



BalanceHealthSM Newsletter

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Vitamins 101

Our bodies need vitamins and minerals to grow and develop normally. Many people recognize that vitamins and minerals are essential to healthy body functioning, but are unclear on what these elements actually do for us and unsure which foods contain these nutrients. This month our wellness experts are going to demystify vitamins and next month we will tackle minerals.

There are two types of vitamins – fat soluble and water soluble. **Fat soluble** vitamins are stored in the body's fat tissues and the liver. They are easier to store than water soluble vitamins and can be stored within the body for long periods of time. They do not need to be replenished as often as water soluble vitamins. However, since they are stored for longer periods of time, there is a greater chance of reaching toxic levels. When vitamins are consumed in excess they do have the potential to make you sick.

On the other hand, **water soluble** vitamins are expelled through the urine. This means they are stored for shorter periods of time and need to be replenished regularly. Since they are expelled frequently, there is a much smaller chance of them reaching toxic levels and making you sick.

There are 13 essential vitamins. Fat soluble vitamins include A, D, E and K, while vitamins C and all the B vitamins are water soluble.

Vitamin A

Vitamin A is the name of a broad range of nutrients that are derived from two sources: preformed retinoids and provitamin carotenoids. Vitamin A helps form and maintain healthy skin, teeth, skeletal and soft tissue, mucus membranes, and skin. It also improves immune function and promotes good vision. Carotenoids such as beta carotene are also antioxidants, which protect cells from free radicals. Insufficient Vitamin A can make people more susceptible to infectious disease and vision problems.

Vitamin A is found in all animal sources, including eggs, organ meats, and fatty fish. Sources of beta carotene include bright yellow and orange fruits and vegetables such as cantaloupe, carrots, pumpkin and sweet potatoes. Children are more sensitive to excessive levels of Vitamin A, but toxicity in adults generally only occurs when more than 25,000 IUs per day are regularly consumed.

Vitamin D

Vitamin D promotes calcium absorption and is essential for bone growth. Without adequate Vitamin D bones can become thin and brittle. In older adults, Vitamin D coupled with calcium helps protect

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against osteoporosis. Vitamin D's other roles within the body include modulation of cell growth, neuromuscular and immune function, and reduction of inflammation.

Very few foods naturally contain Vitamin D. The best source is actually the sun! When sunlight hits your skin, it is synthesized into Vitamin D. Food sources include fatty fish such as salmon as well as fortified dairy products and orange juice. There is no risk of Vitamin D toxicity from overexposure to the sun, but toxicity can occur if an excess is consumed in supplement form.

Vitamin E

Vitamin E exists in 8 different forms and has antioxidant properties. These properties help protect the body from harmful free radicals. Vitamin E deficiency is very rare and therefore supplements are usually not necessary.

Good sources of Vitamin E include kiwi fruit, almonds, avocado, eggs, milk, nuts and leafy green vegetables. Vitamin E toxicity generally does not occur from food, but research suggests that taking E supplements in high doses has the potential to cause bleeding and hemorrhaging issues.

Vitamin K

Vitamin K is not a single nutrient, but the name given to a group of vitamins of similar composition. Vitamin K is essential for proper blood clotting and is important in bone health. Excellent sources of vitamin K include dark green leafy vegetables such as kale and spinach as well as Brussels sprouts and broccoli. In excess, vitamin K has the potential to cause blood clots in susceptible individuals.

Vitamin C

Vitamin C is an important antioxidant. Vitamin C is essential for the growth and repair of tissues in all parts of your body. It helps repair and maintain cartilage, bones, and teeth. The body is not able to make vitamin C on its own and does not store vitamin C for long periods of time. Therefore it is important to include plenty of vitamin C-containing foods in your daily diet. Foods rich in Vitamin C include citrus fruits, cantaloupe, mango and berries.

B Vitamins

The B vitamins consist of B1 (thiamine), B2 (riboflavin), B3 (niacin), B5 (pantothenic acid), B6, B7 (biotin), B12, and folic acid. Each B vitamin has a specific function, but in general they help the process your body uses to get or make energy from the food you eat. They also help form red blood cells. Folic acid in particular is especially important to pregnant women as it helps prevent birth defects. A lack of B6 or B12 can cause anemia. Sources of B vitamins include proteins such as fish, poultry, meat, eggs, and dairy products as well as leafy green vegetables and beans.

How much of each vitamin you need depends on your age and gender, so check with your doctor for recommended daily values. For most people the best way to get enough vitamins is to eat a balanced diet with a wide variety of healthy food.

We encourage you to contact **eni's** wellness experts for assistance developing a customized nutrition plan that is packed full of vitamins!

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