# Nutrition Facts for Better Meals

Revised by Raquel Garzon[1]

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You make choices every day about the foods you eat. Some of these choices may not seem important, but a single choice made over and over again can have a major impact on your health and your life.

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Nutrition is the science of how the body uses food to nourish itself. Nutrients are chemical substances the body needs for building, maintaining, and repairing body tissues and for efficient body functioning. Specifically, nutrients provide:

- Materials necessary for growth, maintenance, and repair of body tissues. Protein, minerals, vitamins, and water are necessary for the body to build and repair bones and tissues throughout life.
- Regulators for all body processes. Vitamins, minerals, water, and proteins do this job.
- Fuel for energy for work and play. Carbohydrates, fats, and proteins are fuel nutrients.

Nutrients fall into six general classes: carbohydrates, proteins, fats, vitamins, minerals, and water. Carbohydrates, fats, and proteins provide fuel that the body uses for energy. Both carbohydrates and proteins provide 4 calories per gram, while fat provides 9 calories per gram. Vitamins and minerals are needed for regulating body processes. Water makes up about 50% of a woman's body weight and about 60% of a man's body weight. Water is part of all body fluids and is needed for regulating body temperature, digesting food, transporting nutrients to the cells, and eliminating body wastes.

Although everyone needs the same nutrients, they need different amounts. For example, children need more protein per unit of body weight to build tissues as they grow. Men and women also have different requirements for different nutrients. For example, women need more iron than men. Active

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people need more nutrients than inactive people. People recovering from an accident or illness need more of certain nutrients than healthy people. Also, people who have an immune deficiency from disease, such as cancer or AIDS, require more nutrients.

The body needs more than 40 different nutrients. Although nutrients are found in all foods, some foods are better sources of nutrients than others. Here are some of the key nutrients the body needs each day.

## Carbohydrates

Carbohydrates are used by the body as a source of readily available energy, to help the body use fat efficiently, and to spare protein from use as an energy source. They can be classified as simple carbohydrates, complex carbohydrates, and fiber. Fiber does not count as a source of energy because it cannot be broken down by human digestive enzymes. Carbohydrates are widely distributed in plant foods, while milk is the primary animal source. Grains are a food group that provides carbohydrates. Other foods that provide carbohydrates include fruits, starchy vegetables, beans and peas, and some dairy products. Sugars, including honey, molasses, and other sweets, also provide carbohydrates.

## Protein

Protein is critical for building and repairing body tissue. Protein breaks down into simpler compounds called amino acids. The body needs 22 amino acids, and all but eight can be produced by an adult body, while a child's body can produce all but nine. The amino acids that cannot be produced by the body are called essential amino acids and must be obtained from food. Foods containing all eight (or nine) essential amino acids in adequate amounts include meat, fish, poultry, eggs, milk, cheese, and soybeans. Dried beans and peas, nuts, peanuts, and peanut butter also contain large amounts of essential amino acids. An adult can get adequate amounts of all essential amino acids by consuming animal products or a variety of plant products. Because children have higher protein needs, a person should consult with a dietitian before eliminating all animal protein sources from a child's diet.

## Fats

Fats are a concentrated source of energy. The body uses them to produce cholesterol, sex hormones, and cell membranes, and to carry fat-soluble vitamins. The fat content of many foods, including the amount of total fat, saturated fat, trans fat, and cholesterol in a serving, can be found on the Nutrition Facts panel on food packages. Fats are found in many foods, but are found in higher amounts in oils, butter, margarine, and salad dressing.

## Important minerals

### Calcium

Calcium plays major structural and functional roles in the body, including building the structure of bones and teeth, aiding in muscle and nerve activity, and blood clotting. Most calcium in the body is stored in the bones and is made available to the fluids and soft tissues that regulate vital body processes. The best sources of calcium are milk, milk products, and calcium-fortified milk alternatives, such as soy milk or almond milk. Other good sources of calcium are dark green leafy vegetables, canned fish with bones, dry beans, and corn tortillas. The body needs phosphorus and vitamin D for calcium to be used properly; phosphorus is found in foods that contain protein and calcium. Food sources of phosphorus include cheese, yogurt, soy, nuts, and beans. A good supply of these foods will ensure enough phosphorus.

### Iron

Iron is essential for making red blood cells and for helping red blood cells carry oxygen to the cells of the body. Good sources of iron are red meat, poultry, fish, dark green vegetables, peas and beans, dried fruits, dark molasses, and whole grains or enriched breads and cereals.

### Magnesium

Magnesium plays a regulatory role in the body. It is required for energy metabolism, is a cofactor of enzymes, and is needed for nerve and muscle function. Magnesium is found in seafood, legumes, nuts, chocolate, and unprocessed grains.

### Zinc

Zinc is important for cell maturation and immune function, and is a vital component of proteins. Zinc is found in shellfish, fortified cereals, meat, legumes, and chocolate. Its absorption by the body is influenced by many factors.

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## Important vitamins

### Vitamin A

Vitamin A is important for growth, normal vision, and keeping the skin, eyes, and linings of the body healthy. Although vitamin A is found only in meat and other animal foods, a precursor or provitamin called beta-carotene is converted by the body into vitamin A and is found in deep yellow and dark green leafy vegetables. Vitamin A and beta-carotene are found in liver, butter, margarine, egg yolks, fortified milk, and cheese. Broccoli, carrots, spinach, pumpkin, sweet potatoes, cantaloupe, and red chile contain beta-carotene.

### Vitamin D

Vitamin D, in combination with calcium and phosphorus, is necessary for forming strong bones and teeth. In recent years, scientists have discovered many new roles for vitamin D. Vitamin D comes from egg yolks, butter, liver, sardines, salmon, shrimp, and vitamin D-fortified milk. It can also be produced by the body when the skin is exposed to sunlight.

### Vitamin C

Vitamin C, also called ascorbic acid, acts as an antioxidant and helps keep blood vessels and connective tissue strong. It is also necessary for forming teeth and bones and healing wounds. The best sources of vitamin C are citrus fruits, green peppers, green chile, and strawberries. Other good sources are tomatoes, cabbage, melons, broccoli, and potatoes.

### B vitamins

Of all the B vitamins, thiamin, riboflavin, and niacin are the best known. The B vitamins are important for healthy digestion, healthy skin, and proper nerve functioning. Meats, whole grains, and enriched breads and cereals are good sources. Milk is an excellent source of riboflavin and pork is a good source of niacin.

### Folate

Folate, a B vitamin, is also called folic acid or folacin. Folate is necessary for proper red blood cell formation and cell growth. It is also important to consume prior to becoming pregnant to prevent two serious birth defects, spina bifida and anencephaly. The Centers for Disease Control and Prevention recommend that all women of child-bearing age consume 400 micrograms (µg) of folate per day. Adequate folate is most critical in the very beginning of pregnancy, before most women realize they are pregnant. Good sources of folate include dried beans and peas, green leafy vegetables, liver, oranges and orange juice, peanuts, and sunflower seeds. Fortified breakfast cereals, pasta, and breads are also good sources.

## Choosing foods to meet nutrient needs

It isn't necessary to shop with a nutrient guide to select healthy foods, but it is important to get a balance of the main food groups at each meal. Some foods within each of those groups provide higher levels of nutrients than other foods. Follow the guidelines and recommendations in Table 1 to ensure you get the nutrients you need each day.

Variety is the key to getting the array of nutrients offered by each food group. Variety starts with including foods from every food group and continues with consuming a variety of different foods from within each group. For more information on choosing foods for balanced and healthy meals and the portions right for you, visit ChooseMyPlate.gov.

| Table 1. Guidelines for Choosing Healthy Foods | | |
|---|---|---|
| **Food Group** | **Examples of Foods** | **Recommendations** |
| **Grains group** | Brown rice, wild rice, white rice | • Make half your grains whole grains<br>• Look for whole grains listed first or second on the list of ingredients<br>• Limit grain desserts, such as cookies and cakes |
| | Oatmeal and cereal | |
| | Quinoa and millet | |
| | Whole wheat bread, tortillas, and pasta | |
| | Corn tortillas | |
| | Hominy | |
| **Vegetables group** | Dark green vegetables: broccoli, spinach, arugula, jalapeños | • Make half your plate vegetables and fruits<br>• Choose a variety of colorful vegetables and eat them raw, steamed, sautéed, or roasted<br>• Add fresh or frozen vegetables to main dishes and side dishes |
| | Red and orange vegetables: bell peppers, carrots, chile peppers, tomatoes, pumpkin | |
| | Beans/peas: lentils, chickpeas, split peas, and black, kidney, lima, pinto, and white beans | |
| | Starchy vegetables: cassava, corn, jicama, plantains, potatoes | |
| | Others: asparagus, avocados, beets, cabbage, cucumbers, eggplant | |
| **Fruits group** | Melons, berries, apples, bananas, cherries, grapes, guava, kiwi, mangoes, oranges, papaya, peaches, pears, pineapple, plums | • Make half your plate fruits and vegetables<br>• Choose whole fresh, frozen, or dried fruits and 100% fruit juice<br>• Eat with meals, for snacks, or as dessert |
| **Dairy group** | Milk, yogurt, kefir, cheese, frozen yogurt, pudding, smoothies, and calcium-fortified almond, coconut, rice, and soy milk. Move to low-fat or fat-free milk or yogurt or choose soy milk. | • Replace sour cream and cheese with low-fat yogurt cheese |
| **Protein group** | Meat, poultry, seafood, eggs, soy products, beans peas, nuts, seeds, nut butters | • Vary your protein foods to include seafood, beans and peas, unsalted nuts and seeds, soy products, eggs, lean meats, and poultry |
| **Oils**<br>**Limit sodium, saturated fat, and added sugars** | Choose canola, corn, olive, sunflower, or safflower oils instead of butter, shortening, margarine, and partially hydrogenated oils | • Choose vegetable oils instead of butter and oil-based sauces and dips instead of ones with butter or cream<br>• Check labels for sodium and look for products lower in sodium<br>• Check labels for saturated and trans fats and limit quantities<br>• Drink water instead of sugary drinks<br>• Limit added sugars and syrups on foods |
| Source: USDA's MyPlate and HHS/USDA *2015–2020 Dietary Guidelines for Americans*<br>Visit ChooseMyPlate.gov for more information. | | |

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