Nutrition and Health: Issues and Insights

Jamie Pope, MS, RDN, LDN, FAND
Assistant Professor, Nutritional Sciences
Vanderbilt University School of Nursing

DATES: Tuesdays and Thursdays, June 18, 20, 25, 27; July 9, 11
TIME: 10:00 a.m.–11:30 a.m.
LOCATION: Scarritt Bennett Center, Laskey Hall, 1008 19th Ave S
HALF OF THOSE POLLED
BELIEVE IT IS EASIER TO DO THEIR TAXES
THAN TO FIGURE OUT HOW TO EAT HEALTHFULLY

THE BREAKDOWN:

52%* OF THOSE POLLED
Think it is harder to figure out what you should and shouldn’t eat to be healthier.

48% OF THOSE POLLED
Think it is harder to figure out how to do your own taxes.

Those most in need of learning how to eat healthfully, those with high BMI, heart disease or cholesterol issues, or high blood pressure - ARE MORE APT TO FIND IT DIFFICULT.

GROUPS MORE LIKELY TO SAY FIGURING OUT WHAT TO EAT IS HARDER:

- MEN (55%) vs. 48% of WOMEN
- NO COLLEGE DEGREE (56%) vs. 40% of COLLEGE GRADS
- BMI in the OBESE (60%) or OVERWEIGHT (54%) range vs. 42% low BMI
- HEART DISEASE (59%) or HIGH CHOLESTEROL (54%) and HIGH BLOOD PRESSURE (57%) vs. 48% NO HEALTH CONDITIONS
Best Diets Overall

#1 Mediterranean Diet
#2 DASH Diet
#3 Flexitarian Diet
#4 MIND Diet
#4 Weight Watchers Diet
#6 Mayo Clinic Diet
#6 Volumetrics Diet
#8 TLC Diet
How Eating Plans Evaluated


• A panel of nationally recognized experts in diet, nutrition, obesity, food psychology, diabetes and heart disease rated each diet considering:
  • how easy to follow
    • https://health.usnews.com/wellness/food/articles/what-makes-a-diet-easy-to-follow
  • ability to produce short-term and long-term weight loss
  • nutritional completeness
    • conformance with 2015 Dietary Guidelines for Americans
  • safety and potential for preventing and managing diabetes and heart disease
What is a Healthy Diet?

- A healthy diet should:
  - Meet nutrient and calorie needs at different life stages
  - Help maintain a healthy body weight
  - Help prevent chronic diseases
  - Foster an enjoyment of eating and appreciation of food
Adequacy, balance, variety and moderation are the core characteristics of healthy diets

- Characteristics....
  - Adequate amounts of essential nutrients
  - Balanced across food groups and macronutrients
  - Variety of foods
  - Moderation and not overindulging
Healthy diets include foods that are good sources of a number of nutrients relative to the amount of calories.

• **Nutrient-dense foods**
  • Provide healthy nutrients in appreciable amounts relative to calories

• **Energy-dense (or empty calorie) foods**
  • Provide calories and low amounts of nutrients

• It is easier to build an adequate and healthy diet around nutrient-dense foods than around empty calorie foods.
The typical American diet does not align with recommended limits or goals

- Excessive amounts of energy-dense foods
- Insufficient amounts of nutrient-dense foods
Healthy diets include foods that are good sources of a number of nutrients relative to the amount of calories

- **Nutrient-dense foods**
  - provide healthy nutrients in appreciable amounts relative to calories

- **Energy dense (or empty calorie) foods**
  - provide calories and low amounts of nutrients

- It is easier to build an adequate and healthy diet around nutrient-dense foods than around empty calorie foods
**Nutrient Dense and Non-Nutrient Dense Forms of Sample Foods**

**FIGURE 5-2. Examples of the Calories in Food Choices That Are Not in Nutrient Dense Forms and the Calories in Nutrient Dense Forms of These Foods**

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Calories in nutrient-dense form of the food</th>
<th>Additional calories in food as consumed</th>
<th>Total Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra lean ground beef patty</td>
<td>184</td>
<td>52</td>
<td>236 total</td>
</tr>
<tr>
<td>Baked chicken breast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breading and frying fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breaded fried chicken strips</td>
<td>138</td>
<td>108</td>
<td>246 total</td>
</tr>
<tr>
<td>Baked chicken breast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breading and frying fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frosting corn flakes cereal</td>
<td>90</td>
<td>57</td>
<td>147 total</td>
</tr>
<tr>
<td>Corn flakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Added sugars</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curly French fried potatoes</td>
<td>117</td>
<td>141</td>
<td>258 total</td>
</tr>
<tr>
<td>Baked potato</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frying fat</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweetened applesauce</td>
<td>105</td>
<td>68</td>
<td>173 total</td>
</tr>
<tr>
<td>Unsweetened applesauce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Added sugars</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole milk</td>
<td>83</td>
<td>66</td>
<td>149 total</td>
</tr>
<tr>
<td>Fat-free milk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk fat</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Energy density is the number of calories in a given volume of food

- **Energy density** (calorie-density)
  - Number of calories in a portion of food divided by the food’s weight in grams
    - Example: 107 calories in 20 grams of potato chips
    - Energy density: $\frac{107}{20} = 5.4$

- Fat, sugar and alcohol tend to increase energy density
- Fluid (water) and fiber tend to decrease energy density
The water, fiber, and fat content of foods is the primary factor that determines energy density.
For an equal number of calories, portion size decreases as energy-density increases.

**WHAT YOU GET FOR 200 CALORIES:**

- **Grapes**
  - 2 cups, 184 grams
  - 150 grams of H₂O
  - < 1 gram fat

- **Cashews**
  - ¼ cup, 34 grams
  - < 1 gram H₂O
  - 16 grams fat

- **Raisins**
  - ½ cup, 67 grams
  - 10 grams of H₂O
  - < 1 gram fat
Eating a low energy-dense diet allows you to eat a larger volume of food, all while maintaining energy balance.
## Energy Density of Common Foods

<table>
<thead>
<tr>
<th>Higher energy-dense food</th>
<th>calories/g</th>
<th>Lower energy-dense food</th>
<th>calories/g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taco shell</td>
<td>4.7</td>
<td>Corn tortilla</td>
<td>2.2</td>
</tr>
<tr>
<td>Bologna</td>
<td>3.1</td>
<td>Sliced turkey breast</td>
<td>0.9</td>
</tr>
<tr>
<td>Fried chicken</td>
<td>2.8</td>
<td>Grilled chicken</td>
<td>1.7</td>
</tr>
<tr>
<td>Fried pork chop</td>
<td>2.8</td>
<td>Broiled pork chop</td>
<td>2.0</td>
</tr>
<tr>
<td>Cheeseburger</td>
<td>2.7</td>
<td>Bean burrito</td>
<td>1.9</td>
</tr>
<tr>
<td>Hash brown potatoes</td>
<td>2.2</td>
<td>Boiled potato</td>
<td>0.9</td>
</tr>
<tr>
<td>Fried fish</td>
<td>2.2</td>
<td>Broiled fish</td>
<td>1.2</td>
</tr>
<tr>
<td>Fried rice</td>
<td>1.6</td>
<td>Rice</td>
<td>1.3</td>
</tr>
<tr>
<td>Potato salad</td>
<td>1.4</td>
<td>Tossed salad with salad dressing</td>
<td>1.1</td>
</tr>
<tr>
<td>Frozen, sweetened strawberries</td>
<td>1.1</td>
<td>Fresh strawberries</td>
<td>0.3</td>
</tr>
</tbody>
</table>

[https://www.cdc.gov/nccdphp/dnпа/nutrition/pdf/r2p_energy_density.pdf](https://www.cdc.gov/nccdphp/dnпа/nutrition/pdf/r2p_energy_density.pdf)

*Comparison of three methods to reduce energy density: effects on daily energy intake (Appetite)* [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3666187/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3666187/)
Processed foods exist along a continuum

Dietary Guidelines for Americans are updated every five years

• Issued by the US Department of Agriculture (USDA) and US Department of Health and Human Services (HHS)

• Evidence-based guidelines to promote health and reduce risk for major chronic disease
  • Intended for health professionals to help people age 2 and over consume a healthy diet and prevent chronic disease
  • basis for Federal food and nutrition policies, programs, and education
Dietary Guidelines for Americans over the years....
2015 Dietary Guidelines for Americans

Overview

• Five overarching guidelines to steer population towards a healthy eating pattern
  • *2015 edition focuses more on eating patterns than individual food groups or dietary components*

• Followed by key recommendations which:
  • Specify foods that a healthy eating pattern includes
  • Nutrients that a healthy eating pattern limits
2015 Dietary Guidelines for Americans

1. Follow a healthy eating pattern across the lifespan
2. Focus on variety, nutrient density, and amount
3. Limit calories from added sugars and saturated fats and reduce sodium intake
4. Shift to healthier food and beverage choices
5. Support healthy eating patterns for all
2015 Dietary Guidelines for Americans

Healthy Eating Patterns

• Adaptable framework in which individuals can enjoy foods that meet their personal, cultural, and traditional preferences and fit within their budget

• Healthy U.S. Style Eating Pattern
  • Based on the types and proportions of foods Americans typically consume, but in nutrient-dense forms and appropriate amounts
  • Provided at 12 different calorie levels

• Other examples of healthy eating patterns that translate and integrate the recommendations
    • Healthy Mediterranean-Style Eating Pattern
    • Healthy Vegetarian Eating Pattern
2015 Dietary Guidelines for Americans

*Shifts in food choices*

- Emphasize the need to make substitutions
  - Choosing nutrient-dense foods and beverages in place of less healthy choices—rather than increasing intake overall
  - Most individuals would benefit from shifting food choices both within and across food groups
2015 Dietary Guidelines for Americans

<table>
<thead>
<tr>
<th>A HEALTHY EATING PATTERN INCLUDES:</th>
<th>MyPlate messages for consumers:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FRUITS</strong></td>
<td>Focus on whole fruits with little or no added sugar. Enjoy fruit as a snack or dessert.</td>
</tr>
<tr>
<td><strong>VEGETABLES</strong></td>
<td>Consume a variety of vegetables from all of the subgroups—dark green, red &amp; orange, legumes, starchy, and other. Limit the use of salt, butter, or creamy sauces.</td>
</tr>
<tr>
<td><strong>PROTEIN</strong></td>
<td>Vary your protein routine. Include a variety of protein foods, including seafood, lean meats and poultry, eggs, legumes, and nuts, seeds, and soy products.</td>
</tr>
<tr>
<td><strong>DAIRY</strong></td>
<td>Substitute fat-free or low-fat milk and yogurt for cheese and sour cream.</td>
</tr>
<tr>
<td><strong>GRAINS</strong></td>
<td>Make half your grains whole grains. Limit grain desserts and snacks that contribute to intakes of added sugars and saturated fat.</td>
</tr>
<tr>
<td><strong>OILS</strong></td>
<td>A healthy eating pattern includes oils. Use oils like canola, olive, &amp; others instead of solid fats (like butter, and stick margarine, shortening, lard, and coconut oil).</td>
</tr>
</tbody>
</table>
2015 Dietary Guidelines for Americans

Cholesterol

• ...."the Key Recommendation from the 2010 DGAs to limit consumption of dietary cholesterol to 300 mg per day is not included in the 2015 edition, but this change does not suggest that dietary cholesterol is no longer important to consider when building healthy eating patterns."

• Average U.S. intake of cholesterol 270 mg per day

• Recommendation included to “consume as little as possible....”
2015 Dietary Guidelines for Americans

Sodium

2010:
- General population reduce daily sodium intake to < 2,300 mg
- Persons who are aged 51 and older, African American or have hypertension, diabetes or chronic kidney disease were encouraged to further limit sodium to 1,500 mg per day

2015:
- Recommendation to reduce daily sodium intake to < 2,300 mg was maintained
- The 1,500-mg recommendation limited to adults with hypertension or prehypertension

- Average U.S. intake of sodium is 3,400 mg per day
- Tolerable Upper Intake Limit (UL) from the IOM Dietary Reference Intakes is 2,300 mg
  - Age specific DGA sodium recommendations align with the UL for age
2015 Dietary Guidelines for Americans

Added Sugars

• General messaging to reduce intake of added sugars was maintained from 2010 to 2015 with the addition of a specified energy limit

• 2015: Americans encouraged to "consume < 10 percent of calories per day from added sugars"
2015 Dietary Guidelines for Americans

Protein

• 2010: “replace protein foods that are higher in solid fats with choices that are lower in solid fats and calories and/or are sources of oils"

• 2015: changed to recommend a healthy eating pattern including "a variety of protein foods, including seafood, lean meats and poultry, eggs, legumes (beans and peas), and nuts, seeds, and soy products."

• The overconsumption of protein by teen boys and adult men in particular prompted the 2015 DGAs to recommend that they specifically reduce consumption of protein foods by decreasing intake of meats, poultry and eggs.
2015 Dietary Guidelines for Americans

Fats

• Saturated fats
  • *Key recommendation to consume < 10 percent of calories from saturated fatty acids* was maintained from the 2010 to 2015 DGAs

• Trans fatty acids
  • Advice to keep trans fat intake as low as possible is consistent from 2010 to 2015
  • June 2015: FDA bans trans fatty acids from U.S. food supply
    • No longer “generally recognized as safe” (GRAS)
    • Food manufacturers have 3 years to remove PHOs (partially hydrogenated oils)

• Solid fats
  • 2010: Use of term "solid fat" and acronym “SoFAS” (Solid Fats and Added Sugars)
  • 2015: Term and acronym no longer used. The overall messaging was similar, with Americans encouraged to limit solid fat intake and to replace solid fats with oils.
2015 Dietary Guidelines for Americans

Dietary Fiber

• 2015 DGAs maintain recommendation to *consume at least half of grains as whole grains* (limit refined grains)

• Although no longer mentioned in the key recommendations, the language to choose foods rich in dietary fiber was consistent between 2010 and 2015
While alcohol was no longer mentioned in the key recommendations, the language remained the same in the 2015 Dietary Guidelines:

"If alcohol is consumed, it should be in moderation — up to one drink per day for women and up to two drinks per day for men — and only by adults of legal drinking age."

“Drink” defined as: 12 oz. beer, 5 oz. wine, or 1.5 oz. 80 proof liquor
2015 Dietary Guidelines for Americans

Caffeine

- Caffeine was not mentioned in the 2010 DGAs, but was thoroughly discussed in the 2015 guidelines. While caffeine is not a nutrient and does not have a daily requirement, guidance on coffee consumption was provided:

  - "Moderate coffee consumption (three to five 8-oz cups/day or providing up to 400 mg/day of caffeine) can be incorporated into healthy eating patterns."

- This included cautions concerning drinks with added sugars, mixing alcohol and caffeine, individuals who do not already consume caffeinated beverages and women who are pregnant, trying to become pregnant or who are breast-feeding.
The USDA updates tools to implement dietary advice
# MyPlate Daily Checklist

Find your Healthy Eating Style

Everything you eat and drink matters. Find your healthy eating style that reflects your preferences, culture, traditions, and budget—and maintain it for a lifetime! The right mix can help you be healthier now and into the future. The key is choosing a variety of foods and beverages from each food group—and making sure that each choice is limited in saturated fat, sodium, and added sugars. Start with small changes—“MyWins”—to make healthier choices you can enjoy.

## Food Group Amounts for 2,200 Calories a Day

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Amounts</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 cups</td>
<td>Focus on whole fruits</td>
<td></td>
</tr>
<tr>
<td>3 cups</td>
<td>Focus on whole fruits that are fresh, frozen, canned, or dried.</td>
<td></td>
</tr>
<tr>
<td>7 ounces</td>
<td>Vary your veggies</td>
<td></td>
</tr>
<tr>
<td>6 ounces</td>
<td>Make half your grains whole grains</td>
<td></td>
</tr>
<tr>
<td>3 cups</td>
<td>Drink and eat less sodium, saturated fat, and added sugars. Limit:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sodium to 2,200 milligrams a day.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Saturated fat to 24 grams a day.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Added sugars to 25 grams a day.</td>
<td></td>
</tr>
</tbody>
</table>

## Visual Cues for Estimating Portion Sizes

### Grains (what counts as an ounce?)
- 1 slice of bread
- ½ cup of cooked pasta or rice
- 8 grams of whole grains per ounce is approximately ¼ cup whole grain
- 1 cup of ready-to-eat cereal
- 1 mini bagel (large bagel = 4 ounces)
- 3 cups popped corn

### Vegetables (what counts as a cup?)
- 1 cup raw or cooked vegetables
- 1 cup of vegetable juice
- 2 cups of raw, leafy greens

### Fruit (what counts as a cup?)
- 1 cup of fruit
- 1 cup of 100% juice
- ½ cup of dried fruit

### Dairy (what counts as a cup?)
- 1 cup of milk or yogurt
- 1 cup calcium-fortified soy milk
- 1½ ounces hard cheese (cheddar, mozzarella, parmesan)
- 2 ounces processed cheese (American)
- 2 cups cottage cheese
- 1 cup frozen yogurt

### Protein (what counts as an ounce?)
- 1 ounce of meat, poultry, fish
- 1 large egg
- 1 tbsp. peanut butter
- ½ ounce of nuts or seeds
- ½ cup cooked beans or peas

### portion size equivalents identify the amounts of foods from each food group with similar nutrition content

- Baseball = 1 cup
- Deck of cards = 3 ounces meat
- Pint of nuts = 1 ounce

---

INFOGRAPHIC 2.8

Nutrition for a Changing World, 1e © 2016 by W. H. Freeman and Company

Photo credits (top—all): Center for Nutrition Policy and Promotion/USDA; (bottom—baseball): Pavel Hlystov/Shutterstock; (bottom—thumb): foto76/Shutterstock; (bottom—all others): Eli Enser
PORTION SIZE EQUIVALENT

**Grains (what counts as an ounce?)**
- 1 slice of bread
- \(\frac{1}{2}\) cup of cooked pasta or rice
- \(\frac{1}{2}\) cup of cooked cereal
- 1 cup of ready to eat cereal
- 3 cups popped corn
- 1 mini bagel (large bagel = 4 ounces)
- 1 pancake or waffle (size of a CD)

**Dairy (what counts as a cup?)**
- 1 cup of milk or yogurt
- 1 cup calcium-fortified soymilk
- 1 1/2 ounces hard cheese (cheddar, mozzarella, parmesan)
- 2 ounces processed cheese (American)
- 2 cups cottage cheese
- 1 1/2 cups ice cream
- 1 cup frozen yogurt

**Vegetables (what counts as a cup?)**
- 1 cup raw or cooked vegetables
- 1 cup of vegetable juice
- 2 cups of raw, leafy greens

**Protein (What counts as an ounce?)**
- 1 ounce of meat, poultry, fish
- 1 egg
- 1 tbsp. peanut butter
- 1/2 ounce of nuts or seeds
- 1/4 cup cooked beans or peas
- 2 tbsp. hummus

**Fruit (what counts as a cup?)**
- 1 cup of fruit
- 1 cup of 100% juice
- 1/2 cup of dried fruit
VISUAL CUES FOR ESTIMATING PORTION SIZES

Baseball = 1 cup

Deck of cards = 3 ounces meat

Golf ball = ¼ cup or 2 ounces.

6 dice = 1 ounce cheese

Palmful of nuts = 1 ounce

Thumb = 1 tbsp. or ½ ounce

Infographic 2.7 part 2
Scientific American: Nutrition for a Changing World
© 2016 W. H. Freeman and Company [Photos: (baseball): Pavel Hlystov/Shutterstock; (thumb): foto76/Shutterstock; (all others): Eli Ensor]
Alternative “plates” have been proposed by other health organizations
Food Guides from around the world have common recommendations

- Eat more plant foods, including vegetables, fruits, whole grains, and beans.
- Choose lean protein foods from a variety of sources.
- Consume less sugar and salt.
- Choose healthy fats while moderating total fat intake.
- Control portion sizes.
- Be physically active.
The Philippines
The Food Guide Pagoda for Chinese People

- Oils 25~30g
- Salt 6g
- Milk and milk products 300g
- Soybean and Nuts 30~50g
- Meat and Poultry 50~75g
- Fish and Shrimp 50~100g
- eggs 25~50g
- Vegetables 300~500g
- Fruits 200~400g
- Cereals, Tubers and Other beans 250~400g
- Water 1200mL

Chinese Nutrition Society

Food-based Dietary Guidelines
Food and Agriculture Organization (FAO) of the United Nations

International Dietary Guidelines have similar characteristics


• https://www.nal.usda.gov/fnic/dietary-guidelines-around-world
• http://www.mayo clinic.com/health/healthy-diet/NU00190

• Most healthy-diet plans emphasize the following:
  • *Eat more plant foods, including fruits, vegetables and whole grains.*
  • *Choose lean protein from a variety of sources.*
  • *Limit sweets and salt.*
  • *Control portion sizes.*
  • *Be physically active.*
“Improving dietary habits is a societal, not just an individual problem. Therefore it demands a population-based, multisectorial, multi-disciplinary, and culturally relevant approach. These recommendations need to be considered when preparing national policies and dietary guidelines, taking into account the local situation.”

- achieve energy balance and a healthy weight
- limit energy intake from total fats and shift fat consumption away from saturated fats to unsaturated fats and towards the elimination of trans-fatty acids
- increase consumption of fruits and vegetables, and legumes, whole grains and nuts
- limit the intake of free sugars
- limit salt (sodium) consumption from all sources and ensure that salt is iodized
World
Daily diets vary considerably around the world. Select different countries or regions to see how consumption patterns have changed in the last 50 years. Click on grams to understand the quantities of food consumed per person in each place. Alternatively, view the breakdown by calories to measure how that balance of food translates into fuel and energy. Percentages in the pie chart reflect the proportion of each item in the overall diet.
“Hungry Planet” by Peter Menzel

- Video interviews by Jamie Pope with Peter Menzel with sampling of photographs from around the world on what people eat in a week....
- Links on YouTube:
  - https://youtu.be/I_XzZFkKQsc
  - https://youtu.be/v_xGT5LmByk
CHINA
UNITED STATES
CALIFORNIA
Food and nutrition labeling guide consumers towards more healthful diets

• Helps consumers...
  • see how individual foods contribute to daily nutritional needs

• Incentive for food companies to improve the nutritional qualities of their products
Links – DGA also FDA guidelines on terms Healthy and Natural....

• FDA guidance on term “natural”
  https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm456090.htm
• FDA Guidance on term “healthy”
  https://www.fda.gov/food/guidanceregulation/guidancedocumentsregulatoryinformation/labelingnutrition/ucm520695.htm
1990 Nutrition Labeling and Education Act (NLEA)

- Amendment to the 1938 Federal Food, Drug and Cosmetic Act
- FDA oversees food and nutrition labeling
- Made nutrition labeling:
  - **mandatory** for most processed foods
  - **voluntary** for fresh meat, poultry, fish, milk, eggs, and produce
1990 Nutrition Labeling and Education Act (NLEA)

- Established standardized “Nutrition Facts” panel
- Established standard portion sizes
- Provides details of nutrient content and ingredients
- Simplifies comparison of similar foods
What’s on the Food Label?

- Product name
- Manufacturer’s name and address
- Uniform serving size
- Amount in the package
- Ingredients in descending order by weight
- Nutrient components
- Percent Daily Value
Daily Values are levels for nutrients developed specifically for nutrition labels

<table>
<thead>
<tr>
<th>Food Component</th>
<th>%DV based on 2000 kcal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>&lt;65 g</td>
</tr>
<tr>
<td>Saturated fat</td>
<td>&lt;20 g</td>
</tr>
<tr>
<td>Protein</td>
<td>50 g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>&lt;300 mg</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>300 g</td>
</tr>
<tr>
<td>Fiber</td>
<td>25 g</td>
</tr>
<tr>
<td>Sodium</td>
<td>&lt;2400 mg</td>
</tr>
<tr>
<td>Potassium</td>
<td>3500 mg</td>
</tr>
</tbody>
</table>
Food Labels Are Changing

<table>
<thead>
<tr>
<th>ORIGINAL LABEL</th>
<th>NEW LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nutrition Facts</strong></td>
<td><strong>Nutrition Facts</strong></td>
</tr>
<tr>
<td>Serving Size 2/3 cup (55g)</td>
<td>8 servings per container</td>
</tr>
<tr>
<td>Servings Per Container About 8</td>
<td>Serving size 2/3 cup (55g)</td>
</tr>
</tbody>
</table>

1. **SERVINGS**: The number of “Servings Per Container” and the “Serving Size” are now in larger and/or bolder type. In many cases, servings sizes have been increased to better reflect what people actually consume today. Packaging size determines whether the nutrition information reflects a single serving and/or the whole package.

2. "CALORIES" is now larger and in bolder type.

3. **FATS**: “Calories from Fat” has been removed because research show that the type of fat consumed is more important than the amount.

4. **ADDED SUGARS**: Sugars that have been added during food processing or packaging must be indicated on the label in grams and as a percent Daily Value (%DV).

5. **NUTRIENTS**: The list of nutrients that are required on the label have been changed. Vitamin D and potassium are now required, and Vitamins A and C are not. For the four nutrients listed here, the actual amount (in milligrams or micrograms) as well as the %DV must be listed. In addition, the daily values for nutrients have been updated to reflect current scientific evidence. The daily values are the reference amounts of nutrients that are used to calculate the %DV.

6. **FOOTNOTE**: The footnote at the bottom of the label has been changed to better explain the meaning of %DV.

The original date of July 2018 for the mandatory implementation of the new label has been delayed until January 1, 2020. Consequently, you will see both the old and new labels on products until that time.

Navigating the Nutrition Facts Panel

**SERVING SIZE:** The information that appears on the label will differ for certain size packages. As shown here, packages that contain two to three servings are required to use dual-column labeling that shows information for a single serving as well as for the whole package. For packages that contain more than one standard serving but less than two, the information on the label will be for the whole package only. Compare the quantity you usually eat to the size of the serving on the label.

**LIMIT THESE NUTRIENTS:** The goal is to stay below 100% of these nutrients per day. Most Americans eat enough or too much of these nutrients. Excess consumption of these nutrients can increase the risk of several chronic diseases.

**GET ENOUGH OF THESE NUTRIENTS:** Getting enough of these nutrients can improve overall health and may reduce the risk of several chronic diseases.

### Nutrition Facts

**Calories**
- 120 per serving
- 260 per package

**Nutrients**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Per Serving</th>
<th>% Daily Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat</td>
<td>3g</td>
<td>5%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>1g</td>
<td>5%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td>0%</td>
</tr>
<tr>
<td>Polyunsaturated Fat</td>
<td>0g</td>
<td>0%</td>
</tr>
<tr>
<td>Monounsaturated Fat</td>
<td>0g</td>
<td>0%</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium</td>
<td>180mg</td>
<td>7%</td>
</tr>
</tbody>
</table>

**CAUTION:** This is the amount of the total energy in one standard serving of the food and/or the whole package, depending on the package size.

**% DAILY VALUE:** The %Vs are based on a 2,000-calorie (kcal) diet and indicate how much one serving contributes to the total daily diet (Daily Value) of these nutrients. The %Vs make it easy to compare similar products in order to choose healthier options. Just be certain that the serving sizes and calorie contents are similar.

**Daily Value Quick Guide**
- 5% or less is low
- 20% or more is high

**FOOTNOTE:** This explains that the %Vs are to help consumers understand the nutrition information in the context of a total daily diet. This may be omitted if the label is too small.

**INGREDIENTS LIST:** Ingredients are listed in descending order by weight. Major food allergens (such as soy) must be identified by name somewhere in the ingredients list.

**Ingredients:** Dried Potatoes, Corn Starch, Corn Oil, Sugar, Sea Salt, Soy Lecithin, Dextrose, and Annatto Extracts. CONTAINS SOY INGREDIENTS.
Claims Made on Foods and Supplements

Nutrient Content Claim
Describes the level of a nutrient or dietary substance in a product using terms such as Good Source, High, or Reduced.

Good: 10%-19% of the DV per serving
High or Excellent: ≥ 20% of the DV per serving

Health Claim
Describes the link between a food, food component, or dietary supplement substance and reduced risk of a disease.

Structure/Function Claim
Describes the role of a nutrient or a dietary substance in maintaining health.

LABELING REGULATIONS FOR SPECIFIC TYPES OF CLAIMS

Nutrient Content Claims

- Most nutrient content claims apply only to nutrients with a DV.
- Exceptions are relative claims that compare content of other foods (i.e., “reduced,” or “light”).
- The word “healthy” may only be used for foods that provide healthy levels of fat, cholesterol, and sodium.

Health Claims

- Must be approved by the FDA.
- Must always use “may” or “might” to describe the ability of the product to reduce the risk of the disease.
- Not allowed on products containing high amounts of sodium, total or saturated fat, or cholesterol.
- Not allowed on foods with little natural nutritional value (the “jelly bean rule”).

Structure/Function Claims

- Must not make any link (directly or implied) to a disease or health-related condition.
- They are supposed to be truthful and not misleading.
- Not reviewed or authorized by the FDA.
- When on a dietary supplement label:
  - the manufacturer must have evidence that the claim is truthful.
  - a disclaimer must state that the FDA has not evaluated the claim, and that the product is not intended to diagnose, treat, cure, or prevent any disease.
FDA Approved Food Label Health Claims

http://www.fda.gov/food/labelingnutrition/labelclaims/healthclaimsmeetingsignificantscientificagreementssa/default.htm

• High in calcium, vitamin D
  Osteoporosis
• High in fiber-containing grain products, fruits & vegetables
  Cancer
• High in fruits & vegetables
  Cancer
• High in fiber
  Heart disease
• Low in fat
  Cancer
• Low in saturated fat & cholesterol
  Heart disease
• Low in sodium
  High blood pressure
• High in folate (folic acid)
  Neural tube defects
• High in soluble fiber
  Heart disease
• Soy protein
  Heart disease
• Carbohydrate sweeteners
  Dental caries
• Plant sterols/stanols
  Heart disease