Sports Nutrition: Nutrients for sports & exercise

Proper nutrition is essential to get the most from your training. Whether you are looking to increase strength, endurance, or speed or to improve body mechanics, good nutrition helps your body respond to training and ultimately improve.

Use this factsheet for general eating guidelines only. The amount of each macronutrient you should eat will vary depending on sport type, amount of training, and other factors. A sports dietitian can help customize amounts that are appropriate for you.

Macronutrients

All foods can be broken down into 3 main types of nutrients: **carbohydrates** [KAR-bow-HI-drayts], **protein**, and **fat.** These are called **macronutrients** [MAK-row-NEW-tree-ents]. Macronutrients play important roles in the body and are essential for good health.

Carbohydrates

Carbohydrates (carbs) are the body's main source of energy.

What do carbohydrates do for my body?

Carbohydrates are needed to:

- Provide the main source of fuel for the brain and for all cells and muscles.
- Fuel the body during any kind of activity, including exercise and activities of daily living.
- Refill energy stores for later use. Small amounts of carbohydrate are stored in the liver for quick use when needed. Large amounts of carbohydrate are stored in skeletal muscle.
- Protect muscle tissue from being broken down and used as energy. This is called "protein sparing."

How much carbohydrate do I need?

The amount of carbs you need varies based on your sport or activity level (long distance, endurance, or high intensity exercise require more carbohydrates). Carbohydrates should provide more than half (50 to 60%) of your total calorie intake.

What foods have carbohydrates?

There are 2 main types of carbohydrates that are found in foods:

- **Complex carbohydrates (starches).** Foods with complex carbohydrates are often rich in vitamins, minerals, and fiber. Complex carbohydrates generally take longer for your body to break down. Complex carbohydrates are found in whole grain breads, cereals, potatoes, pasta, crackers, vegetables, and rice.
- **Simple carbohydrate (sugars).** Sugars provide quick energy because they are broken down by the body more quickly. Simple carbohydrates are found in milk, fruit juices, white bread, desserts, and sodas.

Protein

Protein is a major building block of muscle and is essential for the formation of cells.

What does protein do for my body?

Protein is needed to:

- Build and repair muscle and other tissue.
- Provide structure and support in the nails, hair, muscle, and bones.
- Maintain bone health.
- Regulate and balance fluids.
- Boost immune system function with antibodies, hormones, and enzymes.
- Help transport nutrients in the body.
- Provide vitamins and minerals.

How much protein do I need?

Daily protein needs vary based on your sport and activity level. Protein should provide about one quarter (20 to 25%) of your total calorie intake. Be sure there is a high protein source at every meal, and small amounts of protein with snacks.

What foods have protein?

There are 2 main sources of protein:

- **Animal protein.** Eating meat and dairy products is the best way to get protein. These are called "complete proteins."

  This type of protein is found in beef, pork, chicken, turkey, fish, sea food, eggs, and dairy.

- **Plant-based protein.** You can also get protein from plant sources, but these may not contain all the important nutrients you need. If you only eat plant-based protein, work with your dietitian to make sure you meet all your nutritional needs.

  Good sources of plant-based protein include beans, lentils, nuts, seeds, soy products, and whole grains.

Fats

Fats are an important part of cell function. Fat is **not** optional, but some fats are better for the body than others.

What does fat do for my body?

Fat is needed to:

- Provide energy, especially for low-intensity exercise.
- Make and regulate hormones.
- Help your body absorb important vitamins, including vitamins A, D, E, and K.
- Help cells function and send signals.
- Help the brain send messages throughout the body.
- Insulate and protect internal organs.

How much fat do I need?

Fat should provide more than one quarter (25-30%) of your calories.

What foods have fat?

The key types of fat found in foods include:

- **Monounsaturated fat.** Found in a variety of foods and oils, such as canola, olive, and peanut oils, monounsaturated fat is considered a good or healthy fat.
- **Polyunsaturated fat.** This type of fat is mostly found in plant-based foods and oils. Polyunsaturated fat is considered a good or healthy fat.
- **Omega-3 fatty acid.** This is a type of polyunsaturated fats that is especially good for your heart. Fish oils, canola, flaxseeds, nuts, and other seeds are high in this type of fat.
- **Saturated fat.** This type of fat is found in meats and dairy products. Eat foods with saturated fat in moderation.
- **Trans fat.** Trans fat is found mostly in processed foods or foods made with partially hydrogenated oils. Avoid foods with trans fat.

Micronutrients

Micronutrients include vitamins and minerals. Micronutrients do not provide energy. Instead, they help convert food into usable energy, and they are needed for immune health and other important functions. A diet that is full of colorful fruits and vegetables, whole grains, healthy fats, and proteins will provide the vitamins and minerals you need.