

MACRONUTRIENTS: CARBOHYDRATES, FATS, AND PROTEINS

MACRONUTRIENTS

Macronutrients are nutrients that provide energy to the body and are required in large amounts. They are carbohydrates, fats, and protein.

Carbohydrates

Carbohydrates are the body's main source of energy and the most important nutrient for athletes. If athletes don't eat a diet high in carbohydrates they will experience poor performance and chronic fatigue. Athletes that play stop-and-go sports, such as lacrosse, were found to fatigue slower and have better speed when eating a diet higher in carbohydrates. Healthy carbohydrates are found in foods that are unprocessed or minimally processed by food manufacturers. Carbohydrates exist in three forms: sugar, starch, and fiber.

SUGAR: Is often referred to as simple sugar. It is quickly absorbed into the body and used for energy. There are two major types of sugar. One type occurs naturally in foods such as milk and fruit. The other type is made from processing sugar cane or beets and is added to foods like cakes, cookies, and candy. Sugar is found in many products and necessary to the body. However, excessive amounts of added sugar can contribute to weight gain.

STARCHES: Natural foods containing starch provide energy and offer more vitamins and minerals than simple sugars. Starches provide longer lasting energy than simple sugars. A few examples of starch-rich foods include: wheat, rice, oats, beans, peas, potatoes, yams, bananas, and chestnuts.

FIBER: It keeps the digestive system healthy, clean, and functioning properly. Fiber reduces blood cholesterol levels and normalizes blood sugar levels. It is also important for the prevention of certain diseases (e.g. cancer, heart disease, diabetes). Fiber is found in many foods including whole grain products, oats, barley, rye, brown rice, beans, chickpeas, lentils, nuts, and most fruits and vegetables (especially with the peel).

Nutrition Recommendations

Nutrition recommendations are different for every person and depend on age, gender, height, weight, and activity level. A sports dietitian can help determine nutrient recommendations specific to you. Athletes require more nutrients, specifically carbohydrates, than the average person because they expend more energy on a daily basis. Use the plate below as a guideline for what meal plates should look like.

Micronutrients

Micronutrients are commonly referred to as vitamins and minerals. They are essential nutrients that the body needs in small amounts. Micronutrients do not provide the body with energy but are necessary for proper functioning of all the body's systems. Eating a well-balanced diet of grains, fruits, vegetables, protein, and dairy will provide your body with a lot of different vitamins and minerals. Regardless, micronutrient deficiencies can occur. Be sure to talk to your doctor if you suspect a deficiency. Your doctor will be able to test, monitor, and prescribe the right micronutrient to correct the deficiency.

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MACRONUTRIENTS CONTINUED

Protein

Protein serves as a building block for all body tissues. It helps in growth and development of the body including building and repair of muscles, bones, organs, skin, hair, and damaged tissues. It is also needed to help with regulation of body fluids and hormones. Common sources of protein include meat, poultry, fish, seafood, eggs, milk, yogurt, cheese, beans, soy, and nuts. Protein is important to athletes for muscle growth and repair, but is not the primary energy source for working muscles. Most athletes get enough protein from their diet and don't need supplementation. Consuming more protein than the body needs can lead to health problems (e.g. kidney damage).

Fat

Fat supplies essential fatty acids that the body is incapable of producing such as linoleic acid and alpha-linolenic acid. Fats also help absorb vitamins A, D, E, and K. Fat is necessary for maintaining healthy skin, and is used as an energy source during low intensity activities. Although fat is an energy source, athletes that eat a diet high in fat will not perform as well as those that eat a diet high in carbohydrates. Despite all the good it does, fat is often accused as the culprit in the battle against the bulge. At 9 calories per gram, any type of fat adds more than twice the calories of carbohydrates and protein, and eating too much fat can lead to weight gain. There are three different kinds of fat: saturated, unsaturated, and trans fat.

Unsaturated Fats can help lower cholesterol levels and reduce the risk of heart disease if eaten in place of saturated fats. Unsaturated fats are liquid at room temperature and include monounsaturated (e.g. avocado, nuts, and olive oil) and polyunsaturated fats (e.g. fish, flaxseed and soybean oil). Try to eat mostly unsaturated fats.

Saturated Fat is found mostly in animal foods such as dairy and meat. It can raise your cholesterol levels leading to heart disease. Saturated fat is solid at room temperature. Limit intake of saturated fat.

Trans Fat: is a fat that has been changed through a process called hydrogenation. Trans fat raises cholesterol levels and intake should be avoided. Trans fat is often found in fried foods, commercially baked goods (doughnuts, cookies, crackers), processed foods, and margarines.

It's All About Balance

A balanced diet is important to maintain health and a sensible body weight. No single food will provide all the essential nutrients that the body needs to be healthy and function efficiently. The nutritional value of a person's diet depends on the overall mixture, or balance, of food that is eaten over a period of time. A diet that includes a variety of different foods is likely to provide all the essential nutrients. Remember, it's all about balance. Even eating your favorite dessert is okay in moderation. Eating a variety of colorful foods provides essential nutrients your body needs to play well!

