetables, fruits (would you believe tomatoes?) and a handful of nuts or a serving of a legume (would you believe peas!); and all three complemented by a salad of mixed

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greens, carrot strips and maybe a few olives. Whole grain products also complement with nutrients and nutraceuticals. The entree can be most anything from mussels to eggplant parmigian to chicken breast to hamburger or steak, half of which, if eaten at a restaurant, you can take home for another meal.

### **PRACTICAL APPROACH OF FOOD GUIDES**

A consumer friendly and instructional food guide should not only be a list of food groupings, but should also convey the proportions recommended from the various food groups. Whereas health claims for foods within a grouping assist the user in identifying the relative importance of certain foods, the balance of the dietary depends upon the combinations of food servings made from within a food guide segment and in combination with foods from other groupings. The re-invented pyramid is a solid guide, based upon the science underpinning of health claims and a high density of phytochemicals having protective health benefits. Coupled with an index of physiological costs in Calories (e.g., CFN), the consumer can learn to make healthy choices whether at home or on the road.

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TABLE 1 - Principal USDA Food Guides from 1916 to 1992 (Welsh, 1993)

Food Guide	No. of Groups	Milk	Protein-Rich Foods	Breads	Vegetables & Fruits	Fats	Other Sugars
Hunt <sup>(a)</sup> (1916)	5	Meats & Other Protein Rich Foods	Cereals & Other Starchy Foods	Vegetables and Fruit	Fatty Foods	Sugars	
		1 c milk + 2 - 3 servings other	9	5	9	10	
Stiebeling <sup>(b)</sup> (1930's)	12	Milk Lean Meat Poultry, Fish & nuts	Flours, Cereals	Leafy Green Potatoes Sweet Potatoes & Fruits	Butter Other Fats	Other Sugars	
		2 c 9 - 10/wk 1/wk 1	As desired	11-12/wk 1 3 1	-	-	
Basic Seven <sup>(c)</sup> (1940's) Foundation diet	7	Milk & Milk Products	Bread, Flour & Cereal	Leafy Green Yellow	Potatoes Other Fruit & Vegetables Salad Greens	Butter Fortified Margarine	
		2 c or more 1 - 2	Everyday	1 or more 2 or more 1 or more	Some daily		
Basic Four <sup>(d)</sup> (1956 - 1970's) Foundation diet	4	Milk Group	Bread, Cereal	Vegetable - Fruit Group			
		2 c or more	4 or more	4 or more use dark green/yellow vegetables frequently citrus daily			
Hassle-Free <sup>(e)</sup> (1979) Foundation diet	5	Milk-Cheese Group	Bread-Cereal Group	Vegetable - Fruit Group	Fats, Sweet, Alcohol Group		
		2 2	4	4 Include Vitamin C source daily Dark green/yellow vegetable frequently	Use dependent on Calorie needs		
Food Guide Pyramid <sup>(f)</sup> (1984 +) Total diet	6	Milk Yogurt, Cheese	Breads, Cereals Rice, Pasta	Vegetable	Fats, Oils, Sweet		
		2 - 3 2 - 3	6 - 11 whole grain enriched	3 - 5 dark green/deep yellow starchy/legumes other	2 - 4 citrus other	Total fat ≤ 30% Sweets vary according to calories	

*Each*  
33/50

**TABLE 1 - Principal USDA Food Guides from 1916 to 1992 (Welsh, 1993)**

- (a) "Food for Young Children (1916), "How to Select Foods" (1917), "A Week's Food for an Average Family" (1921), "Good Proportions in the Diet" (1923)
- (b) "Planning for Good Nutrition" (1939) (published two previous food plans, 1933/1936)
- (c) "National Wartime Nutrition Guide" (1943), "National Food Guide" (1946)
- (d) "Essentials of An Adequate Diet" (1956), "Food for Fitness - A Daily Food Guide" (1958)
- (e) Food: "The Hassle-Free Guide to a Better Diet" (1979)
- (f) "Developing the Food Guidance Systems for 'Better Eating for Better Health'" (1985)

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## TABLE 2

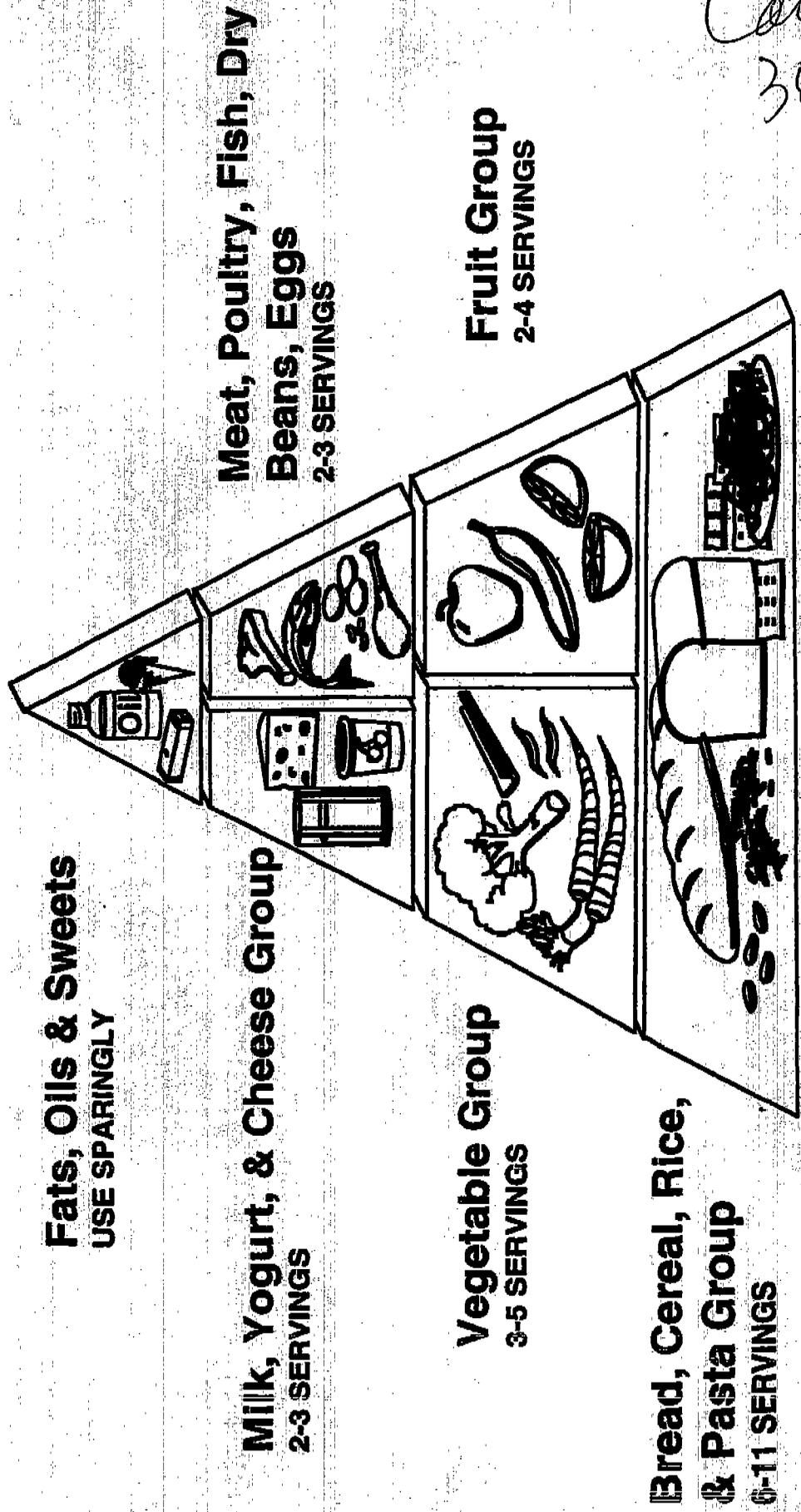
### **Health Claims Support Reinvention of the Pyramid**

- Calcium-rich foods and reduced risk of osteoporosis - Dairy, Vegetables, Legumes
- Low-sodium foods and reduced risk of high blood pressure - Fruits, Vegetables, Nuts
- Low-fat diet and reduced risk of cancer - Plant Foods
- A diet low in saturated fat and cholesterol and reduced risk of heart disease - Plant Foods
- High-Fiber foods and reduced risk of cancer- Plant Foods
- Soluble fiber in fruits, vegetables, and grains and reduced risk of heart disease
- Soluble fiber in oats and psyllium seed husk and reduced risk of heart disease
- Fruit- and vegetable-rich diet and reduced risk of cancer
- Folate-rich foods and reduced risk of neural tube defects - Leafy Vegetables, Legumes, Peanuts
- Sugar alcohols and reduced risk of tooth decay
- Soy protein and reduced risk of heart disease - Legume
- Whole-grain foods and reduced risk of heart disease and certain cancers
- Plant sterol and plant stanol esters and heart disease - Bamboo Shoots, Nuts, Vegetable Oils
- Potassium and reduced risk of high blood pressure and stroke - Fruits, Vegetables

Lack  
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Figure 1.

# USDA FOOD GUIDE PYRAMID

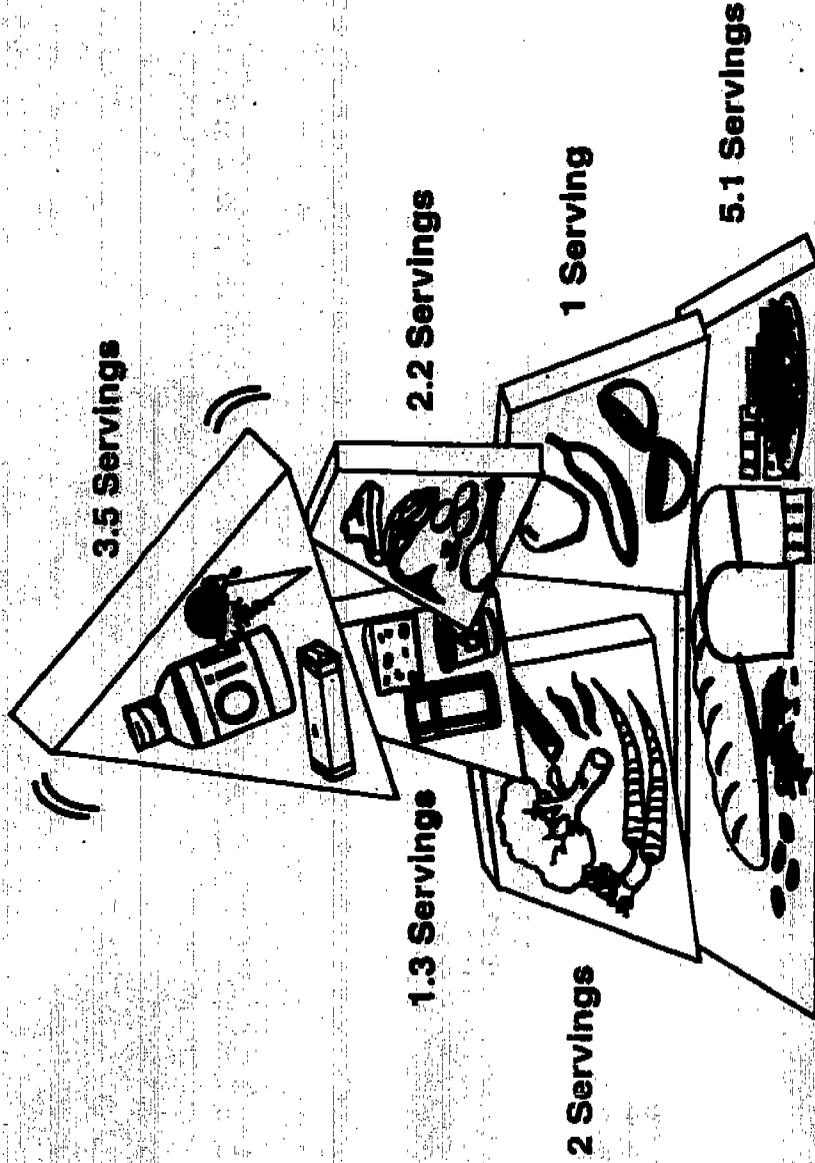


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Figure 2.

# ACTUAL CONSUMPTION PYRAMID

U.S. Total

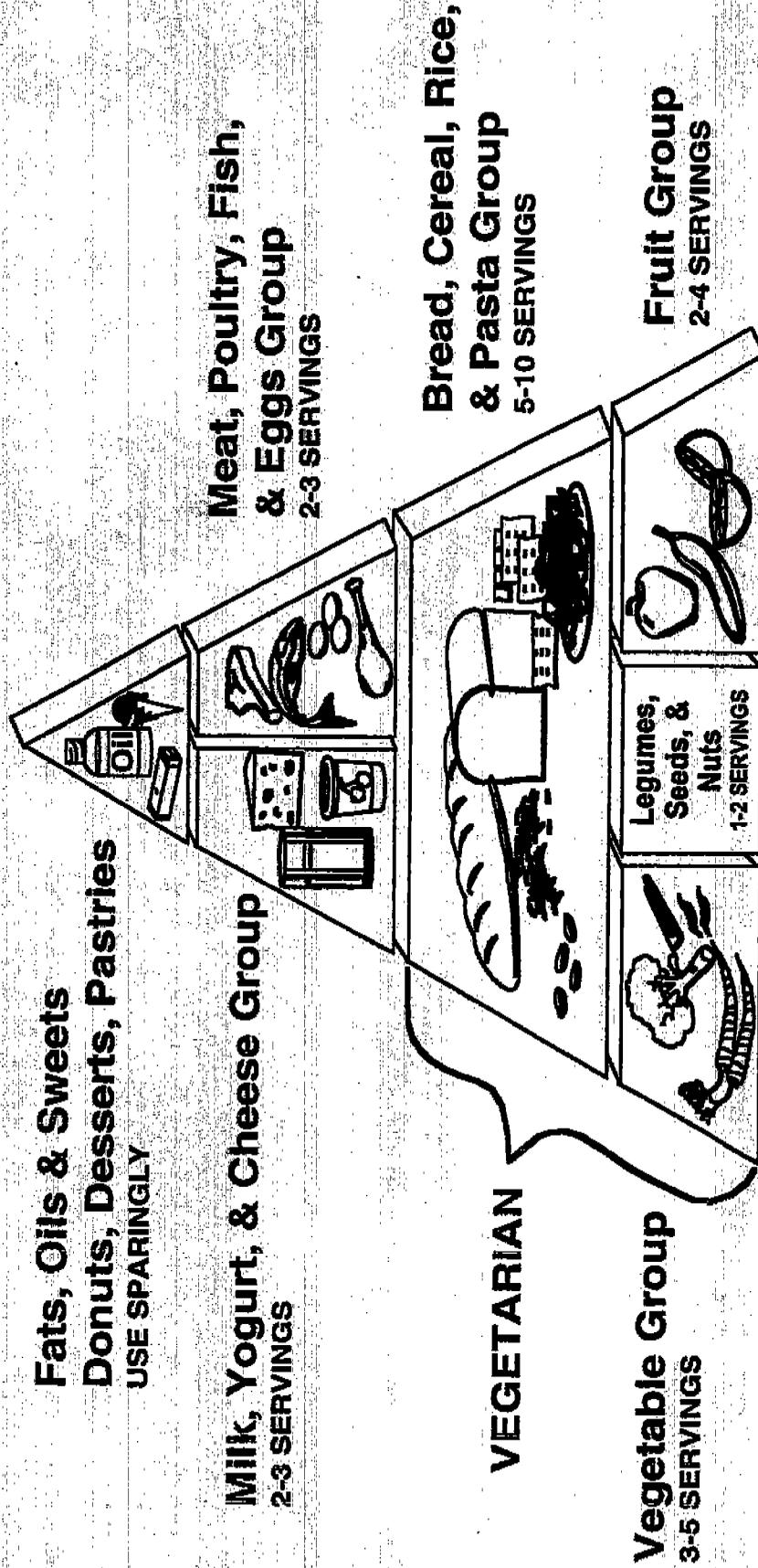


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37/50

Source: EAT H (1994) (National Livestock & Meat Board 11-310)  
Conducted by MRCA and Based on 4,700 Individuals in 2,000 Households

Figure 3.

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH



Source: Lachance, P. A. Presentation to the Dietary Guidelines Committee, Wash., D. C. 1999

*Lachance*  
38/58

Figure 4.

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH

Carbohydrates and Dietary Fiber.

Carotenes (Several); Vitamin E;

Vitamin K in Peas and Broccoli,

Spinach/Other Greens; Thiamine (B<sub>1</sub>)

in Peas, Squash, Green Beans;

Riboflavin (B<sub>2</sub>) in Broccoli, Greens,

Asparagus; Some Niacin and Vitamin

B<sub>6</sub>; Foliates, Pantothenic Acid and

Vitamin C; Biotin in Cauliflower;

Calcium, Potassium, Magnesium,

Some Copper

Carotenoids

e.g. Lycopene, Lutein, etc.

Simple Phenolics

Hydroxycinnamic Acids

Allylic Sulphur Cpds.

Indoles

Isothiocyanates

Drink Tea for Catechins

**Vegetable Group**  
3-5 SERVINGS

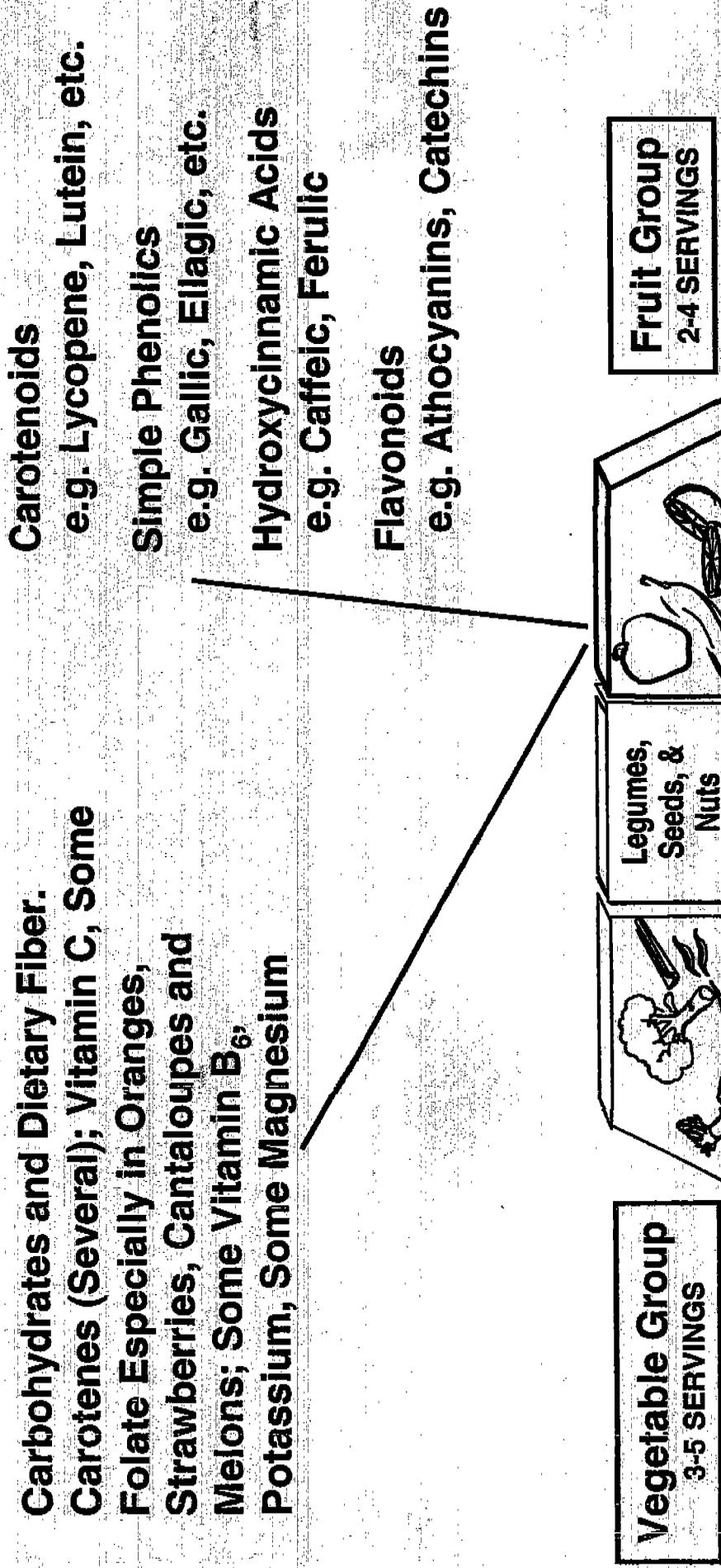


**Fruit Group**  
2-4 SERVINGS

*Each*  
39/50

Figure 5.

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH



Carbohydrates and Dietary Fiber.  
Carotenes (Several); Vitamin C, Some  
Folate Especially in Oranges,  
Strawberries, Cantaloupes and  
Melons; Some Vitamin B<sub>6</sub>,  
Potassium, Some Magnesium

*Each*  
40/50

Figure 7.

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH

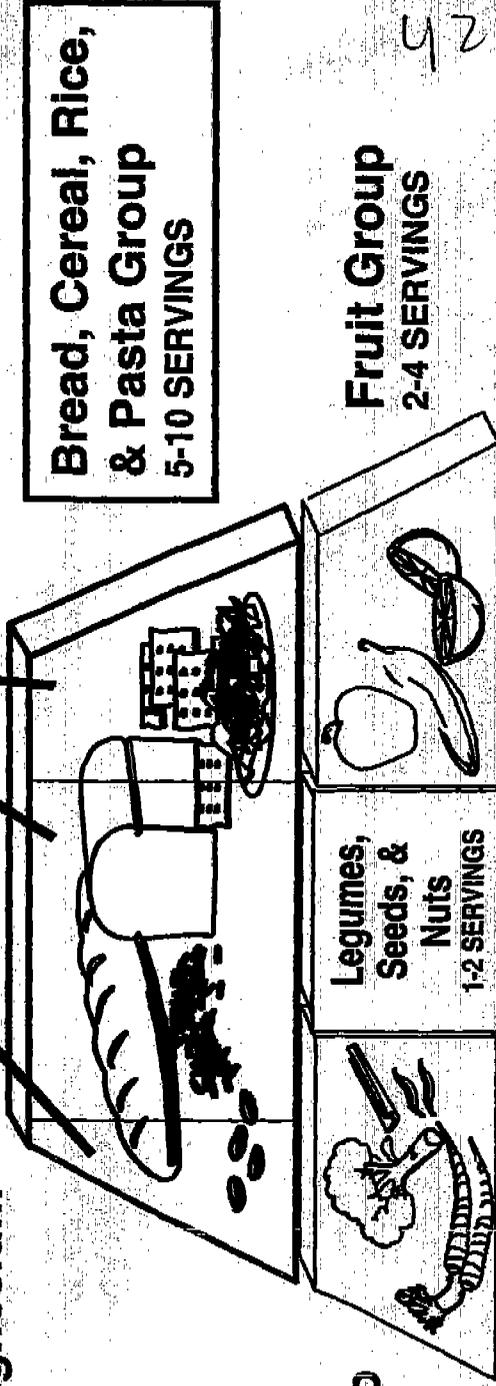
Vitamin E in Cereal Germs (Whole Grains); Thiamine (B<sub>1</sub>) in Whole Grain and Enriched Products; Riboflavin (B<sub>2</sub>), Folate in Enriched and Fortified Foods, Niacin in Enriched and Fortified Products; Vitamin B<sub>6</sub> in Fortified Products. Iron in Enriched Foods; Phosphorous, Zinc, Selenium; Some Magnesium and Copper

## Current Proportions

Not "Enriched" (~15%)

"Enriched" (~55%)

Whole Grain (~30%)  
(need to increase)



Bread, Cereal, Rice,  
& Pasta Group  
5-10 SERVINGS

Legumes,  
Seeds, &  
Nuts  
1-2 SERVINGS

Vegetable Group  
3-5 SERVINGS

Fruit Group  
2-4 SERVINGS

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Figure 8A.

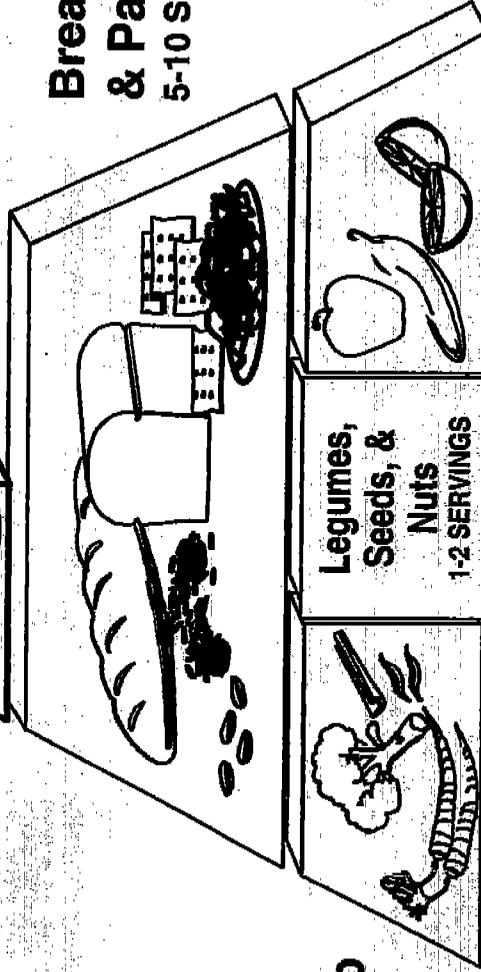
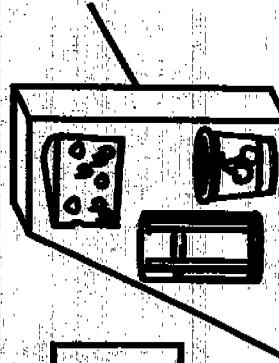
# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH

As Fluid Milk Consumption Decreases,  
Cheese Increases. Elevated Amines  
with Aging of Cheeses Can Raise  
Blood Pressure

**Milk, Yogurt, & Cheese Group**  
2-3 SERVINGS

Protein.

Preformed Vitamin A, Vitamin D in  
Milk and Milk Products, Riboflavin  
(B2); Some Niacin, Vitamin B6, B12  
and Pantothenic Acid; Biotin in  
Cheese; Calcium, Phosphorous,  
and Potassium, Some Magnesium  
and Zinc



**Bread, Cereal, Rice,  
& Pasta Group**  
5-10 SERVINGS

**Vegetable Group**  
3-5 SERVINGS

**Legumes,  
Seeds, &  
Nuts**  
1-2 SERVINGS

**Fruit Group**  
2-4 SERVINGS

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Figure 8B.

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH

Protein.  
Preformed Vitamin A, Thiamine (B<sub>1</sub>), Riboflavin (B<sub>2</sub>),  
Vitamin B<sub>6</sub>, Vitamin B<sub>12</sub>; Biotin in Egg Yolk, Phosphorous,  
Iron, Zinc and Copper, Some Magnesium

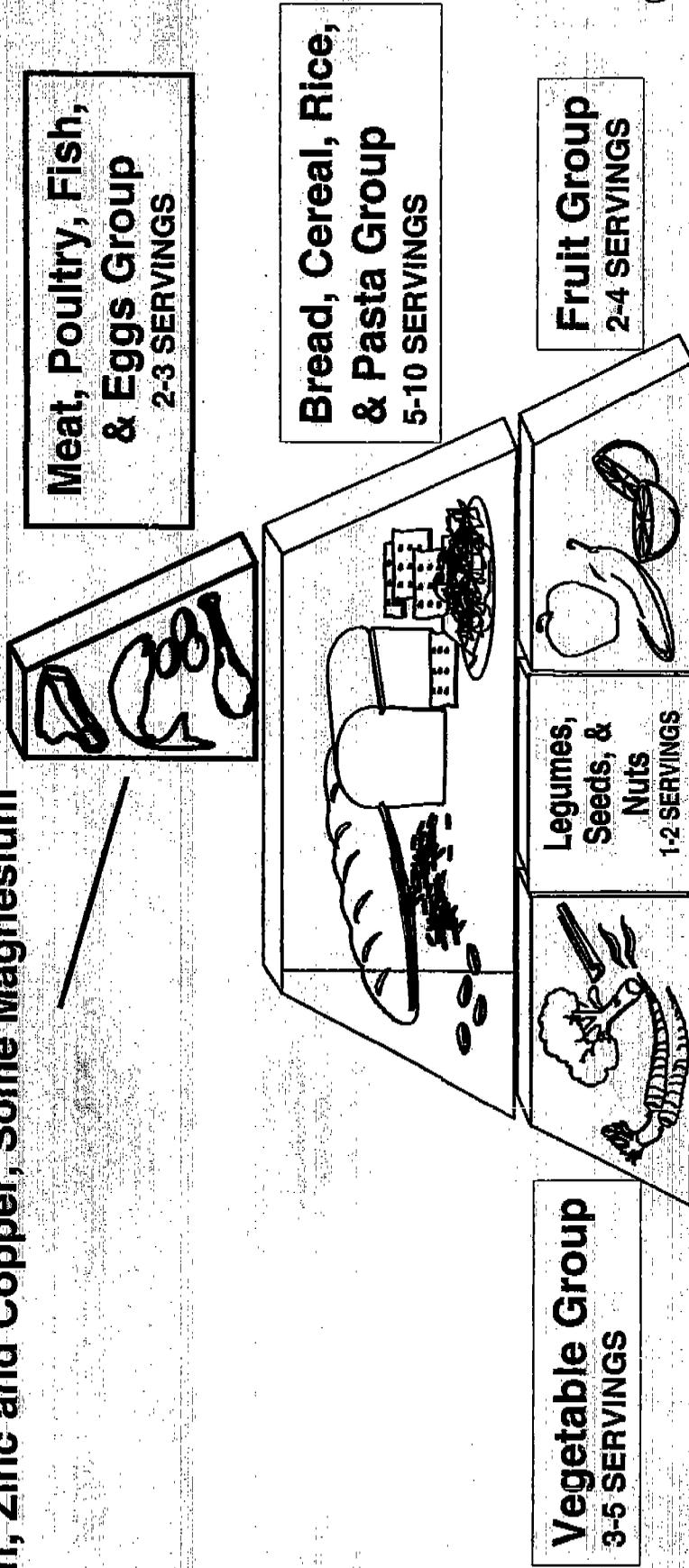
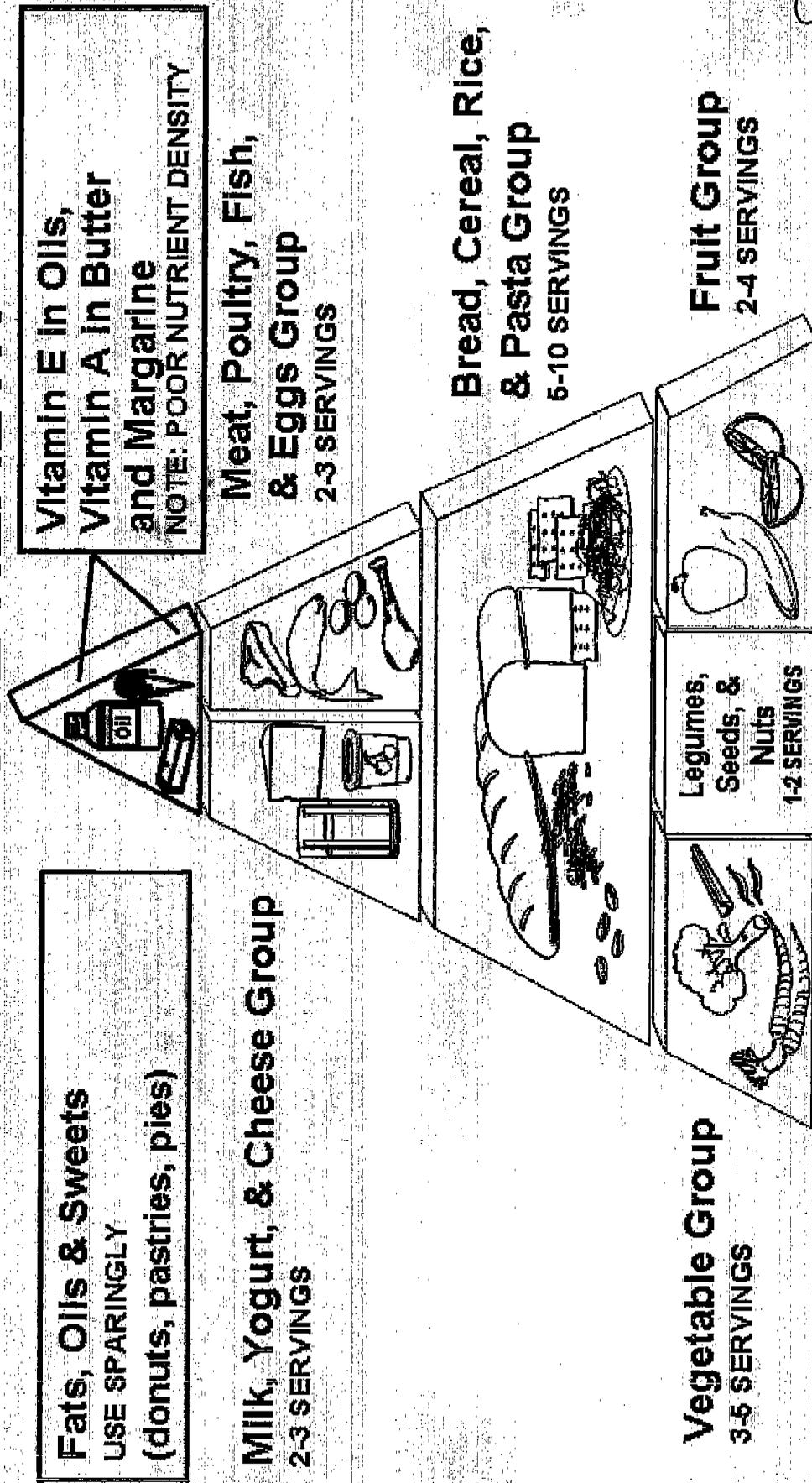


Figure 9.

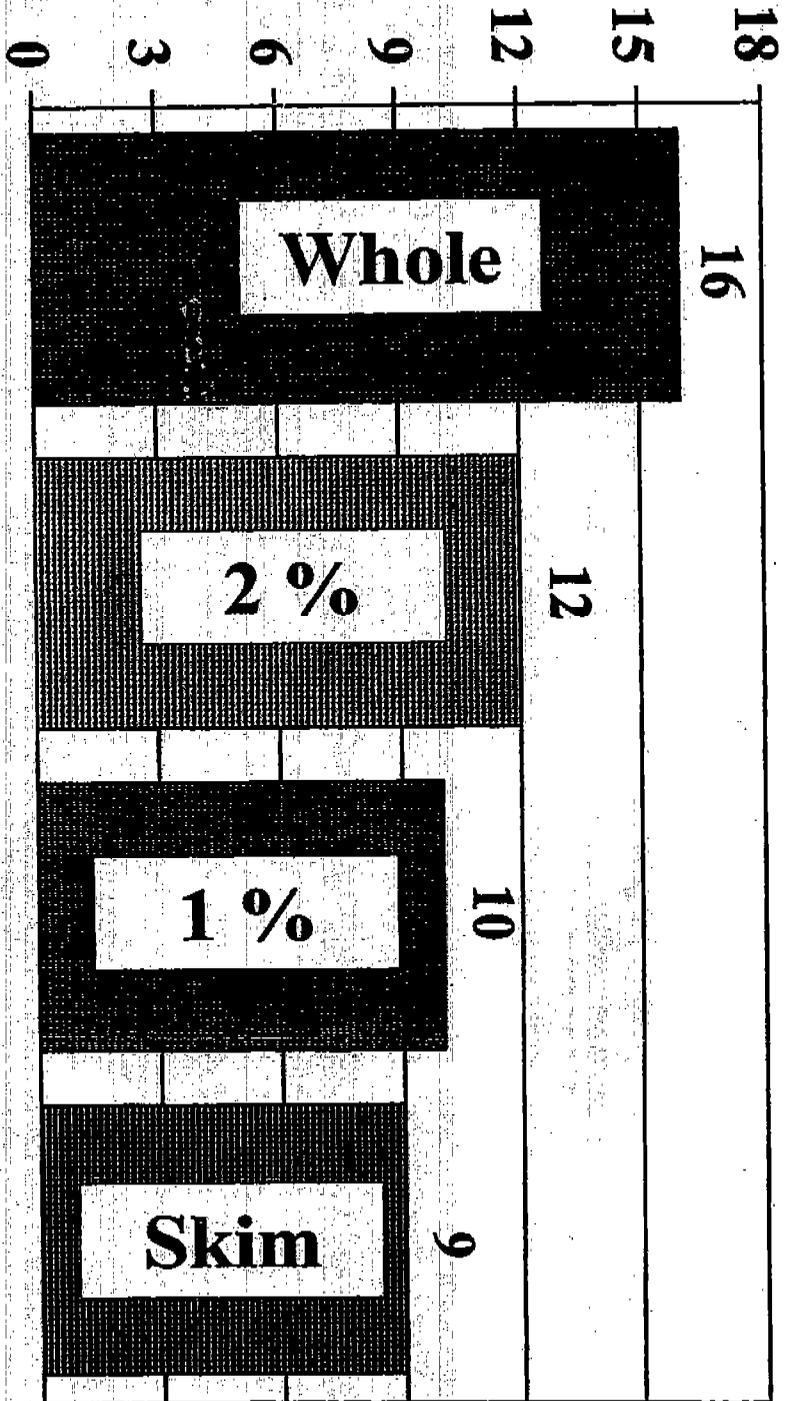
# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH



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### Calories for Nutrient (CFN)



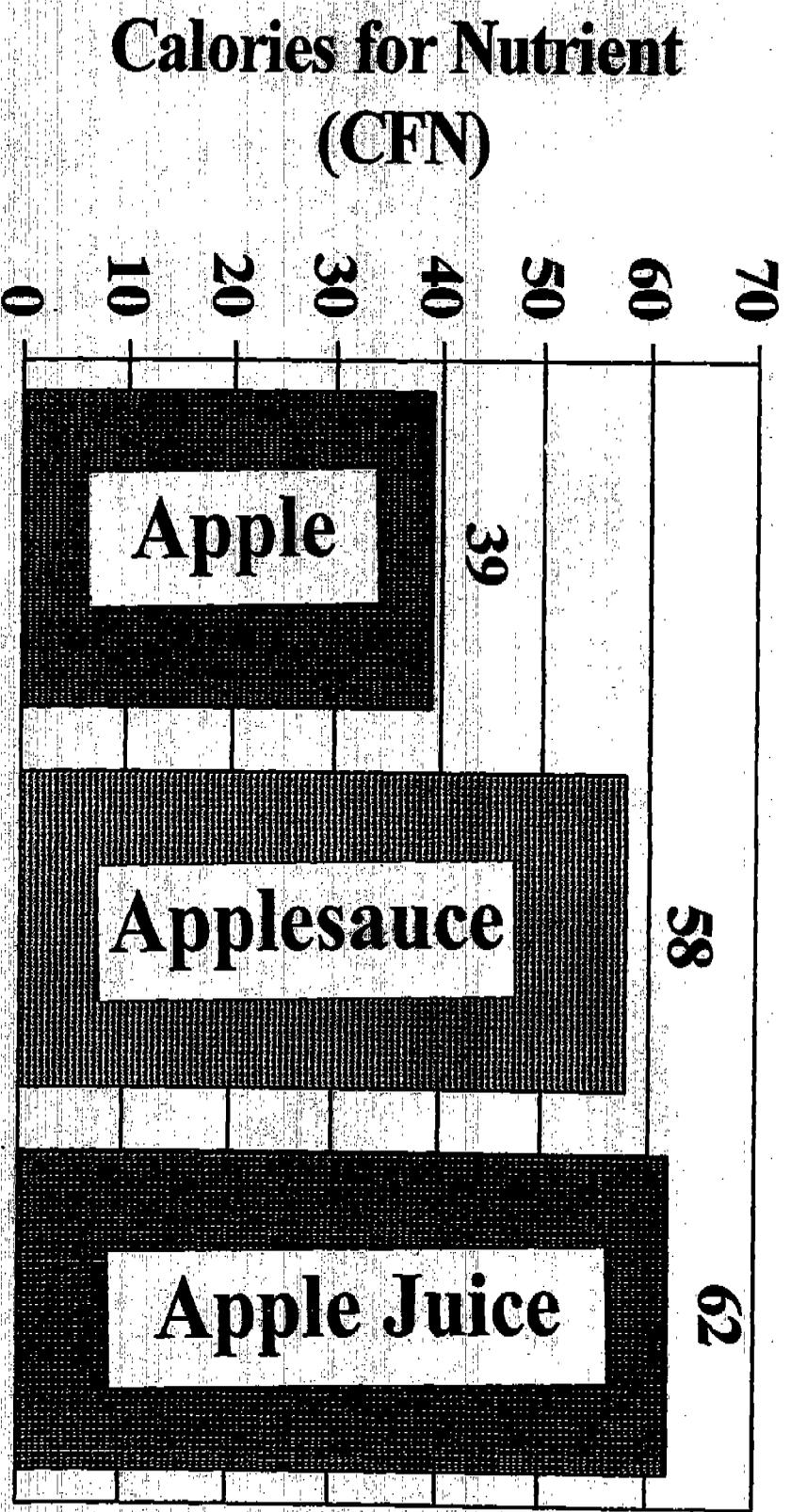
Effect of Milk Choice on CFN

Figure 10.

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**Figure 11.**

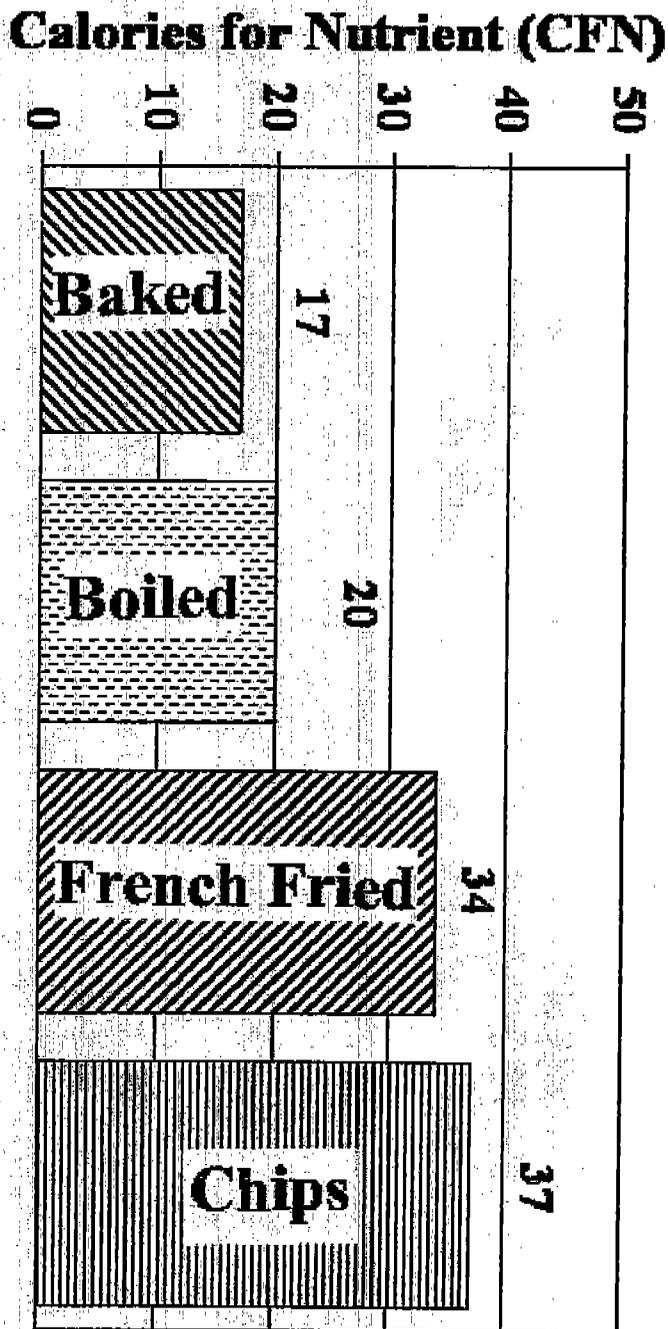
**Effect of Apple Choice on CFN**



Lack  
4.8/50

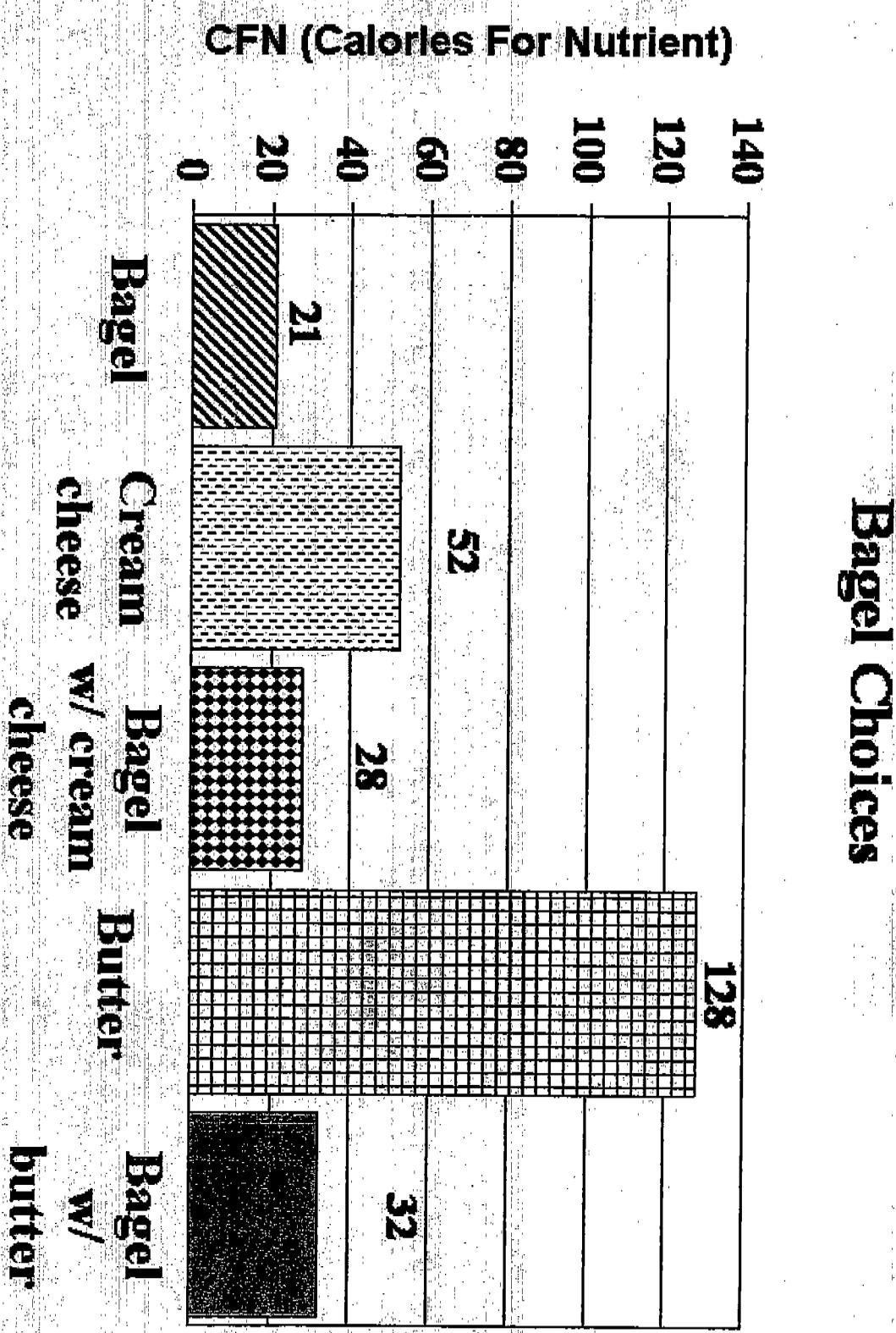
**Figure 12.**

**Effect of Potato Choice on CFN**



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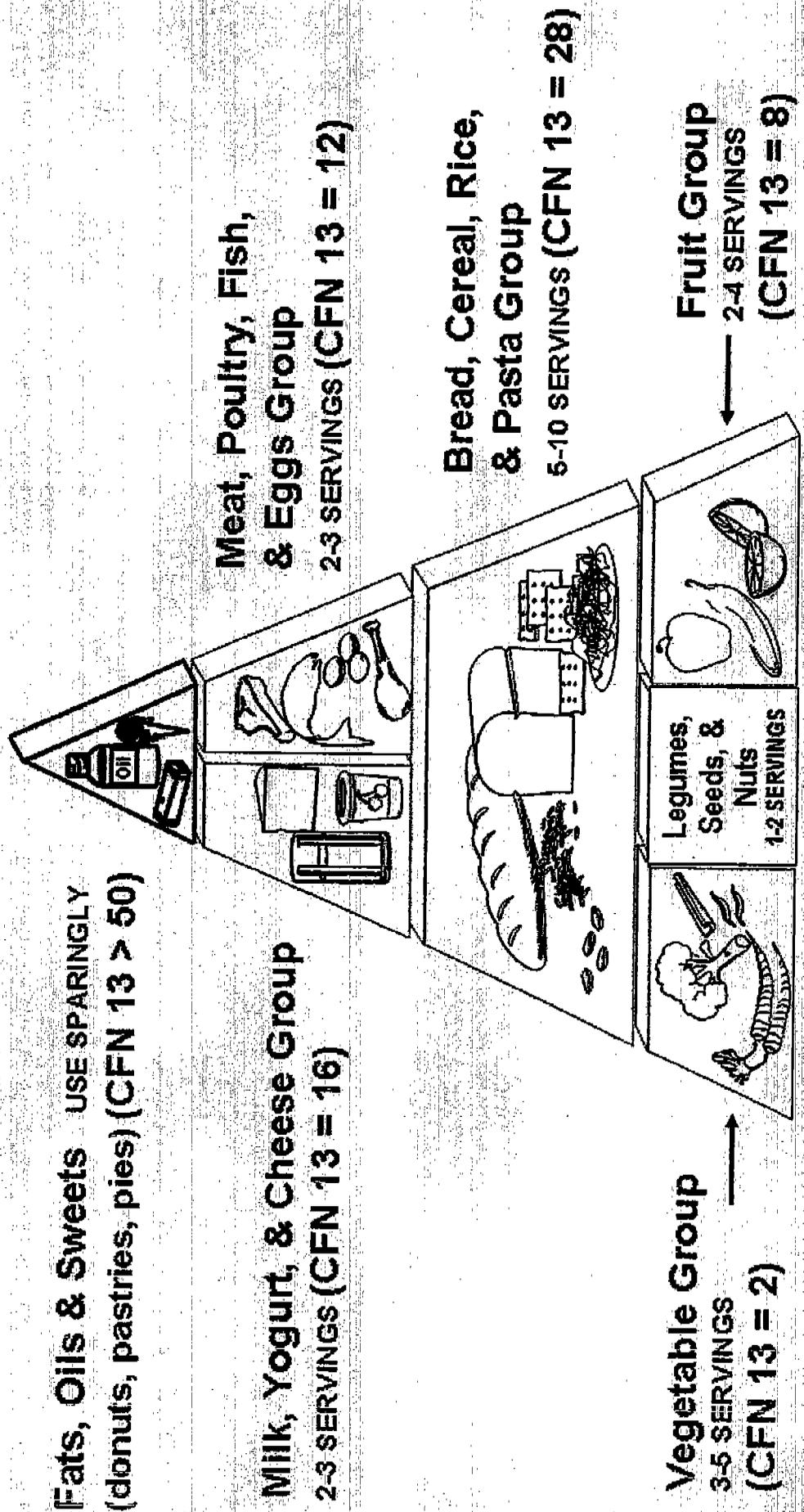
**Figure 13.**  
**CFN's for Bagel Choices**



**Figure 14.**

# A FOOD GUIDE PYRAMID TO PROMOTE HEALTH

(showing the average CFN 13 value per serving)





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August 26, 2004

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

**RE: Request for Comments on Updates to Food Guidance System**

Dear Team Members:

The National Cattlemen's Beef Association (NCBA) appreciates the opportunity to provide comments to the USDA Center for Nutrition Policy and Promotion (CNPP) on the proposed update of the Food Guidance System, as called for in the July 13, 2004 Federal Register. Producer-driven and consumer-focused, NCBA is the trade association of America's cattle farmers and ranchers, and the marketing organization for the largest segment of the nation's food and fiber industry.

We commend USDA's focus on nutrient density and energy balance in its considerations for updating the Food Guidance System. We believe these are the two most important issues in today's environment. Given the epidemic of overweight and obesity, tools such as the Food Guide must help Americans watch their calories, and help them make their calories count *more*. In addition, the Food Guidance System needs to be communicated in a way that is both positive and flexible to more effectively achieve sustainable behavior change.

We believe the revised Food Guidance System must:

1. **Fulfill its mission to serve as a tool that helps people follow the Dietary Guidelines for Americans and achieve healthy lifestyles through diet and physical activity.** The Dietary Guidelines Scientific Advisory Committee recently concluded that a person needs to eat from all five food groups to meet their nutrient needs. Thus, the Food Guide should educate people to use all five food groups to build healthy diets. Each food group offers different essential nutrients critical to promoting health and preventing chronic disease.
2. **Be evolutionary, not revolutionary.** Given its strong awareness among consumers, the Food Guide Pyramid shape should stay similar, but its advice must be updated to reflect the current nutrition environment and new scientific and consumer research.
3. **Be based on rigorous consumer testing and integrate marketing principles to ensure recommended educational strategies and tools will result in consumers changing their behavior.**

Research shows consumers are more likely to be motivated by positive nutrition advice (1). In a recent survey, 80 percent of consumers said they would be willing to change their diets based on a recommendation to "choose naturally nutrient-rich foods first" (2). This type of positive advice can help consumers choose high-nutrient dense/low-energy dense foods first, such as fruits and vegetables, whole grains, low/non-fat dairy and lean meats, while incorporating low-nutrient dense foods as energy needs allow.

- **Flexible dietary guidance can help people make healthful choices** while continuing to enjoy a variety of foods. According to a survey by the American Dietetic Association, 75 percent of consumers indicate they're not doing more to achieve a healthy diet because they do not want to give up the foods they like (3).

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- The Food Guidance System should **encourage attainable goals through small, practical steps** that are easy for consumers to implement and lead to measurable health benefits. Small steps to balance calorie consumption and physical activity resulting in a modest five-to-10 percent loss of body weight can improve blood pressure and help control diabetes and high cholesterol in obese or overweight adults (4).
- To help consumers achieve energy balance, the Food Guidance System should **encourage consumers to be physically active each day**. Regular physical activity in conjunction with appropriate calorie intake promotes weight maintenance and loss, decreases disease risk and improves overall health (5).

NCBA also offers comments on the following topics of particular interest to CNPP:

***A. Advantages and disadvantages of retaining current shape for graphic and other potential shapes to use as a representative of the overall Food Guidance System.***

We encourage CNPP to take an evolutionary, not a revolutionary, approach: **keep the Food Guidance System shape similar to the current Pyramid**, but update the accompanying advice to reflect current consumer needs and new research.

- The Pyramid graphic enjoys a high level of awareness among consumers. Seventy-five percent of those surveyed in a 1998 Gallup poll were familiar with the Food Guide Pyramid (6). In addition, in a 2004 IPSOS Public Affairs survey, 88 percent of consumers said they had heard of the Food Guide Pyramid. However, of that group, only 17 percent said they tried to adhere to the Pyramid's recommendations (2). Government data indicate less than 1 percent of the population actually consumes the recommended number of servings from all food groups (7).
- Government resources should focus on eliminating the gap between consumer awareness and actual compliance. Awareness without action does not go far enough.

We also think CNPP could capitalize on the well-recognized pyramid graphic by refining it to **educate consumers on how to achieve energy balance** through diet and exercise. For example, the shape could depict a two-dimensional pyramid with one side **illustrating the five food groups and recommended daily servings for a 2,000-calorie diet**, consistent with the Nutrition Facts Label, and the other side illustrating various levels of physical activity to balance food intake. A healthy lifestyle is about more than just eating; it's also about being active every day. The Food Guidance System needs to emphasize the importance of energy balance by showing people how to balance daily physical activity with the amount of food they consume.

***B. Usefulness of the proposed strategies to highlight both motivational/awareness and educational messages.***

We agree that both motivational/awareness and educational messages should be part of the new Food Guidance System. Because consumers are more likely to be motivated by positive nutrition advice (1), **the Food Guidance System graphic and slogan should incorporate practical messages on choosing naturally nutrient-rich foods first**, rather than on avoiding particular nutrients, foods or food groups. The educational component featuring revised Daily Food Intake Patterns should guide consumers to choose naturally nutrient-rich foods first **among and within** the five food groups.

- For example, meat plays an important role in health – and is a fundamental building block in food guidance. In fact, USDA-published food patterns show the important nutrient contributions of meat within a calorically balanced diet. Improved food guidance needs to communicate this important message.
  - Naturally nutrient-rich beef is an excellent source of protein, zinc, vitamin B12, selenium, and phosphorus; and a good source of niacin, vitamin B6, iron, and riboflavin (8). And, ENVIRON data show that, in many ways, beef consumers have a healthier and more varied nutrition profile than non-beef eaters (9).
  - Relying on natural food sources of nutrients, such as lean beef, may have advantages in minimizing risk of nutrient interactions, as demonstrated in a recent study investigating how supplemental zinc lowers measures of iron status in young women with low iron reserves (10).

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The Food Guidance System also must stress variety *within* the five food groups. No single food or food group can provide all the essential nutrients people need each day, and options within each food group bring different nutrient packages and caloric levels to the table.

- Given the current concern over caloric intake relative to obesity, it is important to note that when comparing protein equivalence, lean beef provides significantly fewer calories than do some vegetable proteins. In fact, a one-ounce serving of ground beef contains the same amount of protein as a half cup of legumes, but only about half the calories (based on a ground beef composite).

*C. Advantages and disadvantages of the plan to individualize guidance in contrast to "generalized" messages.*

The Food Guidance System should feature both generalized and individualized food guidance that will allow for all consumers to gain a basic understanding of healthful dietary patterns. We believe this is not an either/or proposition. In fact, in the interest of improving overall public health, food guidance must include both generalized and individualized information.

- **The Food Guide graphic must provide a teachable moment for consumers who may not seek or have access to individualized guidance.** The improved graphic must be available, accessible and meaningful in and of itself to reach people, such as low income and low-literacy populations, who may not have access to individualized information. Additionally, the Food Guide Pyramid has served as an effective teaching tool for school settings, and should continue to provide a visual cue for students about healthful eating.
- **Generalized guidance to choose naturally nutrient-rich foods, such as lean meat and other lean proteins, can help address issues of nutrient adequacy.** Beef's naturally nutrient-rich package is important because nutrient deficiencies clearly have adverse short- and long-term effects. More importantly, increasing evidence suggests that even marginal intakes likely have negative consequences (11, 12).
- There is an appropriate time and place for individualized dietary guidance, particularly when led by a health professional. **The Food Guidance System should offer health professionals and consumers tools they can use to create customized diets together.** The Food Guide must be accompanied by a flexible education system that allows people to individualize diets based on factors such as age, lifestyle and culture.
- **Individualized guidance for consumers is important, but may be impractical for families that shop and prepare meals for multiple people.** Expecting a family of four to prepare four different meals based on individualized eating plans is unrealistic. The Food Guidance System graphic should serve as a tool to teach overall healthful dietary patterns.

*D. Advantages and disadvantages of the planned focus on core messages in contrast to use of a graphic to represent educational messages.*

**The graphic should include the core educational messages because the graphic may be the only interface many people have with the Food Guidance System.** Incorporating all food guidance into core messages alone, instead of also into the Food Guidance System graphic, will lead to missed opportunities to educate the public.

- We agree with the three core messages that CNPP has outlined. These messages provide consistent, science-based nutritional guidance, but do not eliminate the need for a graphic that communicates the core messages. **The following message tenets should be considered** when developing a framework for the Food Guidance System that is intended to foster behavior change in consumers.
  - **Energy balance:** Help consumers balance calorie intake with energy expenditure by including a physical activity component in the Food Guidance System.
  - **Nutrient density:** Guide consumers to identify and choose naturally nutrient-rich foods first, such as fruits, vegetables, whole grains, low- and non-fat dairy products and lean meats.

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- **Chronic disease prevention:** Provide positive messages about choosing foods that combat chronic diseases instead of avoiding certain foods or food groups. For example, choosing lean meat and other lean proteins, and low or non-fat dairy products, will help consumers reduce their saturated fat intake.
  - **At least 19 cuts of beef meet government guidelines for lean**, with less than 10 grams of total fat, 4.5 grams or less of saturated fat, and less than 95 milligrams of cholesterol per serving and per 3 ounce serving (13, 8).

The Dietary Guidelines Alliance, a long-standing public-private partnership between health organizations, the food industry, DHHS and USDA, developed consumer tested messages (14) that fit under the three message pillars and we encourage use of these messages in the Food Guidance System.

**Energy balance:**

- Be flexible: Go ahead and balance what you eat and the physical activity you do over several days. No need to worry about just one meal or one day.
- Be active: Walk the dog, don't just watch the dog walk.

**Nutrient density:**

- Be adventurous: Expand your tastes to enjoy a variety of foods.

**Chronic disease prevention:**

- Be sensible: Enjoy all foods, just don't overdo it.
- Be realistic: Make small changes over time in what you eat and the level of activity you do. After all, small steps work better than giant leaps.

*E. Key components for effective interactive educational tools.*

Nearly half of all Americans have difficulty understanding health information and putting that information into practice (15). Therefore, the new Food Guidance System graphic, messages and educational tools—whether delivered through an interactive format or through traditional means—should be based on sound science and **undergo extensive qualitative and quantitative consumer testing to ensure they are easily understood, and their advice is actionable, achievable and motivational to consumers.** Consumer testing may help close the gap between consumers' high awareness of the Food Guide Pyramid but low compliance with its recommendations (2).

- As with the Thrifty Food Plan in 1999, the CNPP **should test the guidelines described in the new Food Guidance System with typical families from a variety of demographic settings.** Testing will ensure that the recommendations communicate a food plan in accordance with the Dietary Guidelines for Americans and meet the Recommended Daily Intakes for nutrients. Testing also will ensure that typical families can effectively follow the Food Guidance System and will assess the feasibility of generalized versus individualized meal plans.

*F. Channels of delivery for the new Food Guidance System.*

**Public-private partnerships will be critical to creating, testing and disseminating messages.** To reach consumers at all socioeconomic levels with key messages and tools, the new Food Guidance System should use a variety of delivery channels, including Internet-based and print educational materials.

- **CNPP should strengthen its work with the Dietary Guidelines Alliance**, a long-standing, successful partnership between health organizations, the food industry, DHHS and USDA. For more than 10 years, this partnership has successfully communicated healthy lifestyle messages that support the Dietary Guidelines for Americans to millions of Americans.
- To achieve maximum visibility and repetition of key messages, a **comprehensive education/communication campaign** surrounding the new Food Guidance System should be developed that incorporates partnerships with industry, health organizations, extension specialists and leaders in the nutrition and education communities.
- Health professionals play a vital role in ensuring that consumers can understand and apply the Food Guidance System guidelines. **Materials and tools for use by health professionals and educators are critical to the Food Guidance System's success**, especially for individualized nutrition guidance.

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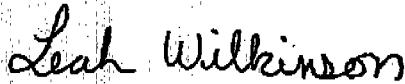
- To reach the broadest audience, **the Food Guidance System must be delivered through a variety of channels** including schools, doctors' offices, hospitals and community organizations.

In conclusion, the new Food Guidance System should serve as a tool to help consumers implement the **Dietary Guidelines for Americans**, retain the well-recognized Pyramid shape but update its advice to reflect current consumer needs and new research, **be based on rigorous consumer testing and integrate marketing principles** to ensure that educational strategies and tools will result in a measurable consumer behavior change.

Thank you for your consideration.



Mary K. Young, M.S., R.D.  
Executive Director, Nutrition  
National Cattlemen's Beef Association



Leah Wilkinson  
Director, Food Policy  
National Cattlemen's Beef Association

cc: Eric Hentges  
Executive Director of the Center for Nutrition Policy and Promotion, US Department of Agriculture  
  
Carole Davis  
Center for Nutrition Policy and Promotion, US Department of Agriculture

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August 26, 2004

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

Re: Comments on the "Proposal for Food Guide Graphic Presentation and Consumer Education Materials"

Dear Food Guide Reassessment Team Members:

Thank you for the opportunity to provide comments on the "Proposal for Food Guide Graphic Presentation and Consumer Education Materials." The American Meat Institute (AMI or the Institute) appreciates the Center for Nutrition Policy and Promotion's (the Center) commitment to transparency throughout the review process.

AMI is the nation's oldest and largest trade association representing packers and processors of beef, pork, lamb, veal, turkey, and processed meat products in the U.S. Our member companies produce more than ninety (90) percent of meat products available in the U.S. AMI supports the use of the *Dietary Guidelines for Americans*, the Food Guide Pyramid, and other educational programs in educating consumers on healthful eating and living. The following comments respond to the questions raised by the Food Guide Reassessment Team (the Team) in the July 13, 2004, *Federal Register* Notice. These comments are meant to strengthen the underlying rationale for continued use of the Pyramid.

- A. Advantages and disadvantages of retaining the current shape of the graphic and other potential shapes to use as a representative of the overall Food Guidance System.

The Pyramid is widely recognized by the American public as a symbol of overall food guidance. The symbol used to communicate food guidance must also be comprehensible and have utility. The often discussed increase in the number of overweight Americans makes it clear that the messages of nutritional adequacy and energy balance, meant to be conveyed by the Pyramid, are not reaching, understood by, or being used by the public. AMI believes, however, this failure is the result of insufficient consumer education rather than the result of an improperly designed graphic.

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In that regard, the education component of the food guidance system necessary to modify consumer behavior is lacking. Living a healthful lifestyle is a learned behavior. Consumers must be educated about nutrition, serving size, and eating habits, as well as the importance of daily physical activity and practical techniques that will allow for long-term weight sustainability to improve their health. These educational efforts must be ongoing and adjusted to reflect the evolving environment in which we live.

AMI supports the Center's continued use of the Pyramid graphic with improved messages and educational outreach that convey the recommendations in the *Dietary Guidelines for Americans* 2005 edition.

- B. Usefulness of the proposed strategies to highlight both motivational/awareness and educational messages.

The Institute agrees that a graphic alone is too simplistic to convey complex messages related to food guidance and would be better used to identify food education program materials issued by the government. The graphic should serve as a reminder for consumers to make smart consumption decisions without delivering overly complicated nutrition messages. The Institute also supports the concept of developing core messages that would serve as the basis of an overall nutrition education framework.

- C. Advantages and disadvantages of the plan to individualize guidance in contrast to "generalized" messages.

The diversity of the American population creates additional challenges for health educators. Interactive personalized guidance tools should be developed by the Center as part of the Food Guidance System and should address the specific needs of different populations (e.g. elderly, children, ethnic groups, etc.). We caution, however, that print materials and web-based tools must not be substituted for an active, government launched television, print media, and/or radio campaign that encourages daily physical activity and healthy food consumption choices.

- D. Advantages and disadvantages of the planned focus on core messages in contrast to use of a graphic to represent educational messages.

Utilizing a graphic to communicate educational messages assures that consumers are receiving the nutrition guidance messages whenever they view the graphic. The graphic historically has been placed on a variety of packaged food items and therefore provided an additional opportunity for public education. However, studies by the Center and other entities have shown that consumers rarely utilize the graphic when it is available on food packaging. Removal of the educational messages from the graphic and utilizing it solely as a reminder of the core nutrition messages will be unsuccessful if the government fails to commit to ongoing nutrition and lifestyle education efforts.

- E. Key components for effective interactive educational tools.

Interactive educational tools need to be readily accessible to the public. Tools should be available at easily remembered web addresses (i.e. [www.goodnutrition.com](http://www.goodnutrition.com)) without having to pass through multiple portals to access information. Further, having these technologies available

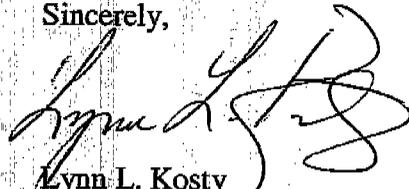
at retail where consumers purchase foods would assist consumers in finding foods that are good sources of specific vitamins and minerals, e.g., vitamin E in almonds or zinc found in beef products.

F. Channels of delivery for the Food Guidance System.

As previously mentioned, print materials and web-based tools must not be substituted for an active, government launched television, print media, and/or radio campaign that encourages improved food choices and lifestyle decisions. Although internet access is readily available to many, it is unclear whether consumers will be sufficiently motivated to seek out the information. Behavior modification is learned and therefore requires repeated exposure for optimal success over the long-term.

The American Meat Institute applauds the Center's effort to update the Food Guide Pyramid to better serve the American consumer. We appreciate your consideration of these recommendations and look forward to our continued work toward a healthier America.

Sincerely,



Lynn L. Kosty  
Director of Regulatory Affairs



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August 26, 2004

Disgs 1 or 6

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

Dear Dr. Hentges:

The Sugar Association, Inc. (Association) is pleased to provide the following comments for Center for Nutrition Policy and Promotion (CNPP) consideration on the proposed revision to the Food Guidance System/Food Guide Pyramid (FGP). The Association would like to acknowledge the dedication and hard work of CNPP staff members in their efforts to revise the current FGP.

The Association would like the FGP revision team to take the following facts about sugars into account as it works to develop a food guidance system that will be useful for consumers and based on the totality of the best available science.

- People eat foods, not individual nutrients.
- Sugar is valued as a food ingredient not only for its flavor enhancement but also for its uniqueness to meet the myriad of fundamental and essential functional requirements.
- There is no scientifically verifiable negative health impact ascribable to sugar intake, including obesity and nutrient displacement, at current consumption levels.
- Every major scientific review completely exonerates the direct involvement of sugars in the etiology of lifestyle diseases.<sup>1,2,3,4</sup>
- The National Academy of Sciences, Institute of Medicine Macronutrient Report (IOM Report) concludes that current scientific data are insufficient to support evidence of any major health impact from sugars intake, including obesity.<sup>5</sup>
- The IOM Report did not set a UL for total or added sugars intake, only a suggested threshold for added sugars.<sup>6</sup>
- In the matter of added sugars and nutrient displacement, the IOM Report stated unequivocally that the suggested intake threshold applied to only some micronutrients within some subpopulation groups. The suggested intake threshold is well above the current average consumption level of sugars in the US population.<sup>7</sup>

Be Sure It's Sugar: The Natural Sweetener... 15 Calories Per Teaspoon!

THE SUGAR ASSOCIATION, INC.

1 • Washington D.C.



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- Authoritative scientific bodies including the US Food and Drug Administration conclude that “added” and “naturally occurring” sugars are indistinguishable and therefore consumers could be misled into believing that food containing no refined sugar is superior to food containing refined sugar.<sup>8</sup>
- Inordinate emphasis on added sugars could create a public health outcome similar to the one resulting from the simplistic focus on low-fat. The importance of energy balance is obscured by such one-dimensional approaches.
- We ask the FGP revision team to consider the potential long-term repercussions the current trend of increasing use of sugar replacers may exert on satiety, metabolism and taste preference, especially among children.

The Association agrees with the many public and private groups advocating retention of the Food Guide Pyramid as the visual symbol for communicating dietary guidance because it is the most recognizable icon of US government nutrition advice. The Association believes that incorporation of hierarchical key messages, such as those proposed by the 2005 Dietary Guidelines Advisory Committee, would only enhance the Pyramid as an actionable communication tool for the American public. For example, the base of the Pyramid could contain the key messages of variety and energy balance within its boundaries, with each additional tier incorporating a key message in order of importance.

For many groups including nutrition educators, the problem is not with the use of the Pyramid as the symbol of food guidance but with the Pyramid’s overly prescriptive information that disregards the realities of how people eat, which makes it hard for the average consumer to not only understand but implement. Pyramid serving sizes are based solely on mathematical calculations designed to assure nutrient adequacy without exceeding caloric intake restrictions. The Association respectfully reminds the FGP revision team that people build their diets on foods, not individual nutrients.

The Association acknowledges that nutrient adequacy is significant and recognizes that this objective is a central consideration of the FGP revision team. However, the Association would like to suggest that the current undue emphasis on upper intake amounts as the standard for defining nutrient adequacy for nutrition advice and food guidance policy may not achieve the primary goal of better overall health for the US public.

The Association respectfully points out that US recommended nutrient intakes are established on the basis of meeting the nutrition needs of 98% of the population.<sup>9</sup> In any short-term dietary sampling, whose information is used as the foundation of food guidance, it is highly unusual if all micronutrient intakes equal their recommended levels. The Association respectfully reminds the FGP revision team that the predisposition “to err on the side of generosity”<sup>9</sup> essentially means micronutrient intakes exceeding 67% of recommended amounts result in nutrient adequate diets.

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In a recent review article, Dr. Cutberto Garza wrote about the importance of considering micronutrient toxicity in the development of revised dietary reference intakes.<sup>10</sup>

“It was clear that scientific, healthcare practitioners and consumer communities had moved beyond focused interest in the prevention of classical nutrient deficiencies.”

“Related to this consideration was an appreciation of the unprecedented ability to manipulate nutrient intakes over wide ranges by increasingly common voluntary fortification of foods, increasing and expanding uses of nutrient supplements and nutrient-related botanicals, and the growing likelihood of expanded capabilities to alter the nutritional characteristics of food crops and animals by genetic modification. These on-going and anticipated changes in food supply raised concerns regarding the evidence base justifying the putative benefits of intake levels higher than necessary to prevent classical deficiency diseases and possibilities of more easily reaching toxic levels of nutrients in diets easily accessible to the public.” (Emphasis Added)

The nutrient profiles of each proposed FGP food group and subgroup recommended for inclusion in the revised FGP<sup>11</sup> were calculated from a weighted average of food amounts reported in the 1994 – 1996 Continuing Survey of Food Intakes by Individuals. The Association is concerned that a majority of the nutrient profiles used in the development of the daily food intake patterns proposed for the revised FGP represent food composition values<sup>12,13</sup> determined before 1990.

Any pre-1990 nutrient profiles used in the development of the revised FGP do not reflect the nutrient values of today’s foods, particularly fortified and enriched grain products. Consequently, more servings than necessary of many FGP food categories, particularly grains, are required to accommodate the prescriptive maximum micronutrient intake levels proposed for the revised food guidance system. As a result, the American public is not only misinformed about the number of calories needed to achieve micronutrient adequacy, but is involuntarily limited in their number of discretionary calories.

When overall nutrient profiles of the proposed food intake patterns<sup>14</sup> are examined, the majority of the proposed micronutrient intake levels exceed their recommended maximums. If overall nutrient intakes had been calculated with the nutrient values of today’s foods, these estimated micronutrient intake levels would be even higher. The precautionary advice proffered by Dr. Garza must be considered when daily food intake patterns are determined solely by calculation.

This mathematical rigidity also makes the proposed dietary guidance too inflexible. If fruits and vegetables are used as the base tier of the FGP, this action would have profound effects on current FGP patterns as well as on the “so called” discretionary added sugars intake proposed for the revised food guidance system. Basing a recommendation for sugars intake solely on a mathematical scheme is not scientific and flawed. Furthermore, this scheme may inadvertently undermine the intent to insure

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nutrient adequate diets. At the 1600-calorie level, for example, the proposed FGP recommendation for added sugars would make it difficult for a child to enjoy a bowl of cold cereal or oatmeal, a fruit-containing yogurt and a glass of chocolate milk in the same day. Such a severe restriction of added sugars could compromise nutrient intake.

A recent study<sup>15</sup> showed that the consumption of sweetened dairy foods and beverages and presweetened cereals increased the quality of children's and adolescent's diets, particularly for calcium, folate and iron. The frequency and amount of food choices is the real issue, not whether a child consumes added sugars. Furthermore, not only are the recommended FGP serving sizes much smaller than what is commonly consumed, but the number of servings are viewed by many as minimum daily requirements. Most consumers consider a large salad, for example, to be a single serving, when in fact it could be as many as 5 FGP servings. The well-intentioned but overly prescriptive FGP advice tends to confuse more than educate.

The nutrition community has called for harmony between the serving sizes of the FGP and the Nutrition Facts Panel. The USDA's answer as to "why the difference" is that the FGP and Nutrition Facts Panel serve different purposes.<sup>16</sup> At a time when consistent messages are so important, the question should be, "Does the American public benefit more from a FGP that promotes rigid eating patterns or more from a FGP that is the visual depiction of evidence-based dietary guidance?"

While the Association believes that discretionary foods or "Treats", should be placed at the top of the FGP, we disagree with not only the overly prescriptive sugars intake limits suggested in the FGP but the manner in which these limits were determined. Most energy dense foods or treats, with few exceptions, are energy dense due to fat content.<sup>17</sup> Suggestions to designate added sugars as discretionary calories does not help average consumers make informed food choices, and may direct them to foods that may have less sugars but not less calories. People eat foods, not individual macronutrients or micronutrients, and sugars are an important ingredient in many healthy foods. This is why the IOM Report could cite no convincing evidence that supported establishment of an upper intake level for added sugars. The fact remains that the FGP suggested levels of added sugars intake are not based on a scientific recommendation or an evidence-based, verifiable negative health impact.

The Association would like to emphasize its strongly held position. The Pyramid's mathematical model lacks the scientific underpinning to be used as the basis to make official or unofficial quantitative recommendations for levels of added sugars intake. This is also the conclusion of the American Dietetic Association (ADA) in its revised position paper on nutritive and non nutritive sweeteners. After providing a detailed description of the construct of the Pyramid, ADA concluded, "Thus, the suggestion of 6% to 10% of energy from added sugars was not based on any scientific evidence regarding health impacts but was calculated using the Food Guide Pyramid."<sup>18</sup>

Thank you for your consideration of these comments,

Respectfully,

*Cheryl Digges*  
Cheryl Digges  
Director Public Policy & Education

*Charles W. Baker*  
Dr. Charles W. Baker  
Vice President Scientific Affairs

*Digges  
5/26/06*

<sup>1</sup>Glinemann, W.H., et. al. Evaluation of health aspects of sugars contained in carbohydrate sweeteners. *J. Nutr* 116(11S):S1-S216, 1986.

<sup>2</sup>National Research Council. *Food and Nutrition Board. Diet and Health: Implications of Reducing Chronic Disease*. National Academy Press, Washington DC, 1989.

<sup>3</sup>World Health Organization and Food and Agriculture Organization of the United Nations. *Carbohydrates in human nutrition*. Report of a Joint FAO/WHO consultation. FAO Food and Nutrition Paper 66, Rome, 1998.

<sup>4</sup>National Academy of Sciences, Institute of Medicine, Food and Nutrition Board. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids*. National Academy Press, 2002.

<sup>5</sup>*Op cit* 4, pg. 6-37.

<sup>6</sup>*Op cit* 4, pg. 6-42.

<sup>7</sup>*Op cit* 4, pg. 6-23.

<sup>8</sup>Federal Register Vol. 58, No. 3 page 2098 January 6, 1993/ Rules and Regulations section b.54:

<sup>9</sup>National Research Council. *Food and Nutrition Board. Recommended Dietary Allowances, 10th edition*. National Academy Press, Washington DC, 1989.

<sup>10</sup>C. Garza, M.D., Ph.D., Moving Beyond the RDA's to Dietary Reference Intakes(DRIs)  
<http://www.cce.cornell.edu/food/expfiles/topics/garza/garzaoverview.html>

<sup>11</sup>United States Department of Agriculture. Food, Nutrition, and Consumer Services; Center for Nutrition Policy and Promotion. Table 4: Nutrient Profiles of Food Guide Pyramid Food Groups and Subgroups.  
<http://www.usda.gov/cnpp/pyramid-update/FGP%20docs/TABLE%204.pdf>.

<sup>12</sup>United States Department of Agriculture. Human Nutrition Information Service. *Agriculture Handbook Number 8, 1990 Supplement*.

<sup>13</sup>United States Department of Agriculture. Human Nutrition Information Service. *Home Economics Report Number 48, 1987*.

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<sup>14</sup>United States Department of Agriculture. Food, Nutrition, and Consumer Services; Center for Nutrition Policy and Promotion. Table 5: Nutrients in Proposed Food Intake Patterns.  
<http://www.usda.gov/cnpp/pyramid-update/FGP%20docs/TABLE%205.pdf>.

<sup>15</sup>CD Fray, RK Johnson, MQI Wang. Children and Adolescents' Choices of Foods and Beverages High in Added Sugars Are Associated with Intakes of Key Nutrients and Food Groups. *Journal of Adolescent Health* 34(1): 56 – 63, 2004.

<sup>16</sup>Serving Sizes in the Food Guide Pyramid and on the Nutrition Facts Label: What's Different and Why?  
<http://www.usda.gov/cnpp/insights/insight22.PDF>

<sup>17</sup>EA Bell and BJ Rolls. Energy density of foods affects energy intake across multiple levels of fat content in lean and obese women. *Amer J Clin Nutr* 73(6): 1010-1018, 2001.

<sup>18</sup> *Position of the American Dietetic Association: Use of Nutrition and Nonnutritive Sweeteners*, "Journal of the American Dietetic Association," Feb. 2004 p. 255-275  
[http://www.eatright.org/Public/Other/index\\_adap0598.cfm](http://www.eatright.org/Public/Other/index_adap0598.cfm)