



## NUTRI-FACTS: NUTRIENT OVEVIEW

There are six categories of nutrients that your body needs to function properly: carbohydrates, proteins, fats, vitamins, minerals, and water. Carbohydrates, proteins, and fats are considered macronutrients because you need them in large amounts; whereas vitamins and minerals are considered micronutrients because you need them in smaller amounts. Water is the most abundant nutrient in the body and is essential to many normal everyday functions.

### Carbohydrates

Carbohydrates are your main energy source. After you eat, the carbohydrates in your food are converted to glucose (a form of sugar).<sup>1,2</sup> Your body uses the sugar to fuel your brain and nervous system.<sup>2</sup> Carbohydrates can be simple or complex depending on how quickly sugar is absorbed into your blood.<sup>2</sup>

#### Simple Carbohydrates

Simple carbohydrates include foods that contain naturally occurring sugar, such as fruits, vegetables, and milk products.<sup>3</sup> They also include processed foods that contain added sugar, such as candy, soda, juice, and white flour.<sup>2</sup> Both forms of simple carbohydrates (naturally occurring and added sugars) contain calories. Foods with naturally occurring sugars contain vitamins, minerals, and fiber, which are part of a healthy diet.<sup>1,2</sup> Those with added sugars contain few nutrients, which is why they are often referred to as “empty calories” and may cause weight gain.<sup>2</sup>

#### Complex Carbohydrates

Complex carbohydrates include foods that contain starch and fiber, such as 100% whole grain breads and cereals, potatoes, beans, peas, and corn.<sup>2</sup> Fiber aids digestion and makes you feel full longer, which helps manage your weight by reducing the amount of food you eat.<sup>4</sup> Unfortunately, many Americans do not get enough fiber in their diet.<sup>4</sup> Men should get 38 grams and women should get 25 grams of fiber daily.<sup>4</sup>

Total carbohydrate needs are based on a percentage of your daily calories. It is recommended that 45 – 65 percent of your intake come from foods that contain complex carbohydrates and natural sugars.<sup>2</sup> For help selecting healthy carbohydrate foods, follow these tips<sup>1,2</sup>:

- ▶ Eat a piece of fruit or a vegetable instead of drinking juice
- ▶ Replace white breads and crackers with 100% whole grain varieties

- ▶ Choose cereals with no added sugar
- ▶ Opt for water instead of soda and sugar-sweetened beverages
- ▶ Avoid foods that have syrups, sweeteners, and concentrates in the ingredients

### Proteins

Proteins are involved in building and repairing cells, tissues, and organs in your body.<sup>5,6</sup> They form the foundation for everything from strong bones and muscle to healthy hair, nails, and skin.<sup>7</sup> That means your growth, development, and ability to heal depends on your protein intake.<sup>6</sup>

Protein is found in meat, fish, poultry, milk and soy products, eggs, beans, nuts, and some grains.<sup>5,6,7</sup> Your exact needs are determined by your age, body weight, and health condition.<sup>5</sup> It is recommended that you get 10 – 35 percent of your daily calories from protein.<sup>5</sup> Most Americans get enough protein from the food they eat and do not require supplementation.<sup>5,6</sup> Increased protein intake leads to additional calories, which may result in weight gain and other potential health concerns.<sup>6</sup> For help making healthy protein choices, follow these tips<sup>5,6</sup>:

- ▶ Select lean cuts of meat, fish, and poultry
- ▶ Choose fat-free or low-fat milk and soy products
- ▶ Substitute two egg whites for one whole egg
- ▶ Add extra beans to your favorite soup, stew, or chili
- ▶ Eat plenty of plant-based proteins, such as beans, soy, and nuts, if you are a vegetarian

### Fats

Fats play an equally important role in a healthy diet. They serve as an energy source after your body depletes the energy from the carbohydrates you consumed.<sup>8</sup> Fats help you absorb vitamins and protect your organs.<sup>8</sup> They also provide essential fatty acids, which are needed for brain development, reducing inflammation, and blood clotting.<sup>8</sup> There are three types of fats: saturated, unsaturated, and trans fat.

#### Saturated Fats

Saturated fats are solid at room temperature.<sup>9</sup> They are found in meat, butter, cheese, ice cream, and whole milk, as well as coconut and palm oils.<sup>9</sup> Saturated fats raise low-density lipoprotein (LDL) or “bad” cholesterol levels, which can lead to heart disease.<sup>9</sup>



## Unsaturated Fats

Unsaturated fats are liquid at room temperature.<sup>8</sup> There are two types of unsaturated fats. Monounsaturated fats are found in avocados and vegetable, olive, and canola oils.<sup>10</sup> Polyunsaturated fats are found in walnuts, fish, and safflower, corn, and soybean oil.<sup>10</sup> Unsaturated fats raise high-density lipoprotein (HDL) or “good” cholesterol levels, which can improve heart health.<sup>8</sup>

## Trans Fats

Trans fats are created when foods are manufactured.<sup>8</sup> Through a process called hydrogenation liquid fats are transformed into solid fats.<sup>7</sup> This is done to keep packaged foods from spoiling.<sup>8</sup> Foods, such as margarine and spreads, cookies, cakes, and frozen pizza contain the manufactured ingredient.<sup>11</sup> Trans fats pose a tremendous health concern because they increase LDL and decrease HDL cholesterol levels, which can lead to heart disease, stroke, or other medical conditions.<sup>11</sup>

It is recommended that your total fat intake be between 20 – 35 percent of your daily calories<sup>12</sup> and that you get most of it from foods that contain unsaturated fats. For help choosing foods that contain healthy fats, follow these tips<sup>8,9,10,11</sup>:

- ▶ Avoid foods with hydrogenated or partially hydrogenated oils in the ingredients
- ▶ Consume less than 10 percent of your daily calories from saturated fats
- ▶ Select lean cuts of meat, poultry, and fish
- ▶ Choose fat-free or low-fat cheese, ice cream, and milk products
- ▶ Replace solid fats with liquid fats when cooking
- ▶ Limit prepared and prepackaged foods, such as baked goods and frozen meals
- ▶ At a restaurant, ask if hydrogenated or partially hydrogenated oils are used in cooking; otherwise, avoid French fries and all fried foods, such as chicken, fish, and vegetables

## Vitamins and Minerals

Vitamins and minerals are nutrients that your body needs in small amounts to stay healthy and perform at its peak.<sup>13</sup> Each nutrient has its own job, such as building muscle, fighting infection, or getting energy from food.<sup>14</sup> If you eat a balanced diet of nutrient-dense foods, you should get all the vitamins and minerals that your body needs.<sup>13,14</sup> However, in some cases dietary supplements may be necessary to meet specific nutrient needs.<sup>14</sup> It is recommended that you consult your health care provider before taking a supplement. You can also follow these tips<sup>14</sup>:

- ▶ Eat a variety of foods, such as 100% whole grains, lean proteins, fruits, vegetables, and fat-free or low-fat dairy products
- ▶ Limit processed or prepared foods because they contain the least amount of vitamins and minerals
- ▶ Check out [Nutri-Facts: Vitamins and Minerals](#) for more information

## Water

Water is essential to life. You can survive for weeks without food, but you can only live for days without water.<sup>15</sup> It helps regulate your body temperature, protects your organs, keeps your joints moving, transports other nutrients throughout your body, and gets rid of waste.<sup>15,16</sup> You get most of your water from the fluids that you drink.<sup>16</sup> But you can also get water from fruits and vegetables, such as oranges and celery.<sup>15,16</sup>

The amount of water that your body needs is based on a variety of factors, including gender, age, body type, and physical activity level.<sup>16</sup> It is important to meet these needs daily because your body loses water through regular activities, such as sweating, urinating, and even breathing.<sup>16</sup> If you are exposed to extreme temperatures, engage in high-intensity exercise, or participate in physical labor you may need more fluids.<sup>16</sup> It is recommended that you consult your health care provider and follow these tips<sup>15,16</sup>:

- ▶ Drink plenty of fluids throughout the day
- ▶ Choose water over sugar-sweetened, caffeinated, or alcoholic beverages because they cause the body to release fluids
- ▶ Carry a water bottle to hydrate on the go
- ▶ Add lemon, lime, or cucumber to your water to enhance the taste

## Resources

- ▶ [HPW Healthy Eating](#): Educational resources and materials to help you select nutrient-dense foods to improve your overall health, prevent chronic disease, and enhance performance.
- ▶ [ChooseMyPlate](#): A personalized daily food plan based on your age, gender, height, weight, and physical activity level. Use this tool from the U.S. Department of Agriculture to calculate your fruit, vegetable, grain, protein, and dairy needs.

To view the references for the Nutri-Facts series, visit:

[HTTP://WWW.MED.NAVY.MIL/SITES/NMCPHC/HEALTH-PROMOTION/PAGES/NUTRI-FACTS\\_REFERENCES.ASPX](http://www.med.navy.mil/sites/nmcphc/health-promotion/pages/nutri-facts_references.aspx)