NUTRITION GUIDE
Your health and well-being are important. So, let’s start by talking about safety and health concerns. Please be sure to read this section before moving on.

This program is a self-care education program designed to help you make healthy, safe changes to your health behaviors. This guide does not take the place of regular health care or your doctor’s advice.

Talk with your doctor before making changes to your diet, fitness routine, or other health behaviors. Use this guide along with your doctor’s advice. Do not change your medicine or medical care routine without first talking with your doctor or other health care providers.

If you have any questions about the information in this guide, please contact Healthyroads at www.healthyroads.com

GUIDELINES AND PRECAUTIONS FOR USING THIS PROGRAM

Your health and well-being are important. So, let’s start by talking about safety and health concerns. Please be sure to read this section before moving on.

This program is a self-care education program designed to help you make healthy, safe changes to your health behaviors. This guide does not take the place of regular health care or your doctor’s advice.

Talk with your doctor before making changes to your diet, fitness routine, or other health behaviors. Use this guide along with your doctor’s advice. Do not change your medicine or medical care routine without first talking with your doctor or other health care providers.

If you have any questions about the information in this guide, please contact Healthyroads at www.healthyroads.com
INTRODUCTION: FOOD AND YOUR HEALTH

Foods give you the energy your body needs. You need energy for digestion, growth, movement, and brain function. In fact, each cell in your body needs energy. And the only way your body gets energy is from eating food.

Food gives your body the calories and wide range of vitamins, minerals, and other nutrients that help your body run smoothly. In Chapters 1 and 2, you will learn about food and what is in a healthy diet.

What you eat is linked to your health. More and more research is showing that this is true. Eating foods that are moderate in fat, and high in fiber, fruits and vegetables may help to:

- Prevent heart disease
- Reach or maintain healthy cholesterol levels
- Reach or maintain a healthy blood pressure
- Reduce risk of certain cancers
- Prevent or manage type 2 diabetes
- Lower chances of bone loss
- Lower risk of eye diseases
- Reach and maintain your healthy weight

A healthy diet can also:

- Improve healing
- Maintain bowel regularity and reduce constipation
- Aid in recovery after exercise
- Build and preserve strong bones
- Increase energy
- Help improve your mood and memory

In Chapter 3, you will learn about how food affects your health and why a healthy diet can benefit other aspects of your life, such as how well you handle stress and how much physical activity you can do.

What you eat is all about choices. When it comes time for your meals and snacks, you have a lot of options. Even if you have made unhealthy food choices in the past, you now have the power to change your diet. It is never too late to start eating right.

Chapter 4 will show you some tips on how to make food choices based on nutritional content.

Chapter 5 is your action plan. If you need to improve your eating habits, a few tools are provided to help you learn to eat what is best for your body.

WHAT IS NUTRITION? WHAT ARE NUTRIENTS?

Nutrition is the process by which your body takes in and uses food; good nutrition is about balance and eating what and when your body needs to stay healthy. Nutrients are the vital elements found in foods that your body needs to function.

It is possible to get all of the nutrients you need from foods. But these days, it is easy to eat foods that don’t have many of these nutrients. Let us take a closer look at some types of food you will want to include—or limit—in your diet.
1.1 Whole Foods

One way to get all the nutrients possible from the foods you eat is to choose whole foods. Whole foods are foods that have not been heavily processed. The foods still have all of their vitamins, minerals, and other nutrients. Some examples of whole foods are fresh fruits and veggies and raw nuts. You can recognize many whole foods by their natural form.

Other examples of whole foods are food items made from naturally occurring sources. Some examples are whole wheat flour (and whole wheat products) and brown rice.

To find packaged products containing whole foods, look for these terms on the package:
- Whole (look for this word before the name of a grain on breads, pastas, and other baked products)
- 100 percent fruit
- Made from whole ripe _____ (e.g., tomatoes, cranberries, raspberries, etc.)
- Recognizable food ingredients that also say:
  - No added sugars
  - Low sodium or no salt added

Examples of processed foods that are NOT whole foods include:
- Packaged cookies
- Chips and crackers
- Donuts and pastries
- Frozen entrees
- Pre-packaged one-skillet meals
- Boxed rice or pasta side dishes

If you find these terms on the food package, it’s most likely a processed food:
- Foods with lots of ingredients you do not recognize
- Foods with a shelf life of months or years
- Bleached, enriched white flour
- Artificially colored or flavored foods
- Foods whose labels promise that the foods “contain real bits of _____” (e.g., apples, strawberries, oranges, etc.)
- Foods with sugar or high fructose corn syrup listed near the top of the ingredients list

It is important to read the whole label because words like low fat, low sodium, and low calorie may make the food seem healthy when it is not.

Remember, you have a choice when you shop for foods. Just follow the guidelines in this guide and with a bit of thought and planning, you may find that eating healthy, whole foods does not have to be a chore. It can even be something you come to enjoy! And the benefits of eating well are great.
1.2 Nutrient Density

Just as a car needs gas to run, your body needs fuel from food to work. If you put nutritious food in your body, it is more likely to run well. In general, the most nutritious foods are whole and unprocessed. These foods are healthy because they:

- Give you energy
- Are full of vitamins, minerals, and plant nutrients
- Contain fiber, healthy protein, and healthy fats
- Have less saturated fat and salt

These healthy foods are called nutrient dense.

Each food you eat can be ranked from low to high in nutrient density. Some foods, like donuts, have little nutrition. They are low in nutrient density. Other foods, like whole wheat bread, are packed with nutrients, such as vitamins, minerals, and fiber. They are high in nutrient density. Fruits and vegetables are also high in nutrient density. Nutrient dense foods are full of nutrients and many are naturally lower in fat or contain only heart-healthy fats. Most often they’re even lower in calories than many processed or fast foods. In other words, by filling up on nutrient dense foods, you get the best nutrition for the calories.

Meals high in nutrient density

Meals high in nutrient density are made up of whole foods. Meals high in nutrient density tend to:

- Curb hunger
- Lessen the number of calories taken in
- Make you feel fuller for a longer time (satiety)
- Reduce the risk of some chronic diseases

Meals low in nutrient density

Meals low in nutrient density are made from processed foods. They can be quick and easy to prepare. But they are usually higher in sugar, fat, calories, and salt. Processed foods may also have:

- Artificial sweeteners
- Trans fats
- Added sugars
- Excess sodium

Eating a diet high in processed foods can have harmful effects on your health. A diet high in calories but low in nutrients can lead to:

- Not getting enough nutrients
- Getting too many calories
- Higher risk of chronic diseases like diabetes, certain types of cancer, heart disease, and stroke
- Weight gain

In the next few pages, you will find 6 nutrient density ladders. These ladders are for:

1. Grains, cereals, and breads
2. Fruits and vegetables
3. Protein foods - meat and meat alternatives
4. Milk and milk alternatives
5. Fats and oils
6. Complete meals (combination foods)
### GRAINS, CEREALS, AND BREADS

**NUTRIENT DENSITY LADDER**

**Key nutrients:** B vitamins, fiber

**TOP STEP**
- Brown rice
- Quinoa
- Steel-cut oatmeal
- Amaranth
- Wild rice
- Millet
- Instant oatmeal
- Low-fat granola
- English muffins
- White rice
- Pasta
- Baked chips
- Wheat crackers
- Plain popcorn
- Buckwheat
- Wheat berries
- Bulgur wheat
- Farro
- Whole wheat pasta
- Unrefined (whole) flour
- Wheat germ
- 100% whole wheat & whole grain bread and bread products
- Whole wheat couscous
- High fiber whole grain cereals
- Whole grain crackers (no trans fats)
- Hard taco shells (whole corn)

**SECOND STEP**
- Brown rice
- Quinoa
- Steel-cut oatmeal
- Amaranth
- Wild rice
- Millet
- Wheat berries
- Bulgur wheat
- Farro
- Whole wheat pasta
- Unrefined (whole) flour
- Wheat germ
- 100% whole wheat & whole grain bread and bread products
- Whole wheat couscous
- High fiber whole grain cereals
- Whole grain crackers (no trans fats)
- Hard taco shells (whole corn)

**FIRST STEP**
- Instant oatmeal
- Low-fat granola
- English muffins
- White rice
- Pasta
- Baked chips
- Wheat crackers
- Plain popcorn
- Buckwheat
- Wheat berries
- Bulgur wheat
- Farro
- Whole wheat pasta
- Unrefined (whole) flour
- Wheat germ
- 100% whole wheat & whole grain bread and bread products
- Whole wheat couscous
- High fiber whole grain cereals
- Whole grain crackers (no trans fats)
- Hard taco shells (whole corn)

### FRUITS AND VEGETABLES

**NUTRIENT DENSITY LADDER**

**Key nutrients:** Vitamins C and A, B vitamins, potassium, fiber, phytochemicals (plant nutrients)

**TOP STEP**
- All fresh fruits and vegetables
- Fruits canned in 100% fruit juice
- Fresh-squeezed fruit and vegetable juice
- Plain, frozen vegetables
- Homemade vegetable-based soups (not creamed)
- All fresh fruits and vegetables
- Fruits canned in 100% fruit juice
- Fresh-squeezed fruit and vegetable juice
- Plain, frozen vegetables
- Homemade vegetable-based soups (not creamed)
- Dried fruit (no sugar added)
- Frozen fruit (no sugar added)
- Baked apple

**SECOND STEP**
- Fruits canned in light syrup
- Canned or jarred 100% fruit and vegetable juice
- Fruit spread (100% fruit)
- Frozen fruits (with added sugar or syrup)
- Canned vegetables (low sodium)
- Frozen fruits (with added sugar or syrup)
- Canned vegetables (low sodium)
- Canned vegetable soups (aim for low sodium)
- Store-bought apple sauce (aim for no added sugar)
- 100% real fruit roll-ups / fruit leather

**FIRST STEP**
- All fried and batter-dipped vegetables: hash browns, onion rings, French fries, tempura, etc.
- Frozen vegetables in butter or cream sauce
- Jelly/jam
- Fruit gelatin desserts
- Potato chips
- Fruit salad mixed with mayonnaise
- Fruit drinks and fruit sodas
- Banana chips (fried)
### PROTEIN FOODS - MEAT AND MEAT ALTERNATIVES

**NUTRIENT DENSITY LADDER**

Key nutrients: Protein, iron, zinc

<table>
<thead>
<tr>
<th>TOP STEP</th>
<th>SECOND STEP</th>
<th>FIRST STEP</th>
</tr>
</thead>
</table>
| Nuts: almonds, walnuts, pecans, pistachios, Brazil nuts (contain protein, high in healthy fat) | Lean chicken or turkey (skinless, boneless, white meat) | Refried beans, sausages, and any processed, packaged meat preserved with sodium nitrates or nitrates
| Dried beans and lentils | Fresh fish | All fried meat products
| Tofu, miso, edamame, tempeh, textured vegetable protein (TVP) | Tuna packed in water | Regular hamburger meat
| Peanuts | Low fat refried beans | Chicken wings

- Eggs
- Shellfish: clams, crab, lobster, scallops, shrimp
- Vegetarian burgers made from whole food ingredients

### MILK AND MILK ALTERNATIVES

**NUTRIENT DENSITY LADDER**

Key nutrients: Calcium, protein, vitamin D

<table>
<thead>
<tr>
<th>TOP STEP</th>
<th>SECOND STEP</th>
<th>FIRST STEP</th>
</tr>
</thead>
</table>
| Low fat (1%, 2%) and nonfat milk | Whole milk | Ice cream
| Buttermilk | Regular yogurt | Frozen yogurt
| Part skin cheeses, like ricotta and mozzarella | Cottage cheese | Cream cheese
| Low fat cottage cheese | Low fat sour cream | Evaporated whole milk
| Fat-free dry milk powder | Low fat cream cheese | Sour cream
| Fortified unsweetened milk alternatives: almond, rice, coconut, soy | Low fat chocolate milk | Whipping cream
| Cheeses from whole milk: cheddar, American, Swiss, feta (watch portions) | Processed cheese food and spread | Processed cheese
| Low fat and nonfat, lower sugar yogurt, Greek or regular | Chocolate milk | Half-and-half
| Fat-free dry milk powder | Half-and-half | Flavored coffee drinks (with or without whipped cream)
| Evaporated fat-free or low fat milk | Whipping cream | Fat-free coffee creamer
| Fortified unsweetened milk alternatives: almond, rice, coconut, soy | Regular cream | Fat-free creamer
FATS AND OILS

NUTRIENT DENSITY LADDER
Key nutrients: Omega-3 fatty acids, monounsaturated fats, polyunsaturated fats, vitamin E

TOP STEP
- Olive oil
- Flaxseed oil
- Tahini paste
- Pesto (made with olive oil)
- Canola oil
- Walnut oil
- Avocado oil
- Sesame oil

SECOND STEP
- Buttery spreads without added trans fats
- Butter, especially whipped butter
- Corn, safflower, and soy bean oils
- Reduced fat mayonnaise
- Coconut and palm oils

FIRST STEP
- Regular mayonnaise
- Hydrogenated fats
- Trans fats
- Stick margarine
- Shortening
- Lard
- Miracle Whip® salad dressing

1.3 Portion Size
A key part of eating a balanced diet is controlling how much you eat. Portion size refers to how much of a food you eat in one meal or snack. Many people eat portions that are much too big.

One way to keep track of how much you eat is to check packaged foods for the serving size. A serving is the amount listed on packaged foods after “serving size.” In general, presume that a serving and a portion should be the same size. If you are eating more than one serving at a time, your portion may be too large. You are also eating more calories, fat, or sugar than is listed on the package. If your portion is double the serving size amount, you will need to double the calories, fat, etc. You may want to eat less of foods than you do now once you have checked the serving size.

The portion size that you eat for a healthy, balanced diet will be based on your health, any issues you have such as high blood sugar, level of activity, and on whether or not you are trying to lose weight. You may want to work with your doctor or dietitian to create an eating plan to fit your unique needs.

Some guidelines for serving sizes of different foods:

**Grains (grains, cereals, and breads):** 1 ounce-equivalent is equal to 1 medium slice of bread; 1 ounce of ready-to-eat cereal (about 1 cup flaked cereal); 1 ounce uncooked pasta or rice; ½ cup cooked rice or pasta; ½ cup cooked cereal

**Vegetables and Fruits:** 1 cup-equivalent is equal to 1 cup raw or cooked vegetable or fruit; 1 cup 100% vegetable or fruit juice; 2 cups leafy salad greens; ½ cup dried fruit or vegetable.

**Protein foods (meat and meat alternatives):** 1 ounce-equivalent is equal to 1 ounce lean meat, poultry, fish or seafood; ¼ cup cooked beans or tofu; 1 egg; 1 tablespoon peanut butter; ½ ounce nuts or seeds

**Dairy (milk and milk alternatives):** 1 cup-equivalent is equal to: 1 cup milk, yogurt, or fortified soy milk; 1½ ounces of natural cheese such as cheddar; 2 ounces of processed cheese.

DAILY SERVINGS GUIDELINES
You will want to know how many servings a day of different foods is best for you. Eating the right number of servings per day can help you get the nutrients you need. You can use your daily calorie needs to help you decide how much of each food group to eat.

This chart can help you find the typical daily calorie range for your age and activity level.

The following boxes show 8 daily calorie levels. Each calorie level has the estimated number of servings per day for each food group to meet the total calories. Find the box with the calorie level that is closest to your calorie needs. Then aim to eat the number of servings for each food group each day. There are a variety of eating patterns that you can follow for good health and using these guidelines can help you achieve your goals.

Keep in mind that these are suggested numbers of servings per day. You may want to talk to your doctor or registered dietitian about how many servings of each food group are right for you.
2,400 Calories per Day
- 8 ounce-equivalents grains, breads, and cereals (at least half as whole grains)
- 2.5 cup-equivalents fruits
- 3 cup-equivalents vegetables (focus on red, orange, and dark green vegetables frequently)
- 7.5 ounce-equivalents protein foods – meat, poultry, fish, seafood, and meat alternatives
- 2.5-3 cup-equivalents milk and milk alternatives
- 31 grams oils
  “Other calories” treats, beverages, additional items up to 300 calories
Weekly:
- 2 cup-equivalent legumes (beans)
- 5 ounce-equivalents nuts and seeds

2,600 Calories per Day
- 9 ounce-equivalents grains, breads, and cereals (at least half as whole grains)
- 2.5 cup-equivalents fruits
- 3.5 cup-equivalents vegetables (focus on red, orange, and dark green vegetables frequently)
- 7.5 ounce-equivalents protein foods – meat, poultry, fish, seafood, and meat alternatives
- 2.5-3 cup-equivalents milk and milk alternatives
- 34 grams oils
  “Other calories” treats, beverages, additional items up to 330 calories
Weekly:
- 2.5 cup-equivalent legumes (beans)
- 5 ounce-equivalents nuts and seeds

2,800 Calories per Day
- 10 ounce-equivalents grains, breads, and cereals (at least half as whole grains)
- 3 cup-equivalents fruits
- 3.5 cup-equivalents vegetables (focus on red, orange, and dark green vegetables frequently)
- 8 ounce-equivalents protein foods – meat, poultry, fish, seafood, and meat alternatives
- 2.5-3 cup-equivalents milk and milk alternatives
- 36 grams oils
  “Other calories” treats, beverages, additional items up to 350 calories
Weekly:
- 2.5 cup-equivalent legumes (beans)
- 6 ounce-equivalents nuts and seeds
### SERVINGS IN A PORTION
You can use the tables on the next few pages to help you learn how many servings you eat in one portion.

**BREADS, CEREALS, AND GRAINS**

A serving is 1 ounce-equivalent:
- 1 medium slice (1 ounce) of bread
- 1 ounce (about 1 cup) ready-to-eat cereal
- ½ cup cooked cereal, grain, or pasta
- 1 ounce uncooked pasta or rice
- ¾–1 ounce of most snack foods
- 3 cups popped popcorn (no added fat)

Remember to refer back to your daily recommendations based on your calorie needs in the previous pages.

<table>
<thead>
<tr>
<th>TYPE OF FOOD</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAGELS</td>
<td>1 “mini” bagel</td>
<td>1 large bagel = 4 servings</td>
</tr>
<tr>
<td>BISCUITS</td>
<td>1 small (2” diameter)</td>
<td>1 large (3” diameter) = 2 servings</td>
</tr>
<tr>
<td>BREADS</td>
<td>1 regular slice</td>
<td>2 regular slices = 2 servings</td>
</tr>
<tr>
<td></td>
<td>1 small slice French bread</td>
<td>1 small baguette (9” long) = 6 servings</td>
</tr>
<tr>
<td></td>
<td>4 snack-size slices rye bread</td>
<td></td>
</tr>
<tr>
<td>BULGUR</td>
<td>½ cup cooked</td>
<td></td>
</tr>
<tr>
<td>CORNBREAD</td>
<td>1 small piece (2 ½” x 1 ¼” x 1 ¼”)</td>
<td>1 medium piece (2 ½” x 2 ½” x 1 ⅛”) = 2 servings</td>
</tr>
<tr>
<td>CRACKERS</td>
<td>5 whole wheat crackers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 rye crispbreads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 square or round crackers</td>
<td></td>
</tr>
<tr>
<td>ENGLISH MUFFINS</td>
<td>½ muffin</td>
<td>1 English muffin = 2 servings</td>
</tr>
<tr>
<td>MUFFINS</td>
<td>1 small (2 ½” diameter)</td>
<td>1 large muffin (3 ½” diameter) = 3 servings</td>
</tr>
<tr>
<td>OATMEAL</td>
<td>½ cup cooked</td>
<td>1 cup cooked oatmeal = 2 servings</td>
</tr>
<tr>
<td></td>
<td>1 packet instant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 ounce dry (regular or quick)</td>
<td></td>
</tr>
</tbody>
</table>

### FRUITS

**A serving is equal to ⅔ cup-equivalent:**
- ⅔ most medium- or large-sized fruit
- 1 small-sized fruit
- ⅔ cup chopped, cooked, or canned fruit
- ⅔ cup (4 ounces) of juice
- ⅔ cup dried fruit, like raisins

Remember to refer back to your daily recommendations based on your calorie needs in the previous pages.

<table>
<thead>
<tr>
<th>TYPE OF FOOD</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPLE</strong></td>
<td>⅔ large (3 ⅓&quot; diameter)</td>
<td>⅔ large apple = 2 servings</td>
</tr>
<tr>
<td></td>
<td>1 small (2 ⅜&quot; diameter)</td>
<td>1 small apple = 1 serving</td>
</tr>
<tr>
<td></td>
<td>⅔ cup sliced or chopped, raw or cooked</td>
<td></td>
</tr>
<tr>
<td><strong>APPLESAUCE</strong></td>
<td>⅔ cup</td>
<td>1 snack container (4 ounces) = ½ serving</td>
</tr>
<tr>
<td><strong>BANANA</strong></td>
<td>½ cup sliced</td>
<td>1 large banana = 2 servings</td>
</tr>
<tr>
<td></td>
<td>⅔ large (8&quot; to 9&quot; long) or 1 small (less than 6&quot; long)</td>
<td></td>
</tr>
<tr>
<td><strong>CANTALOUPE</strong></td>
<td>¼ cup diced or melon balls</td>
<td>1 medium wedge (% of a medium melon)</td>
</tr>
<tr>
<td><strong>CHERRIES</strong></td>
<td>½ cup fresh cherries</td>
<td>½ cup dried cherries</td>
</tr>
<tr>
<td><strong>GRAPE</strong></td>
<td>½ cup whole or cut-up</td>
<td>½ cup dried cherries</td>
</tr>
<tr>
<td></td>
<td>16 seedless grapes</td>
<td></td>
</tr>
<tr>
<td><strong>GRAPEFRUIT</strong></td>
<td>½ medium (4” diameter)</td>
<td>1 medium grapefruit = 2 servings</td>
</tr>
<tr>
<td></td>
<td>⅔ cup sections</td>
<td></td>
</tr>
<tr>
<td><strong>MIXED FRUIT (FRUIT COCKTAIL)</strong></td>
<td>¼ cup diced or sliced, raw or canned, drained</td>
<td>1 snack container (4 ounces) drained = ¾ serving</td>
</tr>
</tbody>
</table>

**ORANGE**
- ⅔ large (3 ⅓" diameter) or
- 1 small (2 ⅜" diameter)
- ⅔ cup sections

**ORANGE, MANDARIN**
- ½ cup canned, drained

**PEACH**
- ⅔ large (2 ⅜-3" diameter) or
- 1 small (2" diameter)
- ⅔ cup sliced or diced, raw, cooked, or canned, drained
- 1 half, canned

**PEAR**
- ½ medium pear (2 ½ per lb)
- ⅔ cup sliced or diced, raw, cooked, or canned, drained
- 1 snack container (4 ounces) drained = ¾ serving

**PINEAPPLE**
- ⅔ cup chunks, sliced or crushed, raw, cooked, or canned, drained
- 1 snack container (4 ounces) drained = ¾ serving

**PLUM**
- ⅔ cup sliced raw or cooked
- 1 large plum = 2 servings

**STRUWBBERRIES**
- About 4 large berries
- ⅔ cup whole, halved, or sliced, fresh or frozen

**WATERMELON**
- ⅔ small wedge (½" thick)
- ⅔ cup diced or balls
- 6 melon balls = 1 serving

**DRIED FRUIT (RAISINS, PRUNES, APRICOTS, CHERRIES, ETC.)**
- ⅔ cup dried fruit
- 1 small box raisins (1 ½ ounces) = 1 serving

**100% FRUIT JUICE (ORANGE, APPLE, GRAPE, GRAPEFRUIT, ETC.)**
- ⅔ cup
- 1 cup 100% fruit juice = 2 servings

VEGETABLES

A serving is equal to ½ cup-equivalent:
- 1 cup raw, leafy vegetables
- ½ cup cut raw or cooked vegetables
- ½ cup (4 ounces) vegetable juice

Remember to refer back to your daily recommendations based on your calorie needs in the previous pages.

<table>
<thead>
<tr>
<th>TYPE OF VEGETABLE</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DARK-GREEN VEGETABLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BROCCOLI</td>
<td>½ cup chopped or florets</td>
<td>1 cup broccoli = 2 servings</td>
</tr>
<tr>
<td></td>
<td>1 ½ spears 5&quot; long raw or cooked</td>
<td></td>
</tr>
<tr>
<td>COOKED LEAFY GREENS</td>
<td>½ cup cooked</td>
<td>1 cup cooked greens = 2 servings</td>
</tr>
<tr>
<td>(COLLARDS, MUSTARD GREENS, TURNIP GREENS, KALE, SPINACH)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RAW LEAFY GREENS</td>
<td>1 cup raw</td>
<td>2 cups raw leafy greens (e.g. salad) = 2 servings</td>
</tr>
<tr>
<td>(SPINACH, ROMAINE, WATERCRESS, DARK GREEN LEAFY LETTUCE, ENDIVE, ESCAROLE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORANGE VEGETABLES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARROTS</td>
<td>½ cup, strips, slices, or chopped, raw, or cooked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>½ cup baby carrots</td>
<td>6 baby carrots = 1 serving</td>
</tr>
<tr>
<td>PUMPKIN</td>
<td>½ cup mashed, cooked</td>
<td></td>
</tr>
<tr>
<td>SWEET POTATO</td>
<td>½ - ¾ large baked (2 ¼&quot; or more diameter)</td>
<td>1 large sweet potato = 2-3 servings</td>
</tr>
<tr>
<td></td>
<td>½ cup sliced or mashed, cooked</td>
<td></td>
</tr>
<tr>
<td>WINTER SQUASH (ACORN, BUTTERNUT, HUBBARD)</td>
<td>½ cup cubed, cooked</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DRY BEANS AND PEAS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DRY BEANS AND PEAS (SUCH AS BLACK, GARANZO, KIDNEY, PINTO, OR SOY BEANS, OR BLACK EYED PEAS OR SPLIT PEAS)</td>
<td>½ cup whole or mashed, cooked</td>
</tr>
<tr>
<td>TOFU</td>
<td>½ cup of ½&quot; cubes (about 4 ounces) or about 1 piece (2 ½&quot; x 2 ½&quot; x 1&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STARCHY VEGETABLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CORN</td>
<td>½ cup</td>
</tr>
<tr>
<td></td>
<td>1 large ear (8&quot; to 9 &quot;long) 2 servings</td>
</tr>
<tr>
<td>GREEN PEAS</td>
<td>½ cup</td>
</tr>
<tr>
<td>WHITE POTATOES</td>
<td>½ cup diced, mashed</td>
</tr>
<tr>
<td></td>
<td>French fries: 10 medium to long strips (2 ½&quot; to 4&quot; long) 1 medium potato = 2 servings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OTHER VEGETABLES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BEAN SPROUTS</td>
<td>½ cup cooked</td>
</tr>
<tr>
<td>CABBAGE, GREEN</td>
<td>½ cup chopped, or shredded raw or cooked</td>
</tr>
<tr>
<td>CAULIFLOWER</td>
<td>½ cup pieces or florets raw or cooked</td>
</tr>
<tr>
<td>CELERY</td>
<td>½ cup, diced or sliced, raw or cooked</td>
</tr>
<tr>
<td>CUCUMBERS</td>
<td>½ cup raw, sliced, or chopped</td>
</tr>
<tr>
<td>GREEN OR WAX BEANS</td>
<td>½ cup cooked</td>
</tr>
<tr>
<td>GREEN OR RED PEPPERS</td>
<td>½ cup chopped, raw, or cooked</td>
</tr>
<tr>
<td></td>
<td>½ large pepper (3&quot; diameter, 3 ½&quot; long)</td>
</tr>
</tbody>
</table>
### PROTEIN FOODS - MEAT AND MEAT ALTERNATIVES

A serving is 1-ounce equivalent:

- **1 ounce** cooked meat, poultry, or fish (typical portion is 3 ounces)
- **¼ cup** cooked beans or tofu
- **1 egg**
- **1 tablespoon** peanut butter
- **½ ounce** of nuts or seeds

Remember to refer back to your daily recommendations based on your calorie needs in the previous pages.

<table>
<thead>
<tr>
<th>TYPE OF FOOD</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEATS</td>
<td>1 ounce cooked lean beef</td>
<td>1 small steak eye of round, filet</td>
</tr>
<tr>
<td></td>
<td>1 ounce cooked lean pork or ham</td>
<td>= 3 ½ to 4 servings</td>
</tr>
<tr>
<td></td>
<td>1 sandwich slice of turkey (4 ½” x 2 ⅔” x ⅛”)</td>
<td>1 small chicken breast half = 3 servings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>½ Cornish game hen = 4 servings</td>
</tr>
<tr>
<td>POULTRY</td>
<td>1 ounce cooked chicken or turkey, without skin</td>
<td>1 small chicken breast half = 3 servings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 small steak eye of round, filet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 3 ½ to 4 servings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 small lean hamburger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= 2 to 3 servings</td>
</tr>
</tbody>
</table>

### FISH

- 1 ounce cooked fish or shellfish
- 1 can of tuna, drained = 3 to 4 servings
- 1 salmon steak = 4 to 6 servings
- 1 small trout = 3 servings

### EGGS

- 1 egg
- 1 ½ egg whites = 1 serving

### NUTS AND SEEDS

- ½ ounce of nuts (12 almonds, 24 pistachios, 7 walnut halves)
- ½ ounce of seeds (pumpkin, sunflower, or squash seeds, hulled, roasted)
- 1 tablespoon of peanut butter or almond butter
- 1 ounce of nuts or seeds or a small handful = 2 servings

### DRY BEANS AND PEAS

- ½ cup of cooked dry beans (such as black, kidney, pinto, or white beans)
- ½ cup of cooked dry peas (such as chickpeas, cowpeas, lentils, or split peas)
- ½ cup of baked beans, refried beans
- 1 cup split pea soup = 2 servings
- 1 cup lentil soup = 2 servings
- 1 cup bean soup = 2 servings

### MEAT ALTERNATIVES

- ¼ cup (about 2 ounces) of tofu
- 1 ounce tempeh, cooked
- ½ cup roasted soybeans
- 1 falafel patty (2 ¼”, 4 ounces)
- 2 tablespoons of hummus
- 1 falafel sandwich = 2 to 3 servings

**DAIRY – MILK AND MILK ALTERNATIVES**

A serving is 1 cup-equivalent:

- **1 cup** milk, yogurt or calcium-enriched soy milk
- **1 ½ ounces** natural cheese
- **2 ounces** of processed cheese

Remember to refer back to your daily recommendations based on your calorie needs in the previous pages.

<table>
<thead>
<tr>
<th>TYPE OF FOOD</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILK</td>
<td>1 cup</td>
<td>1 x 8-ounce milk carton = 1 serving</td>
</tr>
<tr>
<td></td>
<td>1 half-pint container</td>
<td></td>
</tr>
<tr>
<td></td>
<td>½ cup evaporated milk</td>
<td></td>
</tr>
<tr>
<td>YOGURT</td>
<td>1 regular container (8 ounces)</td>
<td>1 small container (6 ounces) = ¼ serving</td>
</tr>
<tr>
<td></td>
<td>1 cup</td>
<td>1 snack size container (4 ounces) = ½ serving</td>
</tr>
<tr>
<td>SHREDDED CHEESE</td>
<td>⅓ cup</td>
<td></td>
</tr>
<tr>
<td>PROCESSED CHEESE</td>
<td>2 ounces</td>
<td>1 slice of processed cheese = ¼ serving</td>
</tr>
<tr>
<td>(AMERICAN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RICOTTA CHEESE</td>
<td>½ cup</td>
<td></td>
</tr>
<tr>
<td>COTTAGE CHEESE</td>
<td>½ cup</td>
<td>½ cup snack size = 1 serving; 1 cup (breakfast portion) = 2 servings</td>
</tr>
</tbody>
</table>

**MILK-BASED DESSERTS**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pudding made with milk</td>
<td>1 cup</td>
<td>1 snack size container (3 ½ ounces) = ¼ serving plus extra “other calories”</td>
</tr>
<tr>
<td>Frozen yogurt</td>
<td>1 cup</td>
<td></td>
</tr>
<tr>
<td>Ice cream</td>
<td>1 ½ cups</td>
<td>1 small scoop ice cream plus extra “other calories”</td>
</tr>
</tbody>
</table>


**FATS AND OILS**

A serving is equivalent to 1 teaspoon or 9 grams:

- **1 teaspoon** butter, buttery spreads, margarine, or oil
- **1 tablespoon** regular salad dressing

<table>
<thead>
<tr>
<th>TYPE OF FOOD</th>
<th>AMOUNT THAT COUNTS AS 1 SERVING</th>
<th>COMMON PORTIONS AND SERVING EQUIVALENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARGARINE</td>
<td>1 teaspoon</td>
<td></td>
</tr>
<tr>
<td>VEGETABLE OIL</td>
<td>1 teaspoon</td>
<td></td>
</tr>
<tr>
<td>REGULAR SALAD DRESSING (NOT LIGHT)</td>
<td>1 tablespoon</td>
<td></td>
</tr>
<tr>
<td>WHIPPED BUTTER</td>
<td>2 teaspoons</td>
<td></td>
</tr>
</tbody>
</table>

The vital nutrients your body needs can be found in foods. We will look at the different nutrients your body needs and also at foods that can give you a good amount of each. When you know the nutrients that help keep your body healthy, you will be able to choose foods packed with these nutrients. You will be able to make healthy choices for your life.

The 6 groups of nutrients you need for a healthy body are:
- Carbohydrates
- Fats
- Protein
- Vitamins and minerals
- Phytochemicals (plant nutrients)
- Water

2.1 Carbohydrates

CHOOSING HEALTHY CARBOHYDRATES
Carbohydrates are part of a healthy diet. Your body needs carbohydrates. They give you energy in the form of glucose (sugar). Quality carbohydrates also have lots of vitamins and minerals that your body needs. They may help manage cardiovascular disease and high blood sugar. Carbohydrates may help you keep your weight in control by replacing some of the higher fat foods in your diet. Some carbohydrate foods are high in fiber, which can help manage cholesterol levels.

Carbohydrates are found in foods such as grains, pasta, rice, bread, and sugar. They are also found in fruits and starchy vegetables like potatoes and corn.

Not all carbohydrates are the same, so you will want to pay attention to the type of carbohydrates you eat. There are 2 main types of carbohydrates: simple and complex carbohydrates. The difference between the 2 depends on the chemical structure of the food and how quickly it is digested. Simple carbohydrates have 1 or 2 sugars and complex carbohydrates have 3 or more.

Simple carbohydrates come in 2 forms:
- Naturally-occurring that contain vitamins and minerals: Found in fruits, vegetables, and milk and milk products
- Processed and refined that lack naturally-occurring vitamins, minerals, and fiber: Found in candy, regular carbonated beverages like soda, syrups, crackers, cookies, and table sugar

Complex carbohydrates are found in legumes/beans, starchy vegetables, and whole grain breads and cereals.

Here is a closer look at simple and complex carbohydrates.

SIMPLE CARBOHYDRATES
Some simple carbohydrates are natural. In other words, not all simple sugars are bad. Fruits have a simple sugar called fructose and milk has a simple sugar called lactose. These are important and nutritious foods to eat. Foods with naturally-occurring sugars are good to eat in moderation because they also have many other nutrients.

Naturally-occurring sugars are found in:
- Fruits
- Milk and milk products
- Vegetables
- Honey

Many foods that you can eat contain sugars and other simple carbohydrates that are not naturally-occurring in the food. These are called added sugars. Sugar can be added to a food when it is made or served. These foods with added sugars should be limited in your diet and include:
- Candy
- Soda
- Juice
• Flavored syrups
• Table sugar
• Sweets like cookies and cakes

Foods with added sugar contain calories, but often are lacking naturally-occurring vitamins, minerals, or fiber. These foods are said to contain “empty calories.” Too many processed or refined sugars may:
• Raise your blood sugar levels
• Raise your triglyceride levels
• Lead to weight gain

When you eat a processed food, you can use the nutrition label to see how much total sugar a food has. You can also look for sugar in the ingredient list. The closer that sugar is to the top of the list, the more sugar there is in the food. Sugar may be listed as “sugar” or by another name like:
• Corn syrup
• High fructose corn syrup
• Dextrose
• Fructose (naturally occurring—found in fruits)
• Fruit juice concentrate
• Glucose
• Lactose (also naturally occurring—found in dairy)
• Galactose (also naturally occurring—found in milk products)
• Malt syrup
• Maltose (also naturally occurring—found in some vegetables and in beer)
• Molasses
• Raw sugar
• Cane sugar
• Sucrose
• Brown rice syrup
• Evaporated cane juice

WHAT ARE SUGAR SUBSTITUTES?
Sugar substitutes, also known as non-nutritive sweeteners, have no calories. But they also have no nutrients. Sugar substitutes are found in:
• Diet sodas
• Sugar-free snacks
• Foods labeled “diabetic”
• Small packets in coffee shops and restaurants

Common non-nutritive sweeteners and zero-calorie sugar substitutes include:
• Saccharine (Sweet ‘n Low®)
• Aspartame (Equal®, NutraSweet®)
• Acesulfame K (Sunett®)
• Sorbitol
• Mannitol
• Xylitol
• Sucralose (Splenda®)
• Stevia (Truvia®)
COMPLEX CARBOHYDRATES
Complex carbohydrates are the more nutritious type of carbohydrate. Unlike simple carbohydrates, they cannot be absorbed into the blood until your body breaks them down further. This means the sugar is released into your blood more slowly. Good sources of complex carbohydrates include:

- Whole grains (brown rice, oats, barley)
- Starchy vegetables
- Legumes (dried beans, peas, and lentils)
- Whole grain breads
- Whole grain pastas

In general, it is best to eat more complex carbohydrates and naturally-occurring simple carbohydrates. For a healthier diet, you will want to eat less simple carbohydrate food that has added or refined sugars.

FIBER
If a complex carbohydrate food cannot be broken down in digestion, it is often called “roughage” or “fiber.” Fiber passes through your body without adding calories to your diet. It is important to include fiber in your diet to keep your digestion healthy. As fiber passes through your digestive tract, certain types of fiber attract and hold water. This helps move food through the digestive tract.

Besides helping digestion, certain kinds of fiber can help lower cholesterol. They also help you feel full after you eat.

Most whole fruits and vegetables have lots of fiber. So do whole grain products and legumes (dried beans, peas, and lentils).

How much fiber do you need each day?

<table>
<thead>
<tr>
<th>WOMEN NEED</th>
<th>MEN NEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 grams of fiber a day</td>
<td>38 grams of fiber a day</td>
</tr>
</tbody>
</table>

Fiber is one of the nutrients that most people do not get enough of in their diet. Therefore, it’s very important to focus on increasing fiber in your diet. Fiber has many health benefits. But do not eat too much high fiber food all at once. Too much fiber at one time may lead to gas and bloating. The key is to slowly increase how much fiber you eat over time. This gives your intestinal tract time to adapt. You should also drink plenty of liquid to help you digest well and avoid constipation.

How can I increase my fiber?
Here are some easy ways to add fiber to your meals and snacks:

- Eat 1-1½ cups of fruit and 2–2½ cups of vegetables a day.
- Switch to whole grain breads that have at least 2.5 grams of fiber per slice.
- Enjoy cooked whole grains like quinoa, brown rice, wild rice, and oatmeal.
- Bake with whole grain flour.
- Include beans (garbanzo, kidney, black, etc.) in your cooking at least 3 times a week.
- Nibble on plain popcorn.
- Eat foods that have at least 3 grams of fiber per serving.

How many carbohydrates do you need each day?
Adults need:

- About 45 to 65 percent of their total calories from carbohydrates
- About 130 grams of carbohydrates each day

Check with your doctor about the right amount of carbohydrates for you.
There are 4 calories in every gram of carbohydrate. Look at the nutrition facts label on a loaf of bread. You will see that a slice of bread has about 15 grams of carbohydrates. Multiply 15 grams by 4 calories. You can see that a slice of bread gives you about 60 calories from carbohydrates.

2.2 Fats
Fat is an important part of a healthy diet. To stay healthy, your body needs healthy fats. These come from both animal and vegetable sources. Animal sources include meat, poultry, and fatty fish. Plant sources include nuts, avocados, seeds, olives, and vegetable oils.

Even though fats are high in calories, they are important because they:
- Make you feel full and satisfied
- Store energy in the body
- Help your body use vitamins A, D, E, and K
- Form a part of the membrane of every cell

Some fats even help protect the body against heart disease and other health problems.

Not all fats are healthy for you. How can you tell the good fats from the bad? One key is to look for foods that have unsaturated fats. Unsaturated fats come mainly from plant sources. The types of fats that are generally not healthy for your body are saturated fats and trans fats. Eating good fats (unsaturated fats) may be better for your health than simply cutting down on saturated and trans fats.

We will look at some types of healthy fats first.

POLYUNSATURATED FATTY ACIDS
Polyunsaturated fatty acids (PUFAs) are considered to be healthier fats. They can help lower cholesterol and fat levels in the blood. And when they are used in place of some of the saturated fats in your diet, they may reduce the chance of heart disease by as much as 25 percent.

- Rich sources of PUFAs:
  - Corn, safflower, sunflower, soybean, and sesame oils
  - Fatty, cold-water fish
  - Some types of nuts

PUFAs should not make up more than 10 percent of your daily calories or about 22 grams in a 2,000 calorie diet.

OMEGA-3 AND OMEGA-6 FATS
Omega-3 fats are good fats to eat along with omega-6 fats. Some studies show a diet higher in omega-3 fats may lower your risk of cardiovascular disease.

- Foods that contain omega-3 fats:
  - Fatty, cold-water fish like salmon and sardines
  - Certain nuts and seeds, including flaxseeds and chia seeds
• Plant oils such as canola, soybean, flaxseed, and walnut oils

• Foods that contain omega-6 fats:
  • Oils such as corn and safflower
  • Many processed foods

**MONOUNSATURATED FATTY ACIDS**

Monounsaturated fatty acids (MUFAs) are also healthy fats. They can help lower cholesterol in some people. They can also help control blood sugar.

• **Rich sources of MUFAs:**
  • Olive oil
  • Canola oil
  • Avocados
  • Some types of nuts

MUFAs should make up no more than 15 percent of your daily calories. This equals about 33 grams in a 2,000 calorie diet.

Next we will look at fats to limit: saturated fats and trans fats.

**SATURATED FATS**

Saturated fats eaten in higher amounts have been shown to raise cholesterol to unhealthy levels. Eating too much saturated fat can also have an unhealthy effect on triglycerides (fats in the blood). Saturated fats in excess not only can raise your cholesterol and lead to heart disease but also may increase your risk of obesity and some types of cancer.

Your body makes all the saturated fat it needs. So you really do not need to eat more of it. No more than 10 percent of your daily calories (22 grams in a 2,000 calorie diet) should come from saturated fat. Research shows that replacing even a small amount of the saturated fat in your diet with polyunsaturated fats or high quality carbohydrates can significantly lower the risk of heart disease.

In general, saturated fats are solid at room temperature. Lard is a good example. These fats are found mostly in animal sources like meat and dairy. They are also found in some tropical plant oils such as coconut and palm oils.
TRANS FATTY ACIDS
Most trans fatty acids (trans fats) are found in processed foods (like packaged cookies). They are rarely found in whole foods. Research has shown that trans fats have a bad effect on the body. Trans fats can:

- Clog the arteries
- Increase bad cholesterol
- Increase the risk of heart disease

Trans fats come from both animal and vegetable sources and are found in:

- Hydrogenated oils
- Partially hydrogenated oils
- Hard margarines
- Many processed foods (convenience and snack foods)

To lower your intake of trans fats, eat fewer processed, convenience foods. Read the nutrition label and ingredients list. Cut back on foods such as bakery items, chips, snacks, and cookies. It is also a good idea to limit fried and other fatty foods. Instead, add more healthy fats to your diet. For example, cook with olive oil, include fish in your diet, and snack on nuts.

**How much fat should you eat each day?**
Adults generally should limit the total amount of fats they eat to:

- About 20 to 35 percent of their calories

Limit saturated fats to:

- No more than 10 percent of your total calories, and replace saturated fats with polyunsaturated fats

Fats have 9 calories per gram. That’s more than twice the calories found in carbohydrates and protein. A teaspoon of oil contains 5 grams and about 45 calories. To figure out fat calories, multiply 9 by the number of grams of fat in the food.

**FOR EXAMPLE:**

9 fat calories per gram x 5 grams = 45 fat calories
2.3 Protein
Protein is a key part of a healthy diet. You need it for many processes in the body. Proteins help build and repair muscle and bones. Proteins carry nutrients and oxygen through the blood. They even help your body fight infections.

You can get enough protein by eating a balanced diet. Protein is found in both animal and plant sources. Protein from animal sources includes meat, poultry, fish, and dairy. Plant sources of protein include beans, lentils, tofu, nuts, soy milk, and seeds.

How much protein do you need each day?
Adults need:
• About 10 to 35 percent of their daily calories from protein
If you are eating 2,000 calories a day, you need:
• 50 to 175 grams of protein per day
You can meet your protein needs with either plant proteins or animal proteins. Tasty meals from plant proteins are usually lower in total fat. They also contain less cholesterol than meals made with animal proteins. Try to eat more plant proteins for good health.

You can figure out exactly how much protein you need. Multiply your weight (in kilograms) by 0.8. (To change pounds to kilograms, divide your weight by 2.2.)

FOR EXAMPLE:
145 lb. female
145 ÷ 2.2 = 66 kg
66 kg x 0.8 = 52.8 grams of protein, or about 50 to 60 grams of protein a day

How much protein do you need per day? ______________________

To get you started thinking about protein in your food, here is a chart of foods that contain protein.

<table>
<thead>
<tr>
<th>FOOD</th>
<th>AMOUNT</th>
<th>PROTEIN (GRAMS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALMONDS, SLIVERED</td>
<td>⅓ cup</td>
<td>7</td>
</tr>
<tr>
<td>PEANUT BUTTER</td>
<td>2 tablespoons</td>
<td>8</td>
</tr>
<tr>
<td>BLACK BEANS, COOKED</td>
<td>⅓ cup</td>
<td>8</td>
</tr>
<tr>
<td>SOY BEANS, COOKED</td>
<td>⅓ cup</td>
<td>15</td>
</tr>
<tr>
<td>CHICKEN</td>
<td>1 ounce</td>
<td>8</td>
</tr>
<tr>
<td>TURKEY</td>
<td>1 ounce</td>
<td>8</td>
</tr>
<tr>
<td>SALMON</td>
<td>1 ounce</td>
<td>7</td>
</tr>
<tr>
<td>BEAN SPROUTS</td>
<td>⅓ cup</td>
<td>2</td>
</tr>
<tr>
<td>BROCCOLI</td>
<td>1 cup</td>
<td>2</td>
</tr>
<tr>
<td>MULTIGRAIN BREAD</td>
<td>1 slice</td>
<td>3</td>
</tr>
</tbody>
</table>

2.4 Vitamins and Minerals
To stay healthy, you will want to get enough vitamins and minerals in your diet. These help:
• Build your skin, bones, blood, and other tissues
• Prevent diseases caused by a lack of vitamins or minerals (like anemia and scurvy)
• Process the carbs, fat, and protein you eat

Vitamins are found naturally in all living things. Minerals come from rocks and soil. They also come from foods grown in mineral-rich soil.

There are many types of vitamins and minerals. These different types are called micronutrients. One of the best ways to make sure you are getting all the micronutrients you need is to eat a variety of foods. A great way to do this is to look at color. A good rule of thumb with fruits and vegetables is to aim for “the more colorful” ones, but all fruits and vegetables are nutritious. Try to eat some of these each day:
• Dark green veggies like spinach, kale, broccoli, and lettuce
• Yellow or orange fruits and veggies like carrots, sweet potatoes, tangerines, and yellow peppers
• Red fruits and veggies like tomatoes, red peppers, and strawberries
• Purple and blue fruits and veggies like blueberries, red cabbage, and radicchio
• Brown foods like mushrooms and beans
Pay Special Attention to these 4 Nutrients

According to many studies and the most recent Dietary Guidelines for Americans, many people are not getting enough of these 4 nutrients in particular in their diets: calcium, vitamin D, potassium, and fiber. You can find food sources of these nutrients in the vitamins and minerals charts to follow. For fiber food sources, please refer to page 33. Remember that all nutrients are important through eating a healthy diet. You can ask your doctor or dietician if these and other nutrients should be a special focus for you.

The chart that follows gives the Dietary Reference Intakes (DRIs) for each vitamin and mineral. The DRIs tell you how much of each vitamin or mineral most people need each day. The chart also shows the upper limit of what is safe to take. Use this to help you get the right amounts of vitamins and minerals in your diet.

Remember, try to get most of your vitamins and minerals each day from food. Try to eat 4 or more cups a day of a variety of fruits and vegetables. If you cannot get enough vitamins or minerals through your diet, your doctor may suggest you take a supplement. Talk to your doctor if you think you are not getting enough of these nutrients.

**VITAMINS**

<table>
<thead>
<tr>
<th>VITAMIN</th>
<th>DIETARY REFERENCE INTAKE</th>
<th>UPPER LIMIT</th>
<th>FOOD SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>VITAMIN A</td>
<td>Males: 900 mcg&lt;br&gt;Female: 700 mcg</td>
<td>3,000 mcg (10,000 IU)</td>
<td>Dairy products, fish, sweet potatoes, carrots, cantaloupe</td>
</tr>
<tr>
<td>VITAMIN D</td>
<td>18-70 years: 600 IU (15 mcg)&lt;br&gt;70+ years: 800 IU (20 mcg)</td>
<td>4,000 IU (100 mcg)</td>
<td>Certain fish, fortified milk products, fortified cereals, fortified orange juice, mushrooms, egg yolks</td>
</tr>
<tr>
<td>VITAMIN E</td>
<td>15 mg</td>
<td>1,000 mg</td>
<td>Vegetable oils, nuts, seeds, whole grains, wheat germ, leafy greens</td>
</tr>
<tr>
<td>VITAMIN K</td>
<td>Males: 120 mcg&lt;br&gt;Female: 90 mcg</td>
<td>None established</td>
<td>Green vegetables, collard greens, spinach, broccoli, Brussels sprouts, cabbage, plant oils</td>
</tr>
<tr>
<td>THIAMIN (VITAMIN B1)</td>
<td>Males: 1.2 mg&lt;br&gt;Female: 1.1 mg</td>
<td>None established</td>
<td>Whole grain products, fortified bread products, fortified, ready-to-eat cereals</td>
</tr>
<tr>
<td>RIBOFLAVIN (VITAMIN B2)</td>
<td>Males: 1.3 mg&lt;br&gt;Female: 1.1 mg</td>
<td>None established</td>
<td>Milk, bread products, fortified cereal</td>
</tr>
<tr>
<td>MINERAL</td>
<td>DIETARY REFERENCE INTAKE</td>
<td>UPPER LIMIT</td>
<td>FOOD SOURCES</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------</td>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>POTASSIUM</td>
<td>4,700 mg</td>
<td>None established</td>
<td>Fruits, bananas, potatoes, sweet potatoes, dried apricots, dried peaches, avocado, spinach, plain yogurt, beans, poultry, fish</td>
</tr>
<tr>
<td>SODIUM</td>
<td>1,200–1,500 mg</td>
<td>2,300 mg</td>
<td>Most foods and in large quantities in processed foods and table salt</td>
</tr>
<tr>
<td>SULFUR</td>
<td>None established</td>
<td>None established</td>
<td>Fish, nuts, legumes, soy products</td>
</tr>
<tr>
<td>CHROMIUM</td>
<td>Males: 30–35 mcg</td>
<td>None established</td>
<td>Eggs, whole grain products, cheese, yeast, potatoes, oysters, liver</td>
</tr>
<tr>
<td>COPPER</td>
<td>900 mcg</td>
<td>10,000 mcg</td>
<td>Seafood, nuts, dried beans</td>
</tr>
<tr>
<td>FLUORIDE</td>
<td>Males: 4 mg</td>
<td>10 mg</td>
<td>Drinking water, saltwater fish, tea</td>
</tr>
<tr>
<td>IODINE</td>
<td>150 mcg</td>
<td>1,100 mcg</td>
<td>Seafood, plants grown in or near the ocean, iodized salt</td>
</tr>
<tr>
<td>IRON</td>
<td>Males: 8 mg</td>
<td>45 mg</td>
<td>Fruits, vegetables, meat, poultry, fish, dark leafy greens</td>
</tr>
<tr>
<td>MANGANESE</td>
<td>Males: 2.3 mg</td>
<td>11 mg</td>
<td>Whole grains, cereal products, fruits, vegetables</td>
</tr>
<tr>
<td>MOLYBDENUM</td>
<td>45 mcg</td>
<td>2,000 mcg</td>
<td>Beans, grains, milk</td>
</tr>
<tr>
<td>SELENIUM</td>
<td>55 mcg</td>
<td>400 mcg</td>
<td>Seafood, grain products, Brazil nuts, seeds (amounts depend on the selenium content of the soil)</td>
</tr>
<tr>
<td>ZINC</td>
<td>Males: 11 mg</td>
<td>40 mg</td>
<td>Oysters, crab, chicken, pork, fortified breakfast cereal, yogurt</td>
</tr>
</tbody>
</table>

**CALCIUM**
- 1,000–1,200 mg
- 2,500 mg
- Milk, cheese, yogurt, fortified ready-to-eat cereals, dark green, leafy vegetables, legumes, sardines, calcium-fortified juice, soy milk, and tofu

**CHLORIDE**
- 1.8–2.3 g
- 3.6 g
- Salt

**MAGNESIUM**
- Males: 400–420 mg
- Females: 310–320 mg
- 250 mg applies only to dietary supplements and not to magnesium derived from food or water
- Legumes, nuts, whole grains, green vegetables

**PHOSPHORUS**
- 700 mg
- Age 19–70: 4 g
- Age 70+: 3 g
- Poultry, fish, eggs, legumes, nuts

**MAGNESIUM**
- Males: 400–420 mg
- Females: 310–320 mg
- 250 mg applies only to dietary supplements and not to magnesium derived from food or water
- Legumes, nuts, whole grains, green vegetables

**PHOSPHORUS**
- 700 mg
- Age 19–70: 4 g
- Age 70+: 3 g
- Poultry, fish, eggs, legumes, nuts

**MINERALS**

- **CALCIUM**
- **CHLORIDE**
- **MAGNESIUM**
- **PHOSPHORUS**

<table>
<thead>
<tr>
<th>MINERAL</th>
<th>DIETARY REFERENCE INTAKE</th>
<th>UPPER LIMIT</th>
<th>FOOD SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>POTASSIUM</td>
<td>4,700 mg</td>
<td>None established</td>
<td>Fruits, bananas, potatoes, sweet potatoes, dried apricots, dried peaches, avocado, spinach, plain yogurt, beans, poultry, fish</td>
</tr>
<tr>
<td>SODIUM</td>
<td>1,200–1,500 mg</td>
<td>2,300 mg</td>
<td>Most foods and in large quantities in processed foods and table salt</td>
</tr>
<tr>
<td>SULFUR</td>
<td>None established</td>
<td>None established</td>
<td>Fish, nuts, legumes, soy products</td>
</tr>
<tr>
<td>CHROMIUM</td>
<td>Males: 30–35 mcg</td>
<td>None established</td>
<td>Eggs, whole grain products, cheese, yeast, potatoes, oysters, liver</td>
</tr>
<tr>
<td>COPPER</td>
<td>900 mcg</td>
<td>10,000 mcg</td>
<td>Seafood, nuts, dried beans</td>
</tr>
<tr>
<td>FLUORIDE</td>
<td>Males: 4 mg</td>
<td>10 mg</td>
<td>Drinking water, saltwater fish, tea</td>
</tr>
<tr>
<td>IODINE</td>
<td>150 mcg</td>
<td>1,100 mcg</td>
<td>Seafood, plants grown in or near the ocean, iodized salt</td>
</tr>
<tr>
<td>IRON</td>
<td>Males: 8 mg</td>
<td>45 mg</td>
<td>Fruits, vegetables, meat, poultry, fish, dark leafy greens</td>
</tr>
<tr>
<td>MANGANESE</td>
<td>Males: 2.3 mg</td>
<td>11 mg</td>
<td>Whole grains, cereal products, fruits, vegetables</td>
</tr>
<tr>
<td>MOLYBDENUM</td>
<td>45 mcg</td>
<td>2,000 mcg</td>
<td>Beans, grains, milk</td>
</tr>
<tr>
<td>SELENIUM</td>
<td>55 mcg</td>
<td>400 mcg</td>
<td>Seafood, grain products, Brazil nuts, seeds (amounts depend on the selenium content of the soil)</td>
</tr>
<tr>
<td>ZINC</td>
<td>Males: 11 mg</td>
<td>40 mg</td>
<td>Oysters, crab, chicken, pork, fortified breakfast cereal, yogurt</td>
</tr>
</tbody>
</table>
2.5 Phytochemicals
Phytochemicals are found in plants and come in many varieties. They play a variety of roles in the body. These micronutrients may help reduce the risk of atherosclerosis, which is the buildup of fatty deposits in artery walls. You can help keep your cardiovascular system healthy by eating foods that contain phytochemicals.

Eating a variety of fruits and vegetables, nuts, and seeds will provide you with phytochemicals. In fact, a large body of research suggests that a plant-based diet can have many health benefits. Plant-based doesn't mean no meat. It simply means more plants as a focus at meals and snacks.

Some of the foods that are known to have measurable amounts of phytochemicals include:
- Grapes
- Strawberries
- Raspberries
- Blackberries
- Blueberries
- Cranberries
- Pink grapefruit
- Carrots
- Broccoli
- Red cabbage
- Squash
- Tomatoes
- Onions
- Red peppers
- Walnuts
- Tea
- Beans
- Flaxseeds

2.6 Water
You can survive without food for weeks. Without water, though, you will die in a few days. Why is water so important?

Water makes up more than 60 percent of your body weight. Your body needs it to do many tasks that keep you alive. Water helps you digest food. It helps your blood circulate. It helps transport nutrients to every part of your body. Without water, your body just could not work.

How much water do you need each day?

Adults need about:
- One cup of water daily for every 20 pounds of body weight
- This equals 8 cups of water a day for a 160-pound person

NOTE:
If you exercise hard, live in a hot climate, have certain health conditions, or live at a high altitude, you may need to drink more. Or, if you have certain health conditions, your doctor may tell you to drink less. Talk to your doctor about how much water you need.

If you do not enjoy plain tap water, try:
- Flavored carbonated water (sugar-free)
- Sparkling water (plain or flavored)
- Tap or bottled water with a squeeze of lemon or lime
- Low sodium, broth-based soups
- Caffeine-free herbal teas
- Juice spritzers made with carbonated water and juice
2.7 Nutrients to Limit

Your body needs many nutrients to stay healthy. Many of these come in foods you eat. Some nutrients are necessary but the amount of these taken in through food should be limited for your health. Your body needs both sodium and cholesterol (which your body makes itself) to function. However, many people include too much of these in their diets. It is important for good health not to overdo foods that contain sodium or cholesterol.

CHOLESTEROL

Cholesterol is a soft, waxy substance. Your body needs cholesterol to:

- Build cell walls
- Make hormones
- Help your nerves do their jobs

The human body makes its own cholesterol. Your liver makes all of the cholesterol your body needs. You don't need to eat it in your food at all, but it is found in some foods. Many people can safely eat foods that contain cholesterol without issues. But it is still important to watch and eat as little as possible. If you have heart disease or high cholesterol, your doctor may tell you to pay special attention to your intake of cholesterol.

Cholesterol is found in foods that come from animals. Plant-based foods do not have cholesterol in them. Any vegetable, fruit, or grain is cholesterol-free.

If your doctor draws blood for a cholesterol test, you will see these 3 terms in the test results:

- LDL (low density lipoprotein) = bad cholesterol
- HDL (high density lipoprotein) = good cholesterol
- Total cholesterol

Too much bad cholesterol can collect in your blood and block arteries. This raises your risk of heart disease.

Good cholesterol travels through your blood. It picks up bad cholesterol from your cells and blood. It brings it back to the liver to be broken down.

LDL and HDL cholesterol are part of your “total cholesterol.” Your doctor may also include other blood tests. For example, he or she might test your triglycerides (fats in the blood). Or your doctor may order special blood tests to tell you more about what types of HDL or LDL cholesterol you have in your blood. If your doctor tells you that your cholesterol numbers are not where they should be, you may need to limit foods that contain cholesterol.

SODIUM

Your body needs sodium (from salt) for many functions. Sodium helps balance the fluids in your body. Your nerves and muscles need sodium, too.

Most of the time, your body can adjust to the different levels of sodium you eat. This means you might be able to balance eating a little sodium one day and much more another day. If you are sensitive to sodium, though, you need to be careful how much you eat in a day. Too much sodium can raise your risk of high blood pressure and raise your risk for cardiovascular issues. Many people take in too much sodium and need to lower their intake. If you do eat salt that has been added to food, you will want to make sure at least some of it is iodized, which means it contains iodine.

Sodium is naturally found in milk, meats, and some drinking water. Processed foods often have added sodium. It is best to limit foods like canned soups, sandwich meats, crackers, and chips. These foods may be high in sodium. In fact, some canned soups have 1,000 milligrams or more of sodium in one cup. If you want to lower your sodium, eat fewer processed foods.

The good news is that fresh fruits and vegetables have little sodium. So eat more of these foods to avoid added sodium. This will also make your diet healthier.

The Dietary Guidelines recommend a daily intake of 2,300 milligrams or less. Some people are advised to aim for 1,500 mg or less, though this is difficult for many people to achieve.

For people who are 51 and older and those of any age who have hypertension, diabetes, or chronic kidney disease, reduce intake of sodium to 1,500 mg daily.
3.1 The Stress-Nutrition Connection

Stress and what you eat are linked in some key ways. Your body needs more nutrients, but not necessarily more calories, when you are under stress. But it can be easy to slip into poor eating habits when you are under long-term stress. When these eating habits don’t give your body the nutrients it needs, it can make some stress signs worse. In fact, eating too much of some foods may actually add to the amount of stress in your body.

**STRESS CAN CAUSE YOU TO MAKE POOR EATING CHOICES.**

Chances are you’ve never wanted to reach for the broccoli when you’ve felt stressed. Research has shown that stress can cause your body to crave sweets and carbohydrates. You might eat even when you are not hungry. And when you are hungry, you might opt for a quick fix, even if it is an unhealthy meal or snack. Even though it might be hard at first, reach for a combination of complex carbs and protein instead. High-fiber complex carbs (such as sweet potatoes, green beans, black beans, broccoli, cucumber, and carrots) can give you a longer-lasting energy boost, and protein can help you feel full longer.

**STRESS CAN CAUSE YOU TO EAT MORE THAN YOU NEED.**

Many people under stress tend to eat until they feel too full, like how you might feel after a holiday dinner. It takes about 20 minutes for chemicals in your digestive tract to signal your brain that you are full. If you eat quickly under stress, it is easy to be over-full before your body even has a chance to signal your brain that you’ve eaten enough. Chewing each mouthful completely and setting down your silverware between bites can help you slow down and eat more mindfully.
WHEN YOU ARE UNDER STRESS, YOU MAY NEED MORE VITAMINS AND MINERALS THAN USUAL.
There are many hormones at work when you are under stress. These hormones need certain vitamins and minerals to function. Being stressed can also cause your body to lose some of the stored-up minerals like calcium. By eating healthy, nutrient-rich whole foods, you can help your body replace the nutrients it loses during ongoing stress.

DIGESTION SLOWS DURING STRESS.
During stressful situations, your body moves blood away from the stomach and intestines to the large muscles. This slows down digestion. When digestion slows, your body doesn’t process or absorb nutrients as well as it should. And when your body doesn’t get enough nutrients, it can make stress in the body worse. Chewing thoroughly, eating at a slower pace in a relaxed environment, and choosing healthy foods can help your body digest foods and get the nutrients you need.

POOR EATING CHOICES CAN MAKE SOME STRESS SIGNS WORSE.
You just learned that your body needs more nutrients during stress. That is one reason to eat healthy. Another is that too much salt, sugar, or fat can make your stress signs worse. Too much salt can lead to high blood pressure. Too much simple sugar can lead to:
- Tiredness
- Headaches
- Anxiety
- Irritability
- Higher blood sugar

And stress can cause your body to store excess fat around your midsection.

TOO MUCH OF SOME FOODS MAY CAUSE STRESS IN YOUR BODY.
When you don’t eat right, you can cause changes that your body has to adapt to. What you eat may be a stress trigger when:
- Your body doesn’t get all the nutrients it needs
- You eat too many chemicals from processed food
- You eat too much sugar

3.2 Anti-Inflammatory Foods
Believe it or not, some foods may be better for you to eat when you are under stress. One reason this is true is because of inflammation.

Inflammation happens when your immune system responds to a stimulus. Inflammation happens when the immune system fights against something that may turn out to be harmful. Your immune system sends blood and other substances to the place where you have an injury or wound. This is why the area around a cut can get red, or a bug bite can get swollen. But inflammation can also happen inside your body. And your fight or flight response—stress—can cause this type of inflammation.

Keep in mind that not all inflammation is bad. It is your body’s natural way of fighting disease and infection. In the short term, it is natural and beneficial. But if it goes on for too long, it can lead to some health conditions. During many stressful situations, inflammation can cause more harm than good.

Some foods have been shown to help lower inflammation in the body. If you are under constant stress, it may help for you to try to eat some of these foods. Keep in mind that these foods might not do anything right away. It can take 6 weeks to 6 months for these foods to have an effect. But don’t worry—the foods you can eat to lower inflammation are also good for you in many other ways. In fact, if you eat a healthy, varied diet, chances are you are already eating some foods that help lower inflammation.

Here are some tips to keep your body’s inflammation levels in check:

EAT FOOD, NOT CHEMICALS.
Many of the foods that may make inflammation worse have added chemicals in them. These chemicals are used to preserve, color, or flavor foods. But they aren’t among the nutrients that your body needs. In fact, your body isn’t designed to handle these chemicals. When you eat them, your immune system may perceive them as a threat. If this happens, it can trigger inflammation.

Don’t worry—you don’t have to remember a long list of chemicals to avoid. You can avoid most of these chemicals by sticking to fresh, whole foods. Some good, whole foods include:
- Whole grains
- Fresh and frozen fruits
- Fresh and frozen vegetables
- Legumes (beans)
- Nuts and seeds
- Fish
Another way to avoid chemicals is to buy organic foods. Organic foods are farmed or raised without synthetic chemical fertilizers or pesticides. Look for labels that say “certified organic.” This term means the food has been reviewed and inspected by a third party. Keep in mind that terms other than “certified organic” can be misleading. Words such as “natural” or just “organic” do not have the same meaning as “certified organic.” Your grocery store may have an organic section. Or visit a farmers market and ask how the foods were raised or grown.

TRY SOME INFLAMMATION BUSTERS.
Some foods have been shown to block a substance in the body that causes inflammation. Most foods that come from plants, like fruits and vegetables, as well as nuts and seeds, help decrease inflammation. Here are some specific foods that can help lower inflammation:
• Onions
• Apples
• Red peppers
• Blueberries
• Rosemary
• Ginger
• Turmeric

EAT MORE OMEGA-3 FATTY ACIDS.
There are many types of fats that you can eat. One type is called omega-3 fatty acids. These fats come from some fish, nuts, and seeds. Research has found that eating omega-3 fats may lower inflammation. A good goal is to try to eat more foods with omega-3 fats. Try to eat some of these foods each week:
• Wild salmon, sardines, mackerel, and albacore tuna
• Flaxseeds
• Walnuts
• Soybeans

If you have a hard time eating these foods, you can also try to take fish oil. Fish oil is a supplement that comes in capsules. If you can’t get enough omega-3s from foods, fish oil may help you get the amount you need. Talk to your doctor or a dietitian if you are not sure whether you should take this supplement or how much you need.

LIMIT OMEGA-6 FATTY ACIDS.
Another type of fat that you can eat is omega-6 fatty acids. This type of fat is also good for you in modest amounts. But you only need a little bit. Too much of this type of fat can make inflammation worse. Be sure you balance omega-6 with omega-3, with more omega-3s being beneficial.
Omega-6 fats are found in many vegetable oils such as corn, soybean, and safflower. These oils are used to make many of the foods you will find on grocery store shelves. Chances are you already eat more omega-6 fats than your body needs. A good goal for most people is to eat fewer foods that have omega-6s. You may want to limit these foods:

- Cookies
- Crackers
- Snack foods
- Fast food
- Processed foods
- Corn, sunflower, safflower, and soybean oils (use olive, canola or avocado oils instead)

**BE MINDFUL OF MEAT.**

Omega-6 fatty acids can produce a compound that increases inflammation. That same compound is found in animal fat. If you face constant stress, you may want to think about how much meat and full-fat dairy you eat. If you eat a lot of meat, you may want to try cutting out meat from 1 or 2 meals a week. Here are some ideas to get you started:

- Trade in your hamburger for a veggie burger.
- Try vegetarian chili or lasagna instead of the same dish with meat.
- Try cooking with tofu, tempeh, or seitan. All 3 are vegetarian proteins made from soy beans and plant proteins.
- Make a sandwich with hearty vegetables such as eggplant, squash, or mushrooms. You might not even miss the meat!

If you eat a lot of full-fat dairy products such as cheese, milk, or yogurt, you may want to switch to low fat or nonfat kinds.

### 3.3 Learning the Difference between Hunger and Cravings

Hunger is a signal from your body that you are running low on fuel. You need to eat so you don’t run out of energy. A craving, on the other hand, is an urge to eat for some other reason—not hunger. Something triggers you, and then you crave a certain food.

Let’s look at this difference a little more closely.

**HUNGER**

The feeling of hunger varies from one person to the next. One person may feel light-headed and weak. Another may feel grouchy. Here are some common signs of hunger:

- Growling stomach
- Hunger pangs
- Cloudy thinking
- Trouble making decisions
- Feeling lightheaded or weak
- Headache
- Feeling sleepy
- Feeling grouchy

Hunger signals tend to be high in the morning after you first wake up. Do you feel your stomach growl as you get out of bed? Does your head feel cloudy? Does your body feel tired before you eat your breakfast? These are all signs of real hunger.

Some people may never feel hungry. Others may be unsure what hunger feels like. Or they may no longer be aware of their own feelings of hunger and fullness. This can happen to chronic dieters who frequently shift from eating very little to overeating.

**CRAVINGS**

A craving is the desire for a certain food or flavor. For example, you might crave a hamburger or something salty. You might crave chocolate or something sweet.

Cravings are usually linked to thoughts and feelings. Someone who feels lonely might crave macaroni and cheese. This dish may bring up fond memories of being cared for as a child. Someone else may crave mint ice cream when the weather’s hot. This food may remind that person of carefree summer days in childhood. A third person may crave fast food in response to a TV ad. The food may look tasty or portray an appealing way of life.

**KNOWING WHEN TO EAT**

So, how can you tell if you are really hungry? Before eating a meal or snack, get in the habit of asking yourself these questions:

- Am I hungry?
- Do I feel hunger pangs now like I do in the morning when I first wake up?
- Am I thirsty?
- If I am not hungry or thirsty, then why do I want to eat?
If you aren’t hungry, but you want to eat, you are having a craving. Use some of the tools you will learn in this section to deal with the craving.

If you are hungry, follow up by asking yourself these questions:

- What would satisfy my hunger right now?
- Will a piece of fruit or a healthful snack be enough? Or am I hungry for something more?

Answer these questions based on how hungry you feel. Then, eat slowly enough to let your hunger naturally subside. It is important that you allow yourself to feel your hunger. It is also important that you not let yourself get too hungry. If you wait too long to eat, you will get overly hungry and may overeat.

3.4 Eating Tips for Quitting Tobacco

If you are quitting tobacco, you may have extra stress to deal with. Some people turn to food at this time. A lot of people worry about gaining weight after they quit. But by knowing the facts and taking care of yourself, you don’t have to gain weight during this stressful time. Try these tips.

GET MORE ACTIVE.
Nicotine makes your body burn calories faster. When you quit, this rate returns to normal. To avoid gaining weight after you quit, get more active each day. You don’t have to join a gym. A brisk walk each day can help a lot.

RECOGNIZE THE DIFFERENCE BETWEEN CRAVINGS AND HUNGER.
Nicotine cravings can sometimes feel like hunger pangs. Instead of eating, wait out the feeling or get busy on a task or hobby. The craving for nicotine will likely pass in a few minutes.

KNOW THAT SWEETS CAN SEEM MORE ATTRACTIVE.
Nicotine affects your blood sugar. When you quit, you may find yourself craving sweets. Eat regular meals and healthy snacks throughout the day. This will keep your blood sugar steady and your energy high. If you want something to satisfy a sweet tooth, try fresh fruit, dried fruit, or a low sugar sweet snack.

EAT HEALTHY MEALS AND SNACKS.
Eating helps to keep your mouth “busy” when quitting. But keep in mind, the foods you choose will play a big role in whether or not you gain weight. If you snack to help manage cravings, choose healthy, lower calorie foods. For snacks, try plain popcorn, raw veggies, or baked tortilla chips and salsa.

For more information on how to manage stress in your life, see the Stress Management Guide.
CHAPTER 4
PUTTING IT INTO PRACTICE

4.1 Grocery Shopping the Smart Way

Now that you have learned about healthy food choices, finding them in the store or market is your first step to healthier eating. Make a list of the foods that you want to buy, not that you used to buy. Depending on where you live, you may discover the healthy foods are stored on shelves that are not easy to find. You may have to go to other stores or markets. Shopping for healthy foods can be challenging at the beginning. However, the benefits of eating healthy foods make it worth the effort to find them.

CHOOSING PRODUCE, GRAINS, AND PROTEIN

The following tips can help you shop for healthy foods.

Step 1: Tackle the produce first.
Remember that produce (fruits and vegetables) makes up a large part of a healthy eating plan. Always start your shopping trip in the produce section.

Step 2: Shop for grains.
The next step at the grocery store is to shop for grains. If you buy grains in bulk, store the grains in airtight bags or containers for up to 2 months in a cool cupboard.

Step 3: Pick your protein.
Once you have your produce and grains, you can choose lean, protein-rich foods like poultry and fish. Also be sure to choose a variety of plant-based proteins to include in your meals. These could include beans, lentils, nuts, and tofu.

Dairy products also have protein. If you eat dairy, the low-fat or nonfat types may be a better choice for fat and calorie control. Alternatives to milk like fortified soy milk, nut-based milk, or coconut milk can be great options, too. These drinks and other foods (like nut or soy cheese or yogurt) tend to be high in nutrient density and are also tasty.

THE NUTRITION FACTS LABEL

The nutrition facts label can help you choose the most nutritious packaged foods. It is found on most foods in the grocery store. It can help you design a balanced and healthy diet. When reading the label, keep in mind the size of a single serving. Eating double servings will double the calories, fat, and other nutrients.

When you are reading food labels, pay attention to these items:

- Serving size: Decide how many servings you plan to eat. For example, if you plan to eat 2 servings, multiply the calories and nutrients by 2.
- Calories per serving and calories from fat: Do most of the calories (more than 30 percent) come from fat?
- Total fat grams: A low fat snack has 3 grams of fat or less per serving.
- Saturated fat: How many grams of saturated fat are in one serving? Most people should eat less than 20 grams of saturated fat per day.
- Trans fats: How many grams of trans fats are listed? Even if the label says 0, look at the ingredients list. There may still be trans fats in the food. These fats may be listed as hydrogenated oils. If there are trans fats on the label or hydrogenated oils in the ingredients list, choose another food.
- Cholesterol: What part of your daily goal of 300 milligrams or less does it make up?
- Sodium: Compare with the recommended daily intake of less than 2,300 mg. Look at the Daily Value (DV) percentage to the right. That will tell you what percentage of the daily recommendation of 2,300 mg one serving of that food makes up.
- Fiber: Aim for 3 grams per serving in bread, cereal, and baked goods.
- Sugar: Compare the sugar grams to fat and protein grams. If there is only sugar, you are getting empty calories.
- Protein: Does the food contain protein? Look at the grams of protein, which will help you decide how the food fits into your daily goal.
4.2 Healthy Eating at Home
Eating healthy foods at home is simple. You can easily make healthy and tasty meals if you keep the right food and equipment on hand.

FIVE TIPS FOR A HEALTHY KITCHEN

1. Check what is in your fridge and cupboards.
   Every week, check what you have in your kitchen. Make sure that you have plenty of healthy, easy-to-grab foods on hand. This will help prevent lapses from your healthy eating plan.

2. Separate more nutritious foods from less nutritious foods.
   Keep foods that are high in sugar, fat, or salt in the drawer of the fridge or on the top shelf of the cupboard. That way, you will not see these foods first when you open the door. Split your fridge and cupboards into 2 sections: “choose more often” (healthy foods) and “choose less often” (less healthy foods). Store the “choose more often” foods at eye level. That way you are more likely to choose those foods.

3. Make healthier foods more appealing.
   Taste matters, but so does appearance. It is important to take the time to prepare meals that look good to you. Your eyes feast on the meal before you even take the first bite. Who can say no to colorful grilled vegetables on a whole wheat sesame bun? Or how about a beautifully prepared, colorful fruit plate?

   Put a modest portion of a main dish with vegetables and other side items on a plate. Cover and store the plate in the fridge for the next day’s lunch or dinner. When you come home from grocery shopping, cut up fruits and vegetables. That way they will be ready for the next meal or snack. Nutritious fresh foods like fruits and vegetables can spoil faster. They should be kept on the refrigerator shelf where you can easily see and reach them.

5. Freeze foods in portion and snack sizes.
   When you freeze meat, keep in mind a reasonable portion size and freeze in 3-ounce portions. This is about the size of a deck of playing cards. For a sweet snack, freeze fruits like grapes or cut-up bananas.
TIPS FOR FOOD SAFETY
Proper food preparation is important in preventing diseases. Millions of people suffer every year from diseases they get from eating unsafe food. The good news is that these diseases can be prevented if food is prepared and stored in a safe way.

Here are 5 keys to safer food:

KEEP CLEAN.
Wash your hands before you handle food. Make sure surfaces are clean before you set food on them. Protect kitchen areas and food from insects, pests, and other animals.

SEPARATE RAW AND COOKED FOODS.
Use separate equipment and utensils such as knives and cutting boards for handling raw foods. Store food in containers so that raw foods and prepared foods do not touch.

COOK THOROUGHLY.
Cook food thoroughly, especially meat, poultry, eggs, and seafood. Bring soups and stews to a full boil. For meat and poultry, juices will be clear, not pink, when they are fully cooked. Be sure to reheat cooked food so that it is hot.

KEEP FOOD AT SAFE TEMPERATURES.
Do not leave cooked food at room temperature for more than 2 hours. Cooked food should be kept hot before serving. Do not thaw frozen food at room temperature. The danger zone for bacteria to grow is between 40 and 140 degrees, so be sure to keep track of the 2-hour window when food is out of the refrigerator or out of the oven.

USE SAFE WATER AND RAW MATERIALS.
If water is not safe, treat it first before cooking with it or drinking it. Wash fruits and vegetables, especially if they are eaten raw. Do not eat food that is past the expiration date.

TIPS FOR TASTY TREATS
You may be surprised to learn that treats can fit into a healthy eating plan. The truth is you are a lot more likely to stick to healthy eating if you enjoy the foods you eat and don’t feel deprived. So it is OK to have a small treat once in a while if your overall diet is healthy. The key here is balance.

Most treats have a lot of calories, sugar, or fat—sometimes all 3. They usually have very little nutrition. These are foods like ice cream, candy, cakes, cookies, chips, and crackers. These foods should be eaten just once in a while and in small amounts.

What does it mean to eat these foods once in a while? Every person defines this differently. Most of the time, you will know if you are eating too many treats. You may gain weight, feel low in energy, or notice that a health problem is getting worse. Treats should not keep you from reaching your healthy goals.

If you want to include occasional treats in your diet, these tips can help you do it in a healthy way:

- Buy treats and snacks in small packages or individual serving sizes. This way, you’ll be less tempted to eat more than one serving or bag.
- Eat treats only away from home. The more treats you have in your house, the more tempted you will be to eat them.
- Make treats healthier by making them yourself.
- If you like candy bars, buy mini candy bars and freeze them. This can make it easier to eat just one.
- Do not eat treats as part of a meal. (For example, do not eat potato chips with your healthy sandwich.) If you mix treats with healthy foods, you may find you eat more of the treat than of the more nutritious food.
- Share your dessert with a friend.
4.3 Eating Out the Smart Way
Eating a healthy meal in a restaurant or fast-food chain can be hard. The trick is to transfer your healthy eating habits from the home to the restaurant. There are healthy choices on most menus—even at fast-food places. And you can eat healthy portions. With practice, you can learn to make healthy choices when you are out. Here are a few tips to get you started.

TIPS FOR EATING OUT
- Choose grilled, lean poultry and fish without the skin.
- Ask for steamed vegetables without butter or salt.
- Ask if there is a special “heart-healthy” or lower calorie menu.
- Split your lunch or dinner with a friend. You could also take home half the order.
- Send back bread or limit yourself to only one piece. If you choose to eat a serving of bread, do not use butter.
- Order lower calorie salad dressing or balsamic vinegar. Ask for the dressing on the side.
- Choose a calorie-free drink such as water or sparkling water with lemon.
- Ask for less (or no) oil, cheese, mayonnaise, or sour cream in the meal.
- Try a vegetarian restaurant or a menu selection that looks high in vegetables, beans, and other nutritious plant-based ingredients.

5.1 It Is Up to You
Healthy foods give you the energy you need to be active and healthy. And eating well gives your body the vitamins, minerals, and other nutrients it needs.

Remember to eat a balance of healthy foods from all of the different food groups. Choose whole foods. Drink plenty of water. And cut down on the unhealthy fats, cholesterol, sugar, and salt in your diet.

5.2 Your Action Plan
One way to put into practice what you are learning about food and your health is to keep a log of what you eat. You can note healthy foods you have tried and enjoyed. You can make notes about foods you would like to try. You can look back and see how balanced your diet is and what foods you want to eat more of or less of. Keeping a log of your diet will give you a picture of how healthy you are eating now and where you want to be.

DAILY FOOD LOG

<table>
<thead>
<tr>
<th>TOOLS</th>
<th>Notebook or journal or digital notebook/tablet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pen or pencil</td>
</tr>
</tbody>
</table>

Try this exercise for 3 days or longer so you can get an idea of how healthy your diet is.

WHY IT HELPS:
This exercise will help you become aware of what and how much you are eating. It can help you see patterns in what you eat.
LEARNING THE SKILL:

For this exercise, you will keep a daily log to track what you eat and drink. You will want to write down:

- Each food you eat and drink, even snacks and water
- The amount of each food and drink
- Where you eat and the time
- What you are thinking and feeling as you eat or drink
- What behaviors or feelings you notice after you eat
- Your level of hunger before the meal or snack

After 3 days, look back over your log. Are there any surprises? Do you see any patterns? You might want to think about these questions:

- Are you eating a wide variety of foods each day (especially fruits, vegetables, and whole grains)?
- Do you skip meals, especially breakfast?
- How many times on average do you have sweet drinks (like soda or sweetened juices) each day? How many total ounces do you drink on most days?
- Do you eat a lot of fried foods?
- How often do you eat in restaurants? How about fast food?
- Do you notice any links between your thoughts or feelings and what or how much you eat?
- Do you see any links between certain foods and how you act?

Write down anything that you notice about your diet here or in your notebook or journal. You can also write down any changes you would like to make:

You might want to discuss what you learn with your doctor.

You can keep up with your food log for longer if you like. It may help you see more patterns or learn more about your eating habits. You may want to keep a list of foods you would like to try or ways to cook different foods.

Each meal and snack can lay the foundation for better health. The choice is yours to make.