

Vitamins

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Vitamins are organic substances present in minute amounts in natural foodstuffs. Having too little of any particular vitamin may increase the risk of developing certain health issues.

A vitamin is an organic compound, which means that it contains carbon. It is also an essential nutrient that the body may need to get from food.

There are currently 13 recognized vitamins.

Fat-soluble and water-soluble vitamins

Vitamins are either soluble, or dissolvable, in fat or water. We describe both types below:

Fat-soluble vitamins

Vitamins A, D, E, and K are fat-soluble. The body [stores](#) [Trusted Source](#) fat-soluble vitamins in fatty tissue and the liver, and reserves of these vitamins can stay in the body for [days](#) and sometimes months.

Dietary fats help the body absorb fat-soluble vitamins through the intestinal tract.

Water-soluble vitamins

Water-soluble vitamins [do not stay](#) [Trusted Source](#) in the body for long and cannot be stored. They leave the body via the urine. Because of

this, people need a more regular supply of water-soluble vitamins than fat-soluble ones.

Vitamin C and all the B vitamins are [water-soluble](#) [Trusted Source](#).

Vitamin A

Chemical names: retinol, retinal, and “the four carotenoids,” including [beta carotene](#).

- It is fat-soluble.
- **Function:** It is essential for eye health.
- **Deficiency:** This may cause night blindness and keratomalacia, which causes the clear front layer of the eye to grow dry and cloudy.
- **Good sources:** These include liver, cod liver oil, carrots, broccoli, sweet potatoes, butter, [kale](#), spinach, [pumpkins](#), collard greens, some cheeses, eggs, apricots, cantaloupe melon, and milk.

Vitamin B1

Chemical name: thiamine.

- It is water-soluble.
- **Function:** It is essential for producing various enzymes that help break down blood sugar.
- **Deficiency:** This may cause [beriberi](#) and [Wernicke-Korsakoff syndrome](#).
- **Good sources:** These include yeast, pork, cereal grains, sunflower seeds, brown rice, whole grain rye, asparagus, kale, cauliflower, potatoes, orange

Vitamin B6

Chemical names: pyridoxine, pyridoxamine, pyridoxal.

- It is water-soluble.
- **Function:** It is vital for the formation of red blood cells.
- **Deficiency:** Low levels may lead to [anemia](#) and peripheral [neuropathy](#).
- **Good sources:** These include chickpeas, beef liver, bananas, squash, and nuts.

Vitamin B12

Chemical names: cyanocobalamin, hydroxocobalamin, methylcobalamin.

- It is water-soluble.
- **Function:** It is essential for a healthy nervous system.
- **Deficiency:** Low levels may lead to neurological problems and some types of anemia.
- **Good sources:** Examples include fish, shellfish, meat, poultry, eggs, milk and other dairy products, fortified cereals, fortified soy products, and fortified nutritional yeast.

Vitamin C

Chemical name: ascorbic acid.

- It is water-soluble.
- **Function:** It contributes to collagen production, wound healing, and bone formation. It also strengthens blood vessels, supports the immune system, helps the body absorb iron, and acts as an antioxidant.

- **Deficiency:** This may result in scurvy, which causes bleeding gums, a loss of teeth, and poor tissue growth and wound healing.
- **Good sources:** These include fruit and vegetables, but cooking destroys vitamin C.

Vitamin D

Chemical names: ergocalciferol, cholecalciferol.

- It is fat-soluble.
- **Function:** It is necessary for the healthy mineralization of bone.
- **Deficiency:** This may cause [rickets](#) and osteomalacia, or softening of the bones.
- **Good sources:** Exposure to UVB rays from the sun or other sources causes the body to produce vitamin D. Fatty fish, eggs, beef liver, and mushrooms also contain the vitamin.