Chapter 2
Nutrition Tools – Standards and Guidelines

Nutrition: Concepts & Controversies, 12e
Sizer/Whitney
Nutrient Recommendations

- Standards for healthy people’s energy and nutrient intakes
- Nutrition experts use the recommendations to assess intakes and offer advice on how much to consume
Nutrient Recommendations

- Dietary Reference Intakes (DRI)
  - Standard used in USA and Canada
  - DRI set values for:
    - vitamins
    - minerals
    - carbs
    - fiber
    - lipids
    - proteins
    - water

- Daily Values
  - Printed on food labels
  - Based on a 2,000 calorie diet
DRI Committee's Values

- **Estimated Average Requirement (EAR):** average daily nutrient intake for ½ the healthy people in a particular life stage & gender group. EAR is used in nutrition research and policy making.

- **Recommended Dietary Allowance (RDA):** average daily nutrient intake for 97%-98% of healthy people in a particular life stage and gender group.

- **Adequate Intakes (AI):** the recommended average daily nutrient intake level based on intake of healthy people (observed or from experiments) in a particular life stage and gender assumed to be adequate.

- **Tolerable Upper Intake Levels (UL):** the highest average daily nutrient intake level that poses no risk of toxicity to almost all healthy individuals of a particular life stage and gender group.
Nutrient Recommendations

- Goals of DRI committee
  - Setting recommended intake values – RDA & AI
    - Used by individuals for nutrient intake goals
    - RDA – solid experimental evidence
    - AI – scientific evidence and educated guesswork
  - Facilitating nutrition research & policy – EAR
    - Requirements for life stages and genders
Nutrient Recommendations

- Goals of DRI committee
  - Establish safety guidelines – UL
    - Identification of potentially toxic levels
    - Danger zones
  - Preventing chronic diseases
    - Acceptable Macronutrient Distribution Ranges (AMDR) proportions
      - 45 to 65 percent of calories from carbs
      - 20 to 35 percent of calories from fat
      - 10 to 35 percent of calories from protein
The Naïve View Versus the Accurate View of Optimal Nutrient Intakes
Understanding the DRI Intake Recommendations

- Differences between individuals
- Adequate intake over time
  - Attempt to get 100% of DRI recommended intake
- Put DRI recommended intakes into perspective
- DRI are designed for healthy people
Daily Values

- Found on food labels
- Apply to the “average” person
  - Eating 2,000 to 2,500 calories a day
- Allow for comparisons among foods
  - Not nutrient intake goals for individuals
- Have not changed in response to new research
  - DRI values have changed over the years
Dietary Guidelines for Americans

- Science-based advice
  - Promote health
  - Reduce risk of major chronic disease
- Apply to most people age 2 and older
Dietary Guidelines for Americans

- Choose nutritious foods
  - Based on USDA Food Guide
    - Supplements
  - Limit potentially harmful dietary components
    - Fat, sugar, cholesterol, salt, and alcohol
Dietary Guidelines for Americans – Key Recommendations

**ADEQUATE NUTRIENTS WITHIN ENERGY NEEDS**

- Consume a variety of nutrient-dense foods and beverages within and among the basic food groups; limit intakes of saturated and trans fats, cholesterol, added sugars, salt, and alcohol.
- Meet recommended intakes within energy needs by adopting a balanced eating pattern, such as the USDA Food Guide (explained in a later section).

**WEIGHT MANAGEMENT**

- To maintain body weight in a healthy range, balance calories from foods and beverages with calories expended (Chapter 9).
- To prevent gradual weight gain over time, make small decreases in food and beverage calories and increase physical activity.

**PHYSICAL ACTIVITY**

- Engage in regular physical activity and reduce sedentary activities to promote health, psychological well-being, and a healthy body weight (Chapter 10).
- Achieve physical fitness by including cardiovascular conditioning, stretching exercises for flexibility, and resistance exercises or calisthenics for muscle strength and endurance.
### Dietary Guidelines for Americans – Key Recommendations

#### FOOD GROUPS TO ENCOURAGE

- Consume a sufficient amount of fruits, vegetables, milk and milk products, and whole grains while staying within energy needs.
- Select a variety of fruits each day. Include vegetables from all five subgroups (dark green, orange, legumes, starchy vegetables, and other vegetables) several times a week. Make at least half of the grain selections whole grains. Select fat-free or low-fat milk products.

#### FATS

- Keep saturated fat, trans fat, and cholesterol consumption low—less than 10 percent of calories from saturated and trans fats and less than 300 milligrams of cholesterol per day (Chapter 5).
- Keep total fat intake between 20 to 35 percent of calories, mostly from foods that provide unsaturated fats, such as fish, nuts, olives, and vegetable oils.
- Select and prepare foods that are lean, low-fat, or fat-free.

#### CARBOHYDRATES

- Choose fiber-rich fruits, vegetables, and whole grains often (Chapter 4).
- Choose and prepare foods and beverages with little added sugars.
- Reduce the incidence of dental caries by practicing good oral hygiene and consuming sugar- and starch-containing foods and beverages less frequently.
Dietary Guidelines for Americans – Key Recommendations

SODIUM AND POTASSIUM
- Choose and prepare foods with little salt (less than 2,300 milligrams sodium, or approximately 1 tsp salt). At the same time, consume potassium-rich foods, such as fruits and vegetables (Chapter 8).

ALCOHOLIC BEVERAGES
- Those who choose to drink alcoholic beverages should do so sensibly and in moderation.
- Some individuals should not consume alcoholic beverages (Controversy 3).

FOOD SAFETY
- To avoid microbial foodborne illness, keep foods safe: clean hands, food contact surfaces, and fruits and vegetables; separate raw, cooked, and ready-to-eat foods; cook foods to a safe internal temperature; chill perishable food promptly; and defrost food properly (Chapter 12).
U.S. Diet and Dietary Guidelines Compared

- Healthy Eating Index (HEI)
  - Yields a score
    - Current American diet: 58 out of 100

- Americans need to choose less of these:
  - refined grains, fats, added sugars, salt

- Americans need to choose more of these:
  - green leafy veggies & legumes, fruits, whole grains, fat free/low fat milk products

- Many need to reduce calorie intake
Diet Planning with the USDA Food Guide

- Food group plan
  - Help people achieve goals
  - Specifies portions
    - Foods are sorted by nutrient density
  - Seven groups: grains, veggies, fruits, dairy, meats, oils, solid fats and sugars
- Variety
  - Among the food groups and within each group
USDA MyPyramid Food Guide

Key:
- Foods generally high in nutrient density (choose most often)
- Foods lower in nutrient density (limit selections)

**GRAINS**

Make at least half of the grain selections whole grains.

These foods contribute folate, niacin, riboflavin, thiamin, iron, magnesium, selenium, and fiber.

1 oz grains is equivalent to 1 slice bread; ½ c cooked rice, pasta, or cereal; 1 oz dry pasta or rice; 1 c ready-to-eat cereal; 3 c popped popcorn.

- Whole grains (amaranth, barley, brown rice, buckwheat, bulgur, millet, oats, quinoa, rye, wheat) and whole-grain, low-fat breads, cereals, crackers, and pastas; popcorn.
- Enriched bagels, breads, cereals, pastas (couscous, macaroni, spaghetti), pretzels, rice, rolls, tortillas.
- Biscuits, cakes, cookies, cornbread, crackers, croissants, doughnuts, french toast, fried rice, granola, muffins, pancakes, pastries, pies, presweetened cereals, taco shells, waffles.

**FRUITS**

Consume a variety of fruits and no more than one-half of the recommended intake as fruit juice.

These foods contribute folate, vitamin A, vitamin C, potassium, and fiber.

1 c fruit is equivalent to 1 c fresh, frozen, or canned fruit; ½ c dried fruit; 1 c fruit juice.

- Apples, apricots, avocados, bananas, blueberries, cantaloupe, cherries, grapefruit, grapes, guava, kiwi, mango, nectarines, oranges, papaya, peaches, pears, pineapples, plums, raspberries, strawberries, tangerines, watermelon; dried fruit (dates, figs, raisins); unsweetened juices.
- Canned or frozen fruit in syrup; juices, punches, and fruit drinks with added sugars; fried plantains.
Choose a variety of vegetables each day, and choose from all five subgroups several times a week.

These foods contribute folate, vitamin A, vitamin C, vitamin K, vitamin E, magnesium, potassium, and fiber.

1 c vegetables is equivalent to 1 c cut-up raw or cooked vegetables; 1 c cooked legumes; 1 c vegetable juice; 2 c raw, leafy greens.

Vegetable subgroups

1. Dark green vegetables: Broccoli and leafy greens such as arugula, beet greens, bok choy, collard greens, kale, mustard greens, romaine lettuce, spinach, and turnip greens.

2. Orange and deep yellow vegetables: Carrots, carrot juice, pumpkin, sweet potatoes, and winter squash (acorn, butternut).

3. Legumes: Black beans, black-eyed peas, garbanzo beans (chickpeas), kidney beans, lentils, navy beans, pinto beans, soybeans and soy products such as tofu, and split peas.

4. Starchy vegetables: Cassava, corn, green peas, hominy, lima beans, and potatoes.

5. Other vegetables: Artichokes, asparagus, bamboo shoots, bean sprouts, beets, brussels sprouts, cabbages, cactus, cauliflower, celery, cucumbers, eggplant, green beans, iceberg lettuce, mushrooms, okra, onions, peppers, seaweed, snow peas, tomatoes, vegetable juices, zucchini.

▲ Baked beans, candied sweet potatoes, coleslaw, french fries, potato salad, refried beans, scalloped potatoes, tempura vegetables.
**MILK, YOGURT, AND CHEESE**

Make fat-free or low-fat choices. Choose lactose-free products or other calcium-rich foods if you don’t consume milk.

These foods contribute protein, riboflavin, vitamin B₁₂, calcium, magnesium, potassium, and, when fortified, vitamin A and vitamin D.

- Fat-free milk and fat-free milk products such as buttermilk, cheeses, cottage cheese, yogurt; fat-free fortified soy milk.

- 1% low-fat milk, 2% reduced-fat milk, and whole milk; low-fat, reduced-fat, and whole-milk products such as cheeses, cottage cheese, and yogurt; milk products with added sugars such as chocolate milk, custard, ice cream, ice milk, milk shakes, pudding, sherbet; fortified soy milk.

| 1 c milk is equivalent to 1 c fat-free milk or yogurt; 1 1/2 oz fat-free natural cheese; 2 oz fat-free processed cheese. |

**MEAT, POULTRY, FISH, LEGUMES, EGGS, AND NUTS**

Make lean or low-fat choices. Prepare them with little, or no, added fat.

Meat, poultry, fish, and eggs contribute protein, niacin, thiamin, vitamin B₆, vitamin B₁₂, iron, magnesium, potassium, and zinc; legumes and nuts are notable for their protein, folate, thiamin, vitamin E, iron, magnesium, potassium, zinc, and fiber.

| 1 oz meat is equivalent to 1 oz cooked lean meat, poultry, or fish; 1 egg; 1/4 c cooked legumes or tofu; 1 tbs peanut butter; 1/2 oz nuts or seeds. |

- Poultry (no skin), fish, shellfish, legumes, eggs, lean meat (fat-trimmed beef, game, ham, lamb, pork); low-fat tofu, tempeh, peanut butter, nuts (almonds, filberts, peanuts, pistachios, walnuts) or seeds (flaxseeds, pumpkin seeds, sunflower seeds).

- Bacon; baked beans; fried meat, fish, poultry, eggs, or tofu; refried beans; ground beef; hot dogs; luncheon meats; marbled steaks; poultry with skin; sausages; spare ribs.
**OILS**

Select the recommended amounts of oils from among these sources.

These foods contribute vitamin E and essential fatty acids (see Chapter 5), along with abundant calories.

- Liquid vegetable oils such as canola, corn, flaxseed, nut, olive, peanut, safflower, sesame, soybean, and sunflower oils; mayonnaise, oil-based salad dressing, soft trans-free margarine.

- Unsaturated oils that occur naturally in foods such as avocados, fatty fish, nuts, olives, seeds (flaxseeds, sesame seeds), and shellfish.

**SOLID FATS AND ADDED SUGARS**

Limit intakes of food and beverages with solid fats and added sugars.

Solid fats deliver saturated fat and trans fat, and intake should be kept low. Solid fats and added sugars contribute abundant calories but few nutrients, and intakes should not exceed the discretionary calorie allowance—calories to meet energy needs after all nutrient needs have been met with nutrient-dense foods. Alcohol also contributes abundant calories but few nutrients, and its calories are counted among discretionary calories. See Table 2-2 on page 44 for some discretionary calorie allowances.

- Solid fats that occur in foods naturally such as milk fat and meat fat (see ▲ in previous lists).
- Solid fats that are often added to foods such as butter, cream cheese, hard margarine, lard, sour cream, and shortening.
- Added sugars such as brown sugar, candy, honey, jelly, molasses, soft drinks, sugar, and syrup.
- Alcoholic beverages include beer, wine, and liquor.
How Does the U.S. Diet Stack Up?

**Key:**
- Recommended Intakes
- Actual U.S. Intakes

**USDA Food Groups**
- Grains (Whole, Refined)
- Vegetables
- Fruits
- Milk
- Meat and beans

*At least half of the grain selections should be whole grains.
Discretionary Calorie Concept

- Discretionary calorie allowance: calories remaining in a person's energy allowance AFTER counting for the number of calories needed to meet recommended nutrient intake through consumption of nutrient dense foods.

Calories to maintain weight-calories needed to supply nutrients from nutrient dense foods = Discretionary calorie allowance
Diet Planning Application

- USDA Food Guide
  - Amounts needed from each food group
  - Healthful diet for given number of calories
- Physical activity
  - Higher calorie need
  - Greater discretionary calorie allowance
- Vegetable intakes
  - Week timeframe
## MyPyramid Recommended Daily Intakes from Each Food Group

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<thead>
<tr>
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<tr>
<td>Calories(^a)</td>
<td>1,600</td>
<td>1,800</td>
<td>2,000</td>
<td>2,200</td>
<td>2,400</td>
<td>2,800</td>
<td>3,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits</td>
<td>1½ c</td>
<td>1½ c</td>
<td>2 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2½ c</td>
<td>2½ c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables(^b)</td>
<td>2 c</td>
<td>2½ c</td>
<td>2½ c</td>
<td>3 c</td>
<td>3 c</td>
<td>3½ c</td>
<td>4 c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grains</td>
<td>5 oz</td>
<td>6 oz</td>
<td>6 oz</td>
<td>7 oz</td>
<td>8 oz</td>
<td>10 oz</td>
<td>10 oz</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Meats and legumes</td>
<td>5 oz</td>
<td>5 oz</td>
<td>5½ oz</td>
<td>6 oz</td>
<td>6½ oz</td>
<td>7 oz</td>
<td>7 oz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oils(^c)</td>
<td>5 tsp</td>
<td>5 tsp</td>
<td>6 tsp</td>
<td>6 tsp</td>
<td>7 tsp</td>
<td>8 tsp</td>
<td>10 tsp</td>
<td></td>
<td></td>
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<tr>
<td>Discretionary calorie allowance</td>
<td>132 cal</td>
<td>195 cal</td>
<td>267 cal</td>
<td>290 cal</td>
<td>362 cal</td>
<td>426 cal</td>
<td>512 cal</td>
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</table>

\(^a\)Calories based on a 2,000 calorie diet for sedentary women: 19–30 Yr, 1,600; 51+ Yr, 1,800; and sedentary men: 31–50 Yr, 2,000; 51+ Yr, 2,200. Calories for active women: 19–30 Yr, 2,400; 31–50 Yr, 2,800, and active men: 19–30 Yr, 3,000.

\(^b\)Vegetables include all forms, raw, cooked, fresh, frozen, canned, or dried.

\(^c\)Oils include vegetable, canola, corn, cottonseed, olive, peanut, and safflower oils.
Weekly Amounts from Vegetable Subgroups

Table 2-2 specifies the recommended amounts (in cups) of total vegetables per day. This table shows those amounts dispersed among five vegetable subgroups per week.

<table>
<thead>
<tr>
<th>Vegetable Subgroups</th>
<th>1,600 cal</th>
<th>1,800 cal</th>
<th>2,000 cal</th>
<th>2,200 cal</th>
<th>2,400 cal</th>
<th>2,600 cal</th>
<th>2,800 cal</th>
<th>3,000 cal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark green</td>
<td>2 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
</tr>
<tr>
<td>Orange and deep yellow</td>
<td>1½ c</td>
<td>2 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2 c</td>
<td>2½ c</td>
<td>2½ c</td>
<td>2½ c</td>
</tr>
<tr>
<td>Legumes</td>
<td>2½ c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3 c</td>
<td>3½ c</td>
<td>3½ c</td>
<td>3½ c</td>
</tr>
<tr>
<td>Starchy</td>
<td>2½ c</td>
<td>3 c</td>
<td>3 c</td>
<td>6 c</td>
<td>6 c</td>
<td>7 c</td>
<td>7 c</td>
<td>9 c</td>
</tr>
<tr>
<td>Other</td>
<td>5½ c</td>
<td>6½ c</td>
<td>6½ c</td>
<td>7 c</td>
<td>7 c</td>
<td>8½ c</td>
<td>8½ c</td>
<td>10 c</td>
</tr>
</tbody>
</table>
# Sample Diet Plan

This diet plan is one of many possibilities for a day’s meals. It follows the amounts suggested for a 2,000-calorie diet (with an extra \( \frac{1}{2} \) cup of vegetables).

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Recommended MyPyramid Amounts</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Snack</th>
<th>Dinner</th>
<th>Snack</th>
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</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>2 c</td>
<td>( \frac{1}{2} ) c</td>
<td>( \frac{1}{2} ) c</td>
<td>1 c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>2( \frac{1}{2} ) c</td>
<td></td>
<td>1 c</td>
<td></td>
<td>2 c</td>
<td></td>
</tr>
<tr>
<td>Grains</td>
<td>6 oz</td>
<td>1 oz</td>
<td>2 oz</td>
<td>( \frac{1}{2} ) oz</td>
<td>2 oz</td>
<td>( \frac{1}{2} ) oz</td>
</tr>
<tr>
<td>Meat and legumes</td>
<td>5( \frac{1}{2} ) oz</td>
<td></td>
<td>2 oz</td>
<td></td>
<td>3( \frac{1}{2} ) oz</td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>3 c</td>
<td>1 c</td>
<td></td>
<td>1 c</td>
<td></td>
<td>1 c</td>
</tr>
<tr>
<td>Oils</td>
<td>5( \frac{1}{2} ) tsp</td>
<td>1( \frac{1}{2} ) tsp</td>
<td></td>
<td>4 tsp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discretionary calorie allowance</td>
<td>267 cal</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
MyPyramid: Steps to a Healthier You

- Online educational tool
- Guides users through diet planning
- Dietary changes
  - Small steps make substantial impacts
- Flexibility of the USDA Food Guide
  - Mixed dishes
  - Vegetarians
MyPyramid: Steps to a Healthier You

The multiple colors of the pyramid illustrate variety: each color represents one of the five food groups, plus one for oils. Different widths of colors suggest the proportional contribution of each food group to a healthy diet.

The name, slogan, and website present a personalized approach.

The narrow slivers of color at the top imply moderation in foods rich in solid fats and added sugars.

The wide bottom represents nutrient-dense foods that should make up the bulk of the diet.

Greater intakes of grains, vegetables, fruits, and milk are encouraged by the width of orange, green, red, and blue, respectively.

A person climbing steps reminds consumers to be physically active each day.
Portion Control

- To control calories you must control portions
- Portion sizes may be difficult to judge
- U.S. trend
  - Larger portion sizes
  - More fat and sugar
- Tips on weights and measures
  - Cups (1 cup = 8 oz measuring cup.)
  - Ounces- weight not volume
  - Tablespoons and teaspoons- measuring spoons not flatware, filled to level
  - ‘Medium’- means different size to people
# U.S. Trend Toward Colossal Cuisine

<table>
<thead>
<tr>
<th>Food</th>
<th>Typical 1970s</th>
<th>Today's colossal</th>
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</thead>
<tbody>
<tr>
<td>Cola</td>
<td>10 oz bottle, 120 cal</td>
<td>40–60 oz fountain, 580 cal</td>
</tr>
<tr>
<td>French fries</td>
<td>about 30, 475 cal</td>
<td>about 50, 790 cal</td>
</tr>
<tr>
<td>Hamburger</td>
<td>3–4 oz meat, 330 cal</td>
<td>6–12 oz meat, 1,000 cal</td>
</tr>
<tr>
<td>Bagel</td>
<td>2–3 oz, 230 cal</td>
<td>5–7 oz, 550 cal</td>
</tr>
<tr>
<td>Steak</td>
<td>8–12 oz, 690 cal</td>
<td>16–22 oz, 1,260 cal</td>
</tr>
<tr>
<td>Pasta</td>
<td>1 c, 200 cal</td>
<td>2–3 c, 600 cal</td>
</tr>
<tr>
<td>Baked potato</td>
<td>5–7 oz, 180 cal</td>
<td>1 lb, 420 cal</td>
</tr>
<tr>
<td>Candy bar</td>
<td>1½ oz, 220 cal</td>
<td>3–4 oz, 580 cal</td>
</tr>
<tr>
<td>Popcorn</td>
<td>1½ c, 80 cal</td>
<td>8–16 c tub, 880 cal</td>
</tr>
</tbody>
</table>

Note: Calories are rounded values for the largest portions in a given range.
A Note About Exchange Systems

- Useful for almost everyone
- Ideal for weight watchers or diabetics
- Estimates values for whole groups of foods
- Focus on energy-yielding nutrients
Checking Out Food Labels

- Requirements for food labels
  - Common or usual name
  - Manufacturer, packer, or distributor contact information
  - Net contents
  - Nutrient contents (Nutrition Facts panel)
  - Ingredients
    - Descending order by weight
Nutrition Facts Panel

- Serving size
  - Common measures allow for comparison
- Servings per container
- Calories/calories from fat
- Nutrient amounts and percentages of DVs
  - Fat, cholesterol, sodium, total carbohydrate, protein
- Vitamins and minerals
  - Vitamin A, vitamin C, calcium, and iron
What’s on a Food Label?

- The name and address of the manufacturer, packer, or distributor
- The common or usual product name
- Approved nutrient claims if the product meets specified criteria
- The net contents in weight, measure, or count
- Approved health claims stated in terms of the total diet

Nutrition Facts

- Serving size: 3/4 cup (22 g)
- Servings per container: 14

**Amount per serving**

- Calories: 110
- Calories from fat: 9
- Total fat: 1 g
- Saturated fat: 0 g
- Trans fat: 0 g
- Cholesterol: 0 mg
- Sodium: 250 mg
- Total Carbohydrate: 23 g
- Dietary fiber: 1.5 g
- Sugars: 10 g
- Protein: 3 g

**Percent Daily Value**

- Vitamin A 25%
- Vitamin C 25%
- Calcium 2%
- Iron 25%

*Percent Daily Values are based on a 2000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.*

Daily Values reminder for selected nutrients for a 2000- and a 2500-calorie diet

Calorie per gram reminder

The ingredients in descending order of predominance by weight

INGREDIENTS, listed in descending order of predominance:

- Corn, Sugar, Salt, Malt Flavoring, Treatments: BHT, VITAMINS and MINERALS: Vitamin C, (Sodium Ascorbate), Niacinamide, Iron, Vitamin B6, (Pyridoxine Hydrochloride), Thiamin, (Thiamine Hydrochloride), Folic Acid, and Vitamin D.
More About Percentages of Daily Values

- ‘% Daily Value’ is based on 2,000 calorie diet
- Two types of Daily Values
  - Some are intake goals to strive for
  - Some constitute healthy daily maximums
- Daily Values greatest use
  - Comparing foods
Claims on Food Labels

- Nutrient claims
  - Food must meet specified criteria
  - Examples
    - “Good source” of a nutrient
    - “High” in a nutrient
- Health claims: claims linking food constituents w/disease states
  - Allowed on labels that FDA has approved
  - “diets low in sodium may reduce the risk of high blood pressure”
Claims on Food Labels

- **Structure/function claims**: legal but largely unregulated claim allowed on labels of dietary supplements and conventional foods
  - Requires no prior approval
  - Notification of FDA is sufficient
  - Required label disclaimer (often in small print)
  - Examples
    - lowers cholesterol
    - helps maintain normal cholesterol levels
Are Some Foods “Superfoods” for Health?

Controversy 2
Phytochemicals

- Nonnutrient components of plants
- Confer color, taste
  - Flavonoids - yellow pigment in foods
- Emerging as potential regulators of health
  - Antioxidants that protect DNA
  - Regulate protein synthesis
  - Mimic hormones
  - Alter blood chemistry
Phytochemicals

- Blueberries
  - Antioxidants- keeps brain in shape
- Chocolate
  - Flavonoids and antioxidants- prevents heart disease
- Flaxseed
  - Lignans and phytoestrogens- fight cancer
- Garlic
  - Antioxidant organosulfur compounds- stop cancer
Phytochemicals

- Soybeans and soy products
  - Chronic diseases like heart disease
  - Downsides- some cancers grow when exposed to estrogen
- Tomatoes
  - Antioxidant lycopene- lessens some cancers
- Tea, wine, pomegranate, and whole grain
  - Lessens breast cancer, low cardiovascular disease
- Yogurt- reduce allergies, ulcers, colon cancer