



# Whole Grains:

Dietary Recommendations, Consumption Patterns, and Health Promotion



**Dr. Robert C. Post, Acting Executive Director/Deputy Director**



**USDA** Center for Nutrition Policy and Promotion

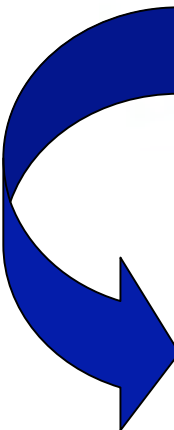
**Make (At Least!) Half Your Grains Whole Conference  
Alexandria, Virginia  
April 22, 2009**



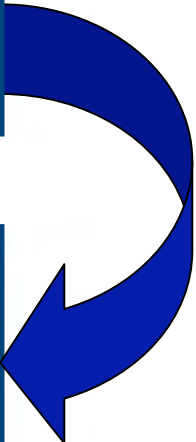
# *USDA Center for Nutrition Policy and Promotion*

**Improve the Nation's Nutrition and Health**

**Promote Healthier Eating Habits  
and Lifestyles**



**Eating Habits More Consistent With the Dietary  
Guidelines for Americans**





## *CNPP's Outcome-Focused, Projects that Inform Public Policy*

Dietary Guidelines for Americans

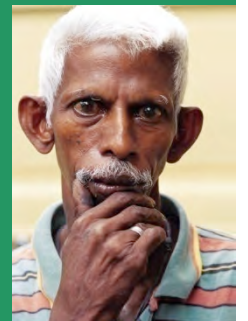
MyPyramid Educational Tools

USDA Food Plans

Food Supply Series

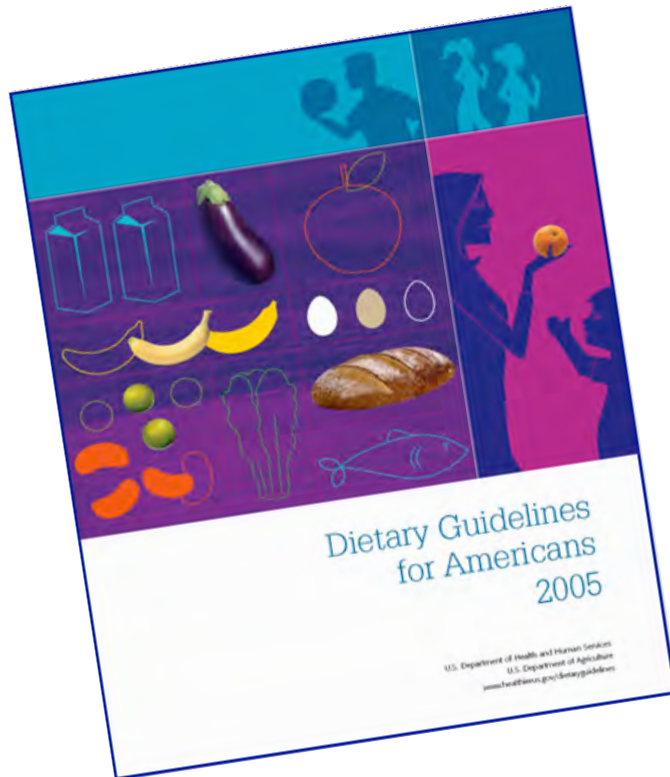
Expenditures on Children

Healthy Eating Index





# *Dietary Guidelines for Americans: Federal Nutrition Policy*



- For policymakers and health professionals
- Separate policy and consumer documents
- 23 general recommendations
- 18 population-specific recommendations (e.g., for older Americans, children, African Americans)



## *2005 Dietary Guidelines: Nine major focus areas*

- Adequate Nutrients Within Calorie Needs
- Weight Management
- Physical Activity
- Food Groups to Encourage
- Fats
- Carbohydrates
- Sodium and Potassium
- Alcoholic Beverages
- Food Safety





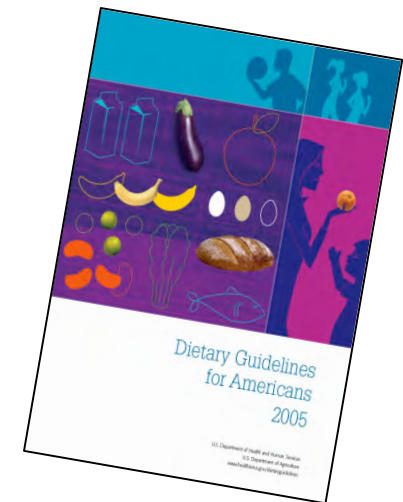
# 2005 Dietary Guidelines: Summary of Recommended Food Pattern Changes

## More

- fruits
- dark green vegetables
- orange vegetables
- legumes
- whole grains
- low-fat milk and milk products
- physical activity

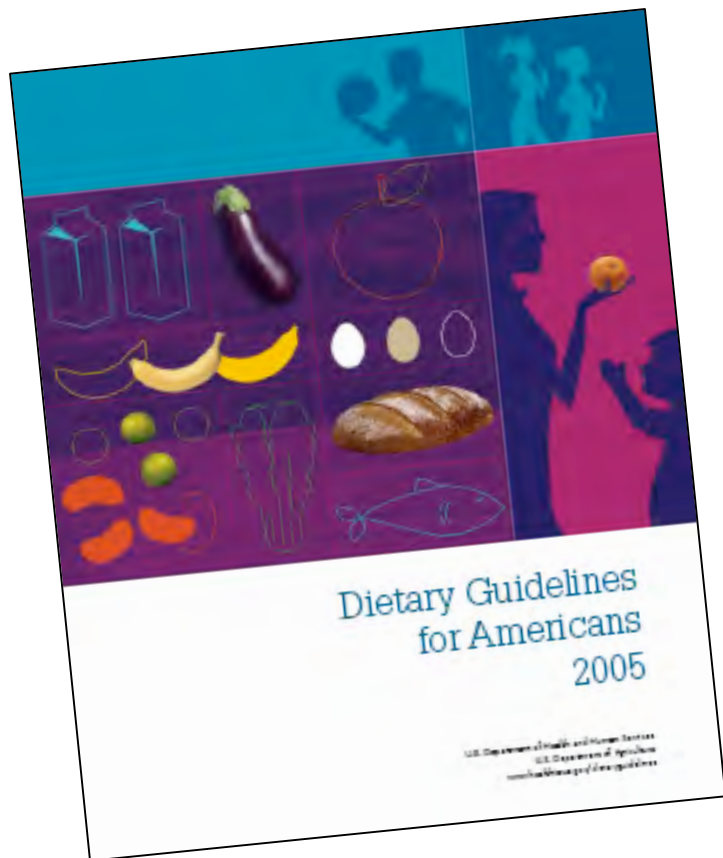
## Less

- saturated fats
- *trans* fats
- cholesterol
- added sugars
- refined grains
- sodium





# Dietary Guidelines for Americans: Consumer Messages



**Focus on fruits.**

**Vary your veggies.**


**Get your calcium-rich foods.**

**Make half your grains whole.**

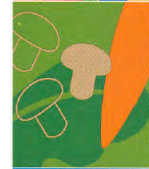
**Go lean with protein.**

**Know the limits on fats, salt, and sugars.**


Mix up your choices within each food group.



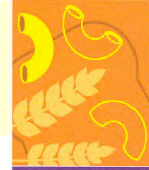
**Focus on fruits.** Eat a variety of fruits—whether fresh, frozen, canned, or dried—rather than fruit juice for most of your fruit choices. For a 2,000-calorie diet, you will need 2 cups of fruit each day (for example, 1 small banana, 1 large orange, and ¼ cup of dried apricots or peaches).




**Vary your veggies.** Eat more dark green veggies, such as broccoli, kale, and other dark leafy greens; orange veggies, such as carrots, sweetpotatoes, pumpkin, and winter squash; and beans and peas, such as pinto beans, kidney beans, black beans, garbanzo beans, split peas, and lentils.



**Get your calcium-rich foods.** Get 3 cups of low-fat or fat-free milk—or an equivalent amount of low-fat yogurt and/or low-fat cheese (1½ ounces of cheese equals 1 cup of milk)—every day. For kids aged 2 to 8, it's 2 cups of milk. If you don't or can't consume milk, choose lactose-free milk products and/or calcium-fortified foods and beverages.



**Make half your grains whole.** Eat at least 3 ounces of whole-grain cereals, breads, crackers, rice, or pasta every day. One ounce is about 1 slice of bread, 1 cup of breakfast cereal, or ½ cup of cooked rice or pasta. Look to see that grains such as wheat, rice, oats, or corn are referred to as “whole” in the list of ingredients.



**Go lean with protein.** Choose lean meats and poultry. Bake it, broil it, or grill it. And vary your protein choices—with more fish, beans, peas, nuts, and seeds.

**Know the limits on fats, salt, and sugars.** Read the Nutrition Facts label on foods. Look for foods low in saturated fats and *trans* fats. Choose and prepare foods and beverages with little salt (sodium) and/or added sugars (caloric sweeteners).



## *The 2005 Dietary Guidelines Recommends...*

*“...consumption of 3 or more ounce equivalents of whole grains per day by substituting whole grains for refined grains. In general, at least half the grains consumed should come from whole grains.”*







# Implementation Challenge:

According to NHANES 1999-2002: **Whole Grain** Consumption

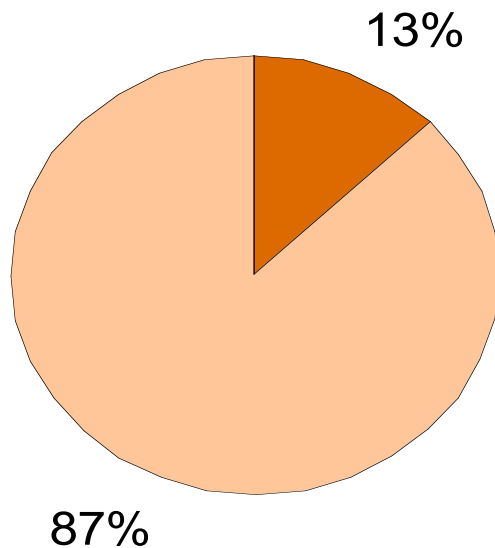
- Only 13% of total grain consumption was whole grain
  - 42% of respondents consumed no whole grains on survey date
  - 8% consumed 3 or more whole grains servings
  - A mere 5% of those consuming whole grains made “half their grains whole”



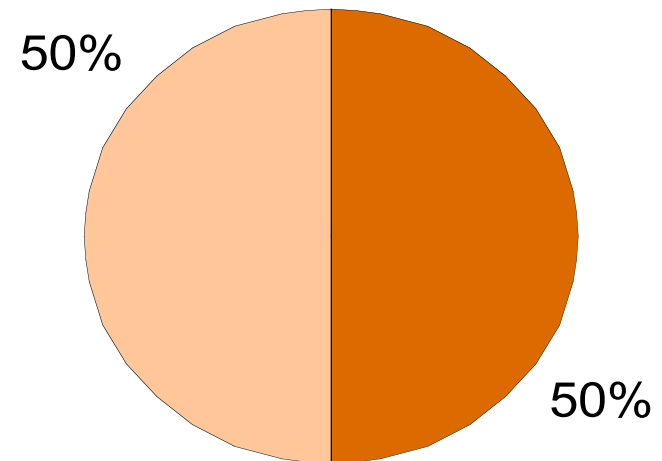


# Grain Recommendations Compared to Consumption

Consumed\*



Recommended\*



\*Females 31-50



# *Healthy Eating Index: A Measure of Diet Quality*

## Purposes

- To assesses conformance to dietary guidance
- To serve as a USDA performance indicator of positive dietary behavioral changes





## The HEI-2005: Nutrient-Density Approach

Estimated mean total and component scores for children ages 2 to 17, U. S., 2003-04

Component (maximum score)	Age 2-5 years (n=763)	Age 6-11 years (n=900)	Age 12-17 years (n=1,623)	Age 2-17 years (n=3,286)
Total Fruit (5)	5.0	2.9	2.5	3.2
Total Whole Fruit (5)	4.3	2.7*	2.2 <sup>†</sup>	2.8
Total Vegetables (5)	2.2	2.3	2.4	2.3
Dark Green and Orange Vegetables and Legumes (5)	0.6	0.5	0.6	0.6
<b>Total Grains (5)</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>
<b>Whole Grains (5)</b>	<b>0.8</b>	<b>0.9</b>	<b>0.6<sup>†</sup></b>	<b>0.8</b>
Milk (10)	10.0	8.7*	7.7 <sup>†</sup>	8.7
Meat and Beans (10)	7.3	7.8	8.8 <sup>†</sup>	8.1
Oils (10)	5.5	6.6	7.5 <sup>†</sup>	6.7
Saturated Fat (10)	4.7	5.2	5.4	5.2
Sodium (10)	4.8	4.5	4.2 <sup>†</sup>	4.4
Extra Calories (20)	9.4	7.7*	7.9 <sup>†</sup>	8.1
<b>Total HEI-2005 score (100)</b>	<b>59.6</b>	<b>54.7</b>	<b>54.8</b>	<b>55.9</b>

\*Age 2-5 versus 6-11 (significantly different,  $p < 0.05$ ).

<sup>†</sup>Age 2-5 versus 12-17 (significantly different,  $p < 0.05$ ).



## Environment for Behavior Change: Some Good Signs

- 2008 IFIC Foundation Food & Health Survey (n=669)
- Changes Made to Improve Healthfulness of Diet: Which of the following changes, if any, have you made in the past six months to improve the healthfulness of your diet?
- *Eating less of a specific food: 71%*
- *Eating more of a certain food component: 37% (up from 29% from 2006)*



# Concern for Food Components

- Americans are concerned about the amount (55%) **and** type (52%) of carbohydrates they consume

Does this mean that, regarding grains and whole grains, we need to craft a better message about the importance of “type” vs “amount”?



## 2008 IFIC Foundation Food & Health Survey

- Two-thirds of Americans (67%) agree that reading or hearing about the relationship between food and health is of interest to them
- 87% say they are aware of MyPyramid; 51% say they know a fair amount about it
- Popular press, doctor's office, food packaging, grocery stores, web site



***MyPyramid:***

***Helping Consumers Implement the Guidelines***



**MyPyramid.gov**  
STEPS TO A HEALTHIER YOU





Search MyPyramid.gov

Go

### Subjects

- My Pyramid Plan
- **Inside the Pyramid**
- Tips & Resources
- Dietary Guidelines
- For Professionals
- Related Links
- My Pyramid Tracker

You are here: [Home](#) / [Inside the Pyramid](#)

## Inside the Pyramid

### Grains

**Make half your grains whole**



- Eat at least 3 ounces of whole grain bread, cereal, crackers, rice, or pasta every day.
- Look for "whole" before the grain name on the list of ingredients.

[Learn more >>](#)

### Related Topics

- [Grains](#)
- [Vegetables](#)
- [Fruits](#)
- [Milk](#)
- [Meat & Beans](#)
- [Oils](#)
- [Discretionary Calories](#)
- [Physical Activity](#)



Search MyPyramid.gov

Subjects

- ▶ My Pyramid Plan
- ▶ Inside the Pyramid
- ▶ Tips & Resources
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- ▶ Related Links
- ▶ My Pyramid Tracker

You are here: Home / My Pyramid

## My Pyramid Plan

Based on the information you provided and the average needs for your age, gender and physical activity [Age: 54, Sex: male, Physical Activity: More than 60 minutes ] your results indicate that you should eat these amounts from the following food groups daily.

Your results are based on a 2800 calorie pattern\*.

▶ Grains *	10 ounces	<a href="#">tips</a>
▶ Vegetables **	3.5 cups	<a href="#">tips</a>
▶ Fruits	2.5 cups	<a href="#">tips</a>
▶ Milk	3 cups	<a href="#">tips</a>
▶ Meat & Beans	7 ounces	<a href="#">tips</a>

Click the food groups above to learn more.

### \* Make Half Your Grains Whole

Aim for at least 5 whole grains a day

### \*\* Vary Your Vegetables

Aim for this much every week:

- Dark Green Vegetables = 3 cups weekly
- Orange Vegetables = 2 1/2 cups weekly
- Dry Beans & Peas = 3 1/2 cups weekly
- Starchy Vegetables = 7 cups weekly
- Other Vegetables = 8 1/2 cups weekly

### Oils & Discretionary Calories

Aim for 8 teaspoons of oils a day

Limit your extras (extra fats & sugars) to 374 Calories

\*This calorie level is only an estimate of your needs. Monitor you body weight to see if you need to adjust your calorie intake.



### View, Print & Learn More:

▶ [Click here to view and print a PDF version of your results.](#)

▶ [Click here to view and print a PDF of a helpful Meal Tracking Worksheet.](#)

▶ [For more detailed assessment of your diet quality and physical activity go to the My Pyramid Tracker.](#)

You will need the free [Adobe Acrobat Reader](#) plug-in to view and print the above PDF files.



## The 2005 Dietary Guidelines (DG) Recommendations for **JohnDoe** on 4/11/2005

Click directly on the 😊 😐 😞 emoticon (face) for more detailed dietary information.

Dietary Guidelines Recommendations	Emoticon	Number of cup/oz. Equ. Eaten	Number of cup/oz. Equ. Recommended
Grain	😊	5.7 oz equivalent	6 oz equivalent
Vegetable	😊	2 cup equivalent	2.5 cup equivalent
Fruit	😞	0.8 cup equivalent	2 cup equivalent
Milk	😐	2 cup equivalent	3 cup equivalent
Meat and Beans	😊	5.2 oz equivalent	5.5 oz equivalent

Dietary Guidelines Recommendations	Emoticon	Amount Eaten	Recommendation or Goal
Total Fat	😞	45.9% of total calories	20% to 35%
Saturated Fat	😞	14.6% of total calories	less than 10%
Cholesterol	😊	258 mg	less than 300 mg
Sodium	😞	7406 mg	less than 2300 mg
Oils	*	*	*
Discretionary calories (solid fats, added sugars, and alcohol)	*	*	*



# MyPyramid: Consumer Tools and Materials

## MyPyramid Plan

- Easy introduction to MyPyramid: Consumers can get an estimate of their food needs

## MyPyramid Tracker

- Advanced tool: Provides sophisticated analysis of food intake and physical activity

## MyPyramid Posters

- Easy-to-use print materials: Explain the messages of MyPyramid

The screenshot shows the MyPyramid.gov website. At the top, it features the USDA logo and the text 'United States Department of Agriculture' on the left, and the 'MyPyramid.gov' logo on the right. Below this is a navigation bar with links for 'Home', 'About Us', 'News & Media', 'Site Help', and 'Contact Us'. The main content area is titled 'Steps to a Healthier You' and features a large graphic of a person climbing a staircase next to a colorful pyramid. To the left of this graphic is a search box and a 'Subjects' menu with options like 'My Pyramid Plan', 'Inside the Pyramid', 'Tips & Resources', 'Dietary Guidelines', 'For Professionals', 'Related Links', and 'My Pyramid Tracker'. To the right of the graphic is the 'My Pyramid Plan' form, which includes fields for 'Age' and 'Sex', a 'Physical Activity' dropdown menu, and a 'SUBMIT' button. Below the main content area are several 'Spotlights' sections: 'Tour MyPyramid', 'Mini-Poster Download', 'Inside The Pyramid', and 'Tips & Resources'. On the far right, there are two additional boxes: 'My Pyramid Tracker' and 'Tip of the Week'. At the bottom of the page, there is a footer with links for 'USDA.gov', 'FOIA', 'Accessibility Statement', 'Privacy Policy', 'Non-Discrimination Statement', 'Information Quality', 'FirstGov', and 'White House'.



# MyPyramid Menu Planner

- Can plan food intake for a day or up to a week
- Provides immediate feedback as foods entered
- Encourages behavior change – taking small steps
- Can plan for family or a small group

The screenshot shows the MyPyramid Menu Planner interface. At the top, it features the USDA logo and the text 'United States Department of Agriculture'. The main header includes 'MyPyramid Menu Planner' and a navigation menu with options like 'Menu Planner', 'Reports', 'Tips', 'Edit Profile', 'Add Family Member', 'Register', 'Help', and 'Site Tour'. A 'Start Menu Planning' section prompts users to search for foods and beverages. The 'Daily Goals' section displays five food groups with their respective goals and current progress: Grains (6 oz goal, 6 1/2 oz current), Vegetables (2 1/2 cups goal, 1 3/4 cups current), Fruit (2 cups goal, 1 cup current), Milk (3 cups goal, 2 cups current), and Meat & Beans (5 1/2 oz goal, 6 oz current). A 'Daily Limits' section shows a total calorie goal of 2000, with a current total of 1513. It also displays 'Extras' (265 calories) and 'Oils' (6 tsp, 4 units). The bottom section shows a 'Menu' for 'Day 1' with a list of meals: Breakfast (Oatmeal, Fat free milk, Strawberries), Lunch (Mixed salad greens, Italian dressing, Roast beef), Dinner (Spaghetti with tomato sauce, Meatloaf), and Snacks (Flavored yogurt, Raw carrots). A 'Copy Meals' button is visible in the top right of the menu section.



# MyPyramid for Kids

## MyPyramid for Kids

- Developed by FNS, in collaboration with CNPP
- Allows children (6 to 11 years old) to “fuel” their rocket with food and physical activity
- Helps children keep track of how their choices fit into MyPyramid





# MyPyramid for Moms

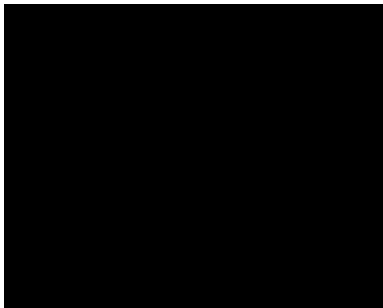


- Includes a MyPyramid Plan personalized for Moms' trimester or stage of breastfeeding
- Provides information on a variety of topics, from nutritional needs to food safety

The screenshot shows the MyPyramid.gov website interface. At the top, there is a navigation menu with links for Home, About Us, News & Media, Site Help, Online Ordering, Contact Us, and En Español. Below the menu is a search bar and a 'Go' button. A sidebar on the left lists various subjects, with 'Pregnancy & Breastfeeding' selected. The main content area features a heading 'MyPyramid for Pregnancy & Breastfeeding' and a section titled 'When you are pregnant or breastfeeding, you have special nutritional needs.' This section includes three key points: 'First' (visit your health care provider), 'Next' (get your own MyPyramid Plan for Moms), and 'Then' (learn more by choosing a topic). A 'Menu of Topics' is provided at the bottom, listing various subjects like 'MyPyramid Plan for Moms', 'Pregnancy—Nutritional Needs', 'Breastfeeding—Nutritional Needs', etc. A small image of a pregnant woman is visible on the right side of the page.



# MyPyramid for Preschoolers



Designed for parents of preschool children 2 to 5 years old.


Helps parents teach their children to develop healthy habits.

Go

**Subjects**

- MyPyramid Basics
  - Inside the Pyramid
  - Tips & Resources
  - Got a Question?
- Interactive Tools
  - MyPyramid Plan
  - Menu Planner
  - MyPyramid Tracker
  - Child Cost Calculator
- Multimedia
  - Video Podcasts
  - Audio Podcasts
  - PSAs
  - Animation
- Specific Audiences
  - Preschoolers (2-5y)
  - Kids (6-11y)
  - Pregnancy & Breastfeeding
  - General Population
- For Professional Use
- Steps to a Healthier Weight
- Dietary Guidelines
- Partnering with

## MyPyramid for Preschoolers



MyPyramid Plan

**Use MyPyramid to help your preschooler eat well, be active, and be healthy.**


MyPyramid for Preschoolers is for children 2 to 5 years of age. Click on the blue button to get a customized MyPyramid Plan for your preschooler.

**Explore ways to help your preschooler:**


- **Grow up healthy.** Complete a growth chart especially for your child to find out more about normal development.
- **Develop healthy eating habits.** Raise a healthy eater by setting a good example and practicing positive habits.
- **Try new foods.** Help for picky eaters.
- **Play actively every day.** Add physical activity into your preschooler's day.
- **Follow food safety rules.**

**Learn more:**

- **Sample Meals Patterns, Meals and Snacks**
- **Find Kitchen Activities for preschoolers**
- **Search for More Information.**



*You are the most important influence on your child. You can do many things to help your children develop healthy eating habits for life.*







## *Partnering with MyPyramid*

<http://www.mypyramid.gov/Challenge/index.html>

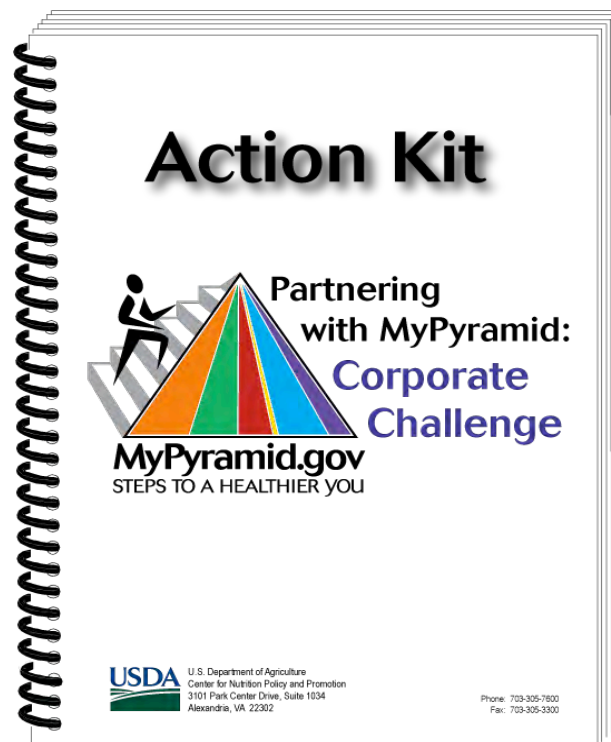
A program initiated by USDA to encourage corporations to use MyPyramid messages in promoting healthy food and lifestyle choices.





## Partnering with MyPyramid

<http://www.mypyramid.gov/Challenge/downloads/ActionKit.pdf>



An easy guide to help companies sign on to the Corporate Challenge that includes:

- What is Partnering with MyPyramid?
- How do I sign up?
- Project Ideas




## *Grains-based Food Industry Efforts to Increase **Whole Grain** Consumption*

- Reformulating existing products with new ingredients (Sustagrain<sup>®</sup> , Ultragrain<sup>®</sup> , and MaizeWise<sup>TM</sup>)
- Developing new products (wholegrain flour with taste and texture similar to that of refined flour products, Soft and Smooth Whole Grain White, developed Kansas Diamond<sup>TM</sup> white whole-wheat extra-fine flour)
- Educating consumers thru grain product labels and promotions (2-Week Fiber Challenge, Whole Grains Stamp, and “Just Ask<sup>TM</sup>” campaign)





# MyPyramid on Food Labels



**MyPyramid.gov**  
STEPS TO A HEALTHIER YOU

One serving contains

- ½ cup of vegetables
- 1 ounce of grains

MyPyramid recommends 2 ½ cups of vegetables and at least 3 ounces of whole grains per day for a 2000 calorie intake pattern.

**Nutrition Facts**  
Serving Size ½ cup (114g)  
Servings Per Container 4

---

**Amount Per Serving**  
**Calories 90**    Calories from Fat 30

---

	% Daily Value*	
<b>Total Fat</b> 3g		5%
Saturated Fat 0g		0%
<b>Cholesterol</b> 0mg		0%
<b>Sodium</b> 300mg		13%
<b>Total Carbohydrate</b> 13g		4%
Dietary Fiber 3g		12%
Sugars 3g		
<b>Protein</b> 3g		

---


Vitamin A 80%    •    Vitamin C 60%  
Calcium 4%    •    Iron 4%

\* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories: 2,000		2,500	
Total Fat	Less than 65g	80g		
Sat Fat	Less than 20g	25g		
Cholesterol	Less than 300mg	300mg		
Sodium	Less than 2,400mg	2,400mg		
Total Carbohydrate	300g	375g		
Dietary Fiber	25g	30g		

---

Calories per gram:  
Fat 9 • Carbohydrate 4 • Protein 4



One serving contains

- ½ cup of vegetables
- 1 ounce of grains.

MyPyramid recommends 2½ cups of vegetables and at least 3 ounces of whole grains per day for a 2000 calorie intake pattern.

Ingredients: asdl asl alsdkf  
asdlf alsdfj lasd spalw wlicgh



# ConAgra Foods®

MyPyramid food group information on about 700 ConAgra food products in the grocery - Summer 2009.



# GENERAL MILLS

- Reaching 10,000 Latinas with a 10-lesson nutrition plan
- Box Tops for Education newsletter on MyPyramid sent to 1.3 million consumers
- 482,000 unique visitors to website MyPyramid article

### Program Update Email Newsletters

**Be the first to know!** You'll receive Box Tops newsletters with the latest information for your school, including:

- Your school's earnings progress
- Opportunities to win Bonus Box Tops
- New Box Tops product updates
- Recipes and coupons for Box Tops products
- Ways to earn more cash for your school when you shop online through the Marketplace.

[Subscribe now »](#)

[See the most recent Box Tops newsletter »](#)



40,000 visitors per month to Wellness website.

Launching today—A new interactive MyPyramid website tool to help consumers reach their personalized MyPyramid goals.

The screenshot shows the Campbell's Nutrition &amp; Wellness website. The header includes the Campbell's logo, the text 'Nutrition &amp; Wellness', and the tagline 'Nourishing people's lives everywhere, every day.' Below the header is a navigation bar with links for 'Home', 'Your MyPyramid Goals', and 'Campbell's@ MyPyramid Menus'. The main content area features a large graphic of a person climbing a staircase labeled 'ACTIVITY' next to a colorful MyPyramid pyramid. The pyramid is divided into five colored bands: orange (Grains), green (Vegetables), red (Fruits), blue (Milk), and purple (Meat &amp; Beans). Below the pyramid is a collection of food items. To the right of the main graphic is a text box that reads: 'Roll your mouse over the colored bands and learn more about each category, and how Campbell's products can help you meet your MyPyramid goals.' Below this text is a button labeled 'Determine Your MyPyramid Goals'. At the bottom of the page, there is a footer with copyright information and links for 'Legal Information', 'Privacy Policy', 'Allergen Labeling', 'Contact Us', 'Site Map', and 'Search Campbell'.



## *Partnering with MyPyramid Challenge*

Since kickoff in June 2008....

- 50% increase over Fall 2007
- MyPyramid.gov receiving **50 - 90 million** hits per **week**
- 250,000 new visitors per week – MyPyramid Menu Planner alone



# MyFood--pedia

## MyPyramid: New Tool Under Construction

### MyFood--pedia

Quick access to food info.  
Find the calories and MyPyramid food groups.

Enter food name:

### MyFood--pedia

Quick access to food info.  
Find the calories and MyPyramid food groups.

Enter food name:

The closest matches for cheerios are:

[Cheerios](#)  
[Honey Nut Cheerios](#)  
[Sweet cherries \(raw\)](#)  
[Maraschino cherries](#)

### MyFood--pedia

#### Honey Nut Cheerios

Choose an amount:

#### Add-ons

- 1% milk (low fat)
- Fat free milk (skim)
- Soymilk, plain (calcium fortified)
- White sugar (granulated or lump)
- Whole milk

#### Results—food groups and calories:

● Grains	½ oz.
Whole Grains	½ oz.
● Milk	½ cup(s)

**Total Calories**            **112**  
Extras\*                      40 Calories  
\* (solid fats, added sugars, or alcohol)

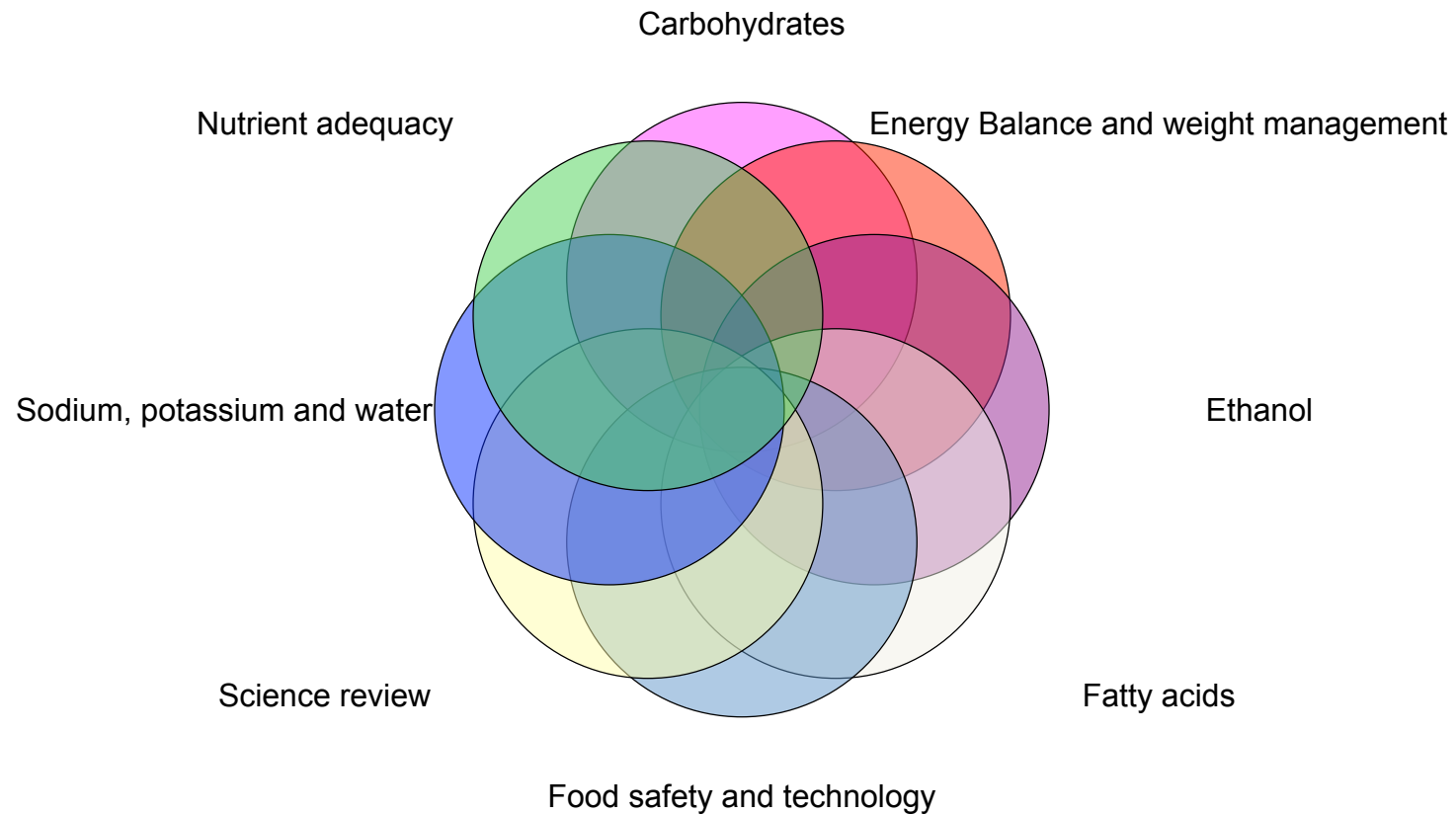
Learn more at [www.MyPyramid.gov](http://www.MyPyramid.gov).

Brought to you by USDA Center for  
Nutrition Policy and Promotion.





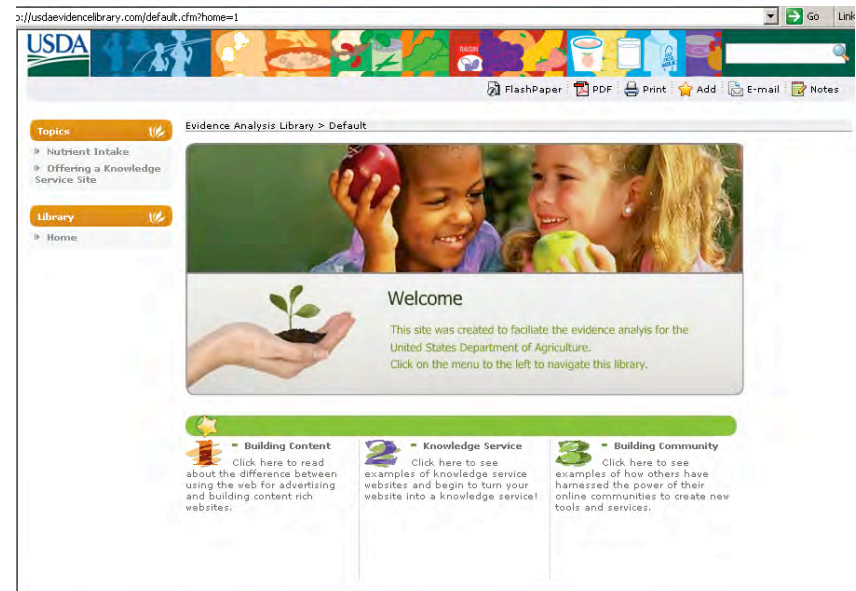
# *2010 Dietary Guidelines Advisory Committee: Key topic areas/Subcommittees*





## USDA's Nutrition Evidence Library (NEL)

- Web-based system and set of tools to support evidence-based scientific review process
- Portfolios of evidence abstracts, overview worksheets, evidence summaries and conclusion statements
- Document sharing, tracking, and archiving
- Work group communication tools
- Project status reports

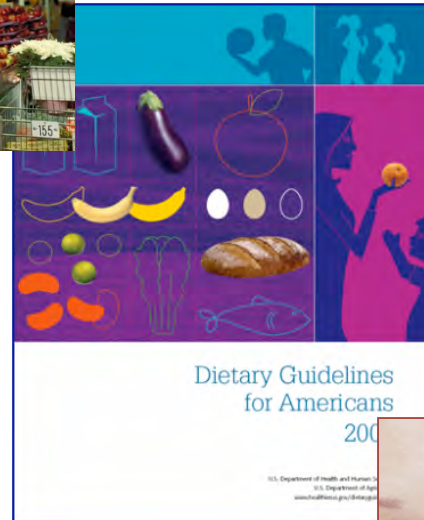




## *Nutrition Evidence Library (NEL) Purpose*

- *To serve as a resource for the 2010 Dietary Guidelines Advisory Committee*
- *To inform Federal nutrition policy*
- *To identify research gaps for scientists*
- *To assist nutrition educators*
- *To provide science-based information to nutrition stakeholders and consumers*





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