



Nutrition for Energy and Recovery



Winning Nutrition for Athletes



Whether it's playing football, swimming, jogging, lacrosse, hockey, baseball or any other sport, you need to eat a nutritious, balanced diet to fuel your body. Good nutrition, like any sporting event, has basic ground rules. Following these rules will help you feel great and score those winning points!

So...what are those winning ingredients for a healthy, energetic peak performance athletic career?

1. **Carbohydrates**
2. **Protein**
3. **Fats**
4. **Vitamins**
5. **Minerals**
6. **Water**

All athletes need a nutrition plan that provides sufficient energy in the form of carbohydrates, protein, fats, vitamins, mineral and fluid. This means a nutrition plan where you get 55-60% of your calories from carbohydrates (or carbs, as everyone calls them), 10-15% from protein and approximately 25% from fat.

To accomplish this goal, you need to eat a variety of foods every day - grains, vegetables, fruit, beans, lean meats, and low fat dairy products. You also need fluid, mostly in the form of water to avoid dehydration. Dehydration can stop even the finest athlete from playing their best.

Athletics is becoming increasingly competitive. More and more stress is being placed on how well you perform. To reach your highest potential, all of your body systems must be perfectly tuned. Nothing is more important to your well-being and ability to perform than good nutrition. Eating the right foods helps you maintain desirable body weight, stay physically fit, and establish optimum nerve-muscle reflexes. Without the right foods, even physical conditioning and expert coaching aren't enough to push you to your best. Good nutrition must be a key part of your training program if you are to succeed.

There is no one "miracle food" or supplement that can supply all of your nutritional needs. Certain foods supply mainly proteins, other foods contain vitamins and minerals, and so on. The key to balancing your diet is to combine different foods so that nutrient deficiencies in some foods are made up by nutrient surpluses in others. Eating a variety of foods is the secret.



The nutrients—the proteins, carbohydrates, fats, vitamins, minerals, and water—are teammates that work together to provide good nutrition. Just as each team member carries out different tasks during a game, each nutrient performs specific functions in your body. A lack of just one nutrient is a disadvantage to your body, just as losing a player to the penalty box is a disadvantage for a hockey team. Your body needs all these nutrients all of the time, so the foods you eat should supply them every day.

Just because you are not hungry does not necessarily mean that your body has all the nutrients it needs. You can fill up on foods that contain mostly carbohydrates and fats, but your body still has basic needs for proteins, minerals, and vitamins.

So let's take a look at the six categories a little more closely. Learning how to manage your diet is just as important as learning how to do a squat correctly.

Carbohydrates

Carbohydrates are one of the main types of food. Your liver breaks down carbohydrates into glucose (blood sugar). Your body uses this sugar for energy for your cells, tissues and organs.

Carbohydrates come in two forms: simple or complex. Simple carbohydrates come from some fruits, milk products, candy and cakes. Complex carbohydrates include whole grain breads and cereals, starchy vegetables and legumes. Complex carbohydrates and some simple carbohydrates provide vitamins minerals and fiber. Products made with refined sugar provide little nutrition. It is wise to limit these products.

Most sports nutritionists agree that about 60% of your diet should come from carbohydrates, mostly complex carbs. So let's look at your choices. We've also suggested some serving sizes to help you plan. Remember: Carbs come from vegetables, fruits, and grains.

To meet increased energy needs, you may require more than the minimum number of servings listed. In some cases, you may need more than the recommended number of servings. For most athletes, the increased energy should come from the vegetable group and the bread, cereal, rice, and pasta group. Foods in these two groups contain a lot of starch, which is an excellent source of food energy. If you participate in very high levels of physical activity and/or have a larger body stature, you will require the highest intake of food energy.

Vegetable Group

(All vegetables, including dark green, deep yellow, and starchy vegetables—and their juices)

Provide vitamins and minerals that complement other food sources. Good sources of Vitamin C include tomatoes, broccoli, and brussel sprouts. Good sources of Vitamin A include carrots, broccoli, spinach, greens, pumpkin, and sweet potatoes.

3 to 5 servings daily - 1 serving is

- * 1/2 cup of cooked vegetables***
- * 1/2 cup of chopped raw vegetables***
- * 1 cup of leafy raw vegetables such as lettuce or spinach***
- * 3/4 cup (6 ounces) of juice***



Fruit Group

All fruits and their juices are good source of many vitamins and minerals. Good sources of vitamin C include citrus fruits and their juices, melons, and strawberries. Apricots are good sources of vitamin A.

2 to 4 servings daily - 1 serving is



- * 1 whole fruit such as a medium apple, banana, or orange
- * 1/2 grapefruit
- * 3/4 cup (6 ounces) of juice
- * 1/2 cup (4 ounces) of berries
- * 1/2 cup (4 ounces) of cooked or canned fruit
- * 1/4 cup of dried fruit

Bread, Cereal, Rice, and Pasta Group

All whole-grain and enriched breads and cereals, such as cooked or ready to eat cereals, bread, macaroni, grits, spaghetti, crackers, noodles, and rice

Contribute complex carbohydrates (starch and fiber) and significant amounts of protein, B vitamins, and iron.



6 to 11 servings daily - 1 serving is



- * 1 slice of bread
- * 1/2 hamburger bun or English muffin
- * 1 small roll, biscuit, or muffin
- * 3 to 4 small or 2 large crackers
- * 1/2 cup cooked cereal, rice, or pasta
- * 1 ounce ready-to-eat breakfast cereal

Protein



Protein is a basic substance of all body cells. It is important for you because it builds tissues such as muscle, connective tissue, skin and hair. You need it for growth and repair of body tissues. It is also a necessary component of hormones, enzymes, the immune system and fluid balance.

There is a great deal of bad information and controversy about how much protein you need. Many athletes go out and purchase expensive protein powders and supplements. **You do not need to do this.** If you follow a balanced diet, you will get plenty of the protein you need. Protein is no more essential than other nutrients. Protein is a poor source of energy and too much does not help performance. A balanced diet supplies enough protein for any athlete.

Protein is comprised of 20 common amino acids. Nine of these are called essential amino acids because they cannot be made in the body – they must be obtained from food.

If you don't eat enough carbohydrate for energy, your body uses the glycogen stored in your liver to maintain your blood sugar level. When the liver glycogen is used, your liver uses protein and other by-products to make the necessary glucose. The long-term result is a loss of your muscle mass and poorer performance.

Here is a good breakdown of proteins and appropriate serving sizes.

Milk, Yogurt, and Cheese Group (Milk, yogurt, and all types of cheese)

Provides calcium. Also contains protein, vitamin A, and riboflavin (B2).



3 servings daily - 1 serving is

- * 8 ounce glass of milk
- * 8 ounces of yogurt
- * 1 1/2 ounces of natural, unprocessed cheese

Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group (Beef, pork, lamb, poultry, fish, eggs, dry peas, dry beans, peanuts, peanut butter)

Good source of protein. These foods also contain thiamin (B1), riboflavin (B2), niacin, iron, and zinc.

2 to 3 servings daily - 1 serving is

- * 3 ounces of lean, cooked meat
- * 2 eggs
- * 1 cup of cooked dry beans, peas, or lentils
- * 4 tablespoons of peanut butter



Fats & Oils

All fats and oils are a mixture of saturated fatty acids and unsaturated fatty acids. Solid fats contain more saturated fats and/or trans fats than oils. Oils contain more monounsaturated (MUFA) and polyunsaturated (PUFA) fats. Saturated fats, trans fats, and cholesterol tend to raise “bad” (LDL) cholesterol levels in the blood, which in turn increases the risk for heart disease. To lower risk for heart disease, cut back on foods containing saturated fats, trans fats, and cholesterol.

Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking. Oils come from many different plants and from fish. Some common oils are:



- canola oil
- corn oil
- cottonseed oil
- olive oil
- safflower oil
- soybean oil
- sunflower oil

Foods that are mainly oil include mayonnaise, certain salad dressings, and soft (tub or squeeze) margarine with no trans fats.

Most oils are high in monounsaturated or polyunsaturated fats, and low in saturated fats. Oils from plant sources (vegetable and nut oils) do not contain any cholesterol. In fact, no foods from plants sources contain cholesterol.

A few plant oils, however, including coconut oil and palm kernel oil, are high in saturated fats and for nutritional purposes should be considered to be solid fats.

Solid fats are fats that are solid at room temperature, like butter and shortening. Solid fats come from many animal foods and can be made from vegetable oils through a process called hydrogenation which create trans fat...not a good thing to eat!. Some common solid fats are:

- butter
- beef fat (tallow, suet)
- chicken fat
- pork fat (lard)
- stick margarine
- shortening



Most nutritionists agree that about 25% of your daily calories should come from good fat sources. Fat is a major source of energy and several vitamins, including A, K, & E are fat-soluble, meaning they need fat to be transported through your body.



Vitamins

Vitamins are a vital part of your diet. They are not a direct source of energy, but they aid in the conversion of carbohydrates, fat, and protein into energy. This is extremely important for athletes. Here are the most important vitamins, their benefits, and in what foods to find them in:

Vitamin A

Benefits:

Critical to the development of bones and teeth; Helps maintain good eyesight; Enhances immune system; Prevents red blood cell damage

Sources:

- Dark green leafy vegetables
- Yellow-orange vegetables and fruits
- Liver
- Milk
- Butter

Vitamin B-Complex

Benefits:

Provides energy by converting carbohydrates into glucose; Essential to the metabolism of fats and proteins; Assists in growth; Contributes to appetite

Sources:

- Whole grain cereals
- Green vegetables
- Nuts
- Beans
- Poultry
- Fish

Vitamin C

Benefits:

Helps the formation of scar tissue; Fights bacterial infection; Reduces the impact of some allergy producing substances; Helps prevent the common cold
As an antioxidant, fights cancer, cataracts, and heart disease

Sources:

- Broccoli
- Tomatos
- Oranges
- Grapefruit
- Cantaloupe

Vitamin D

Benefits:

Critical for bone development and strength; Mantains a stable nervous system; Maintains a normal and strong heartbeat; Helps in blood clotting

Sources:

- Fish-liver oils
- Fortified milk
- Egg yolks

Vitamin E

Benefits:

Lessens oxidative damage after hard training; Prevents lung damage from many pollutants; Vital to the immune system

Sources:

- Vegetable oils
- Wheat germ
- Whole grains
- Rice
- Leafy vegetables

Vitamin K

Benefits: Vitamin K is known as the clotting vitamin as it helps to clot blood.

Sources:

- Green leafy vegetables
- Vegetable oils
- Fish

Minerals

Minerals, like Vitamins do not provide us with energy, but they do work to ensure that our body functions properly. Minerals are essential for the functioning of the heart, they aid in warding off fatigue and cramps, and in the transportation of oxygen. This is very important to athletes

Calcium

Benefits:

Builds and maintains bone strength, which prevents stress fractures; Builds and maintains teeth; Helps regulate heart function; Assists in muscle growth and contraction

Sources:

Milk
Calcium fortified juices
Beans
Oranges
Broccoli

Chloride

Benefits:

Maintains nerve impulses that control the muscles; Maintains water balance and distribution; Needed for the production of stomach acid

Sources:

Table salt (sodium chloride)

Iron

Benefits:

Along with protein, helps form hemoglobin, which carries oxygen from the lungs through the blood to the body tissues, which includes the muscles

Sources:

Beef
Lamb
Pork
Leafy green vegetables
Iron fortified cereals
Breads

Sodium

Benefits:

With water, helps retain fluids that counteract dehydration; Helps our bodies produce a thirst sensation so we'll drink more fluids

Sources:

Seafood
Poultry
Carrots

Magnesium

Benefits:

Aids in the body's energy production; Combats stress; Assists in bone growth; Helps regulate body temperature

Sources:

Bannans
Green vegetables
Corn
Apples
Whole wheat bread

Phosphorous

Benefits:

Helps in almost every chemical reaction in the body, assists in the use of carbohydrates, fats, and proteins for energy

Stimulates heart and muscle contractions
Prevents tooth decay

Sources:

Meats
Fish
Chicken
Eggs
Whole grains
Chocolate!

Potassium

Benefits:

Aids in the conversion of glucose to glycogen; Nourishes the muscles; Stimulates the kidney to get rid of body wastes

Sources:

Bananas
Green leafy vegetables
Oranges
Potatoes
Raisins

Zinc

Benefits:

Helps remove carbon dioxide from exercising muscles; Aids in healing; Boosts the immune system

Sources:

Beef
Chicken
Sunflower seeds