

A guide to nutritional supplements



Supplements do exactly what the name describes, supplement. People who take supplements should not be under the impression that supplements will cause a drastic change in your body. Supplements are purposed to complement your diet and workout regime. The better your diet and exercise regime, the more benefits you will see from supplementation.

Supplements make it easier to get the necessary nutrients to build muscle and enhance your training when taken correctly and combined with a good diet. Vitamins and minerals are important nutrients for our body. Our body would not function properly without adequate doses of vitamins and minerals.

Cyanocobalamin & Cobalamin play an important role in carbohydrate, protein, and fat metabolisms and in the maintenance of nervous system tissue, which is an important aspect in the growth of muscle. At high dosages it can be used as an appetite stimulant and an energy booster.

Riboflavin is not ingested, but made by intestinal flora from digested flavonoids. It is one of the fastest absorbed and fastest excreted, thus making it a constant need. It is involved in glucose metabolism, oxidation of fatty acids, and the moving of hydrogen ions through the citric acid cycle. It is also need to activate B6 and help manufacture B3 in order to assist in functioning of the adrenal gland. It is also responsible for producing antibodies, as well as, play a role in cell growth and cell respiration.

Niacin is used for cell respiration and involved in several metabolic processes related to energy production, such as the metabolization of carbs, fatty acids, and protein. Niacin in high doses can be used as a detoxification to cleanse your body of unwanted toxins.

Thiamine (B1) is also required for protein metabolism and growth as well as the formation of hemoglobin. It also enhances circulation by allowing for a better oxygen supply and more energy, helps with the production of new red blood cells, and metabolizes carbs. It plays a key role in the

What's the difference between fat soluble & water soluble vitamins

Vitamins fall into two categories: fat soluble and water soluble. The fat-soluble vitamins (Vitamin A, D, E, and K) dissolve in fat and can be stored in your body. The water-soluble vitamins (such as Vitamin C and the B-complex vitamins etc.) need to dissolve in water before your body can absorb them. Your body can only 'store' fat soluble vitamins, whereas excess water soluble vitamins are flushed out of the body.

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Kenai Spine

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creation of hydrochloric acid, which eases digestions. However, thiamine requirements appear to be directly associated with calorie expenditure. In other words, the more exercise, the more thiamine your body needs.

Pyridoxine (B6) assists in protein metabolism, growth and carbohydrate utilization and is one of the most important vitamins for mental and physical health, especially in women because

it balances the female hormones and assists in the immune system. It also balances sodium and potassium and promotes the production of new red blood cells.

Pantothenic Acid (B5) is involved in the manufacturing of the hormones associated with dealing with stress. It also plays a critical role in the secretion of cortisol, which helps support the adrenal glands. As with all B-vitamins it also assists with protein, carbs, and fat metabolism and helps fight allergies and strengthens the immune system.

Folic Acid (B9) is manufactured within the body and unlike other B vitamins folic acid can be stored in the liver. It's main purpose is the synthesis of DNA, cell growth, the formation of red blood cells, energy production, and the formation of non-essential amino acids from ingested and stored protein sources.

Biotin plays an important role in amino acid metabolism, the production of energy and red blood cell formation. It is one vitamin that people do not get an adequate supply of when dieting because it can be blocked by a substance called Avidin, which is found in raw egg whites.

Vitamin C is an antioxidant that protects muscles, which enhances recovery and growth. Vitamin C is also involved in amino acid metabolism,

particularly in the formation of collagen, which holds your bones and muscles together.



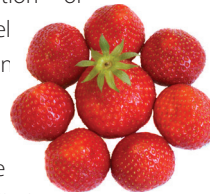
Furthermore, it helps with the absorption of iron that is needed to help oxygen bind to hemoglobin, which helps oxidize muscles and increase performance. It also assists in the formation of and release of steroid hormones, such as testosterone. It is important to note that because vitamin C is one of the most water-soluble vitamins, it diffuses very fast in water. Since muscle cells are mostly water, the more muscle you have, the more vitamin C you will need due to lower concentrations in body tissues.

Vitamin A is known for helping with vision; however, it also is important with protein synthesis and glycogen production.



Vitamin D plays a key role in the absorption of calcium and phosphorus.

Vitamin E is another antioxidant that protects cell membranes, which is important to several metabolic processes and muscles for growth.



MINERALS ARE INORGANIC ELEMENTS THAT COME FROM THE SOIL AND WATER.

Your body needs larger amounts of some minerals, such as calcium, to help grow your bones and stay healthy. Other minerals (like chromium, copper, iodine, iron, selenium, and zinc) are called trace minerals because you only need very small amounts of them each day.

Calcium is needed for muscle contraction and if adequate stores are not available muscle contractions cannot be sustained. It is also needed for healthy bones.

Magnesium helps with the formation of bones and teeth and also is needed to assist with the absorption of calcium and potassium. It also helps in the process of producing vitamin D and controlling blood pressure.

Phosphorus helps provide fast and powerful muscle contractions and is required for the synthesis of ATP.

Potassium prevents high blood pressure, restores normal function of nerve and muscle cells, is good for normal muscle contractions, helps maintain water balance, regulates acid balance in the body, promotes regular heart beat, and is good for injuries.

Iron's main function is to combine with protein and copper to make hemoglobin that can transport oxygen in the blood from the lungs to the tissue that need it. It also increases the quality of blood, increases resistance to stress and disease, prevents fatigue, and forms myoglobin, which supplies oxygen to muscle cells.

Zinc plays a role in the maintenance of the immune system, wound healing, cell activation, and managing insulin and blood glucose. It also has anti-inflammatory properties.

Iodine is used in the production of hormones

by the thyroid gland, regulates the conversion of fat to energy, stabilizes our body weight and also helps control our cholesterol levels.

Magnesium helps the body use vitamin C, biotin, and choline more efficiently. It is used to help dispose of free radicals and needed in stimulating the growth of the connective tissues.

Selenium is needed for important antioxidant enzymes to function. It stops the production of free radicals and reduces the production of inflammatory problems.

Chromium is essential to the body's ability to produce insulin. It enhances insulin's effect in the body by improving the uptake of glucose, causing better blood circulation and maintaining blood sugar level.