

# Vitamin Basics



You read about how everything from asparagus to zucchini has this vitamin and that vitamin, and those vitamins will bring you certain health benefits to your heart, cells, brain and skin.

Then, you walk into the drug store and see rows and rows of vitamins and the alphabet soup of names. What do they mean? What are the benefits? Why do experts say you need them?

There are 13 essential vitamins that are broken down into two groups: fat-soluble, meaning they dissolve easily in fat; and water-soluble, which dissolve easily in water. Fat-soluble vitamins include A, D, E and K; the water-soluble vitamins include all the Bs and vitamin C.

Here is a summary of the 13 essential vitamins:

	Benefits	Food Sources
<b>Vitamin A</b>	<p>Vision, bone growth, reproduction, teeth, soft tissue, mucous membranes, skin, cell growth, and immune-system regulation.</p> <p>“Carotenoids” are dark substances in plant foods that can turn into a form of vitamin A.</p> <p>Beta-carotene is probably the most well-known carotenoid. The more intense the color of a fruit or vegetable, the higher the beta-carotene content.</p>	<p>Liver, milk, fortified foods, colorful fruits and vegetables, eggs, meat, cheese, cream, cod, halibut and fish oil.</p> <p>Beta-carotene sources: carrots, pumpkin, sweet potatoes, winter squash, cantaloupe, pink grapefruit, apricots, broccoli, spinach, and most dark green, leafy vegetables.</p>
<b>Vitamin B1</b> <i>thiamine</i>	<p>Converting carbohydrates to energy; heart function; healthy nerve cells.</p>	<p>Fortified breads, cereals and pasta, whole grains, wheat germ, lean meats, especially pork and fish, dried beans, peas, soybeans, dairy products, fruits and vegetables</p>
<b>Vitamin B2</b> <i>riboflavin</i>	<p>Works with other B vitamins; body growth; production of red blood cells; release of energy from carbohydrates.</p>	<p>Lean meat, eggs, nuts, legumes, green leafy vegetables, fortified breads and cereals.</p>
<b>Vitamin B3</b> <i>niacin</i>	<p>Healthy skin, nerves, lower “bad” cholesterol, functioning of the digestive system, conversion of food into energy.</p>	<p>Dairy products, poultry, fish, lean meats, nuts, eggs, legumes, and enriched breads and cereals.</p>

<b>Vitamin B6</b>	Forming of red blood cells, hemoglobin in the blood; protein metabolism; normal blood sugar levels; functioning of immune and nervous systems and brain.	Fortified cereals, beans, meat, poultry, fish, and some fruits and vegetables
<b>Vitamin B12</b>	Cell formation, especially red blood cells and "myelin," the covering of nerve cells; maintenance of central nervous system.	Meat, shellfish, milk, cheese and eggs. People who don't eat meat products sometimes need Vitamin B supplements to keep from having a deficiency in the nutrient.
<b>Vitamin C</b>	Healthy teeth, gums and tissue; iron absorption; strengthening of the immune system; wound healing.	Vitamin C is neither made by humans nor stored long in your system, which is why health experts say we need to eat citrus fruits, strawberries, broccoli, peppers and spinach.
<b>Vitamin D</b>	<b>Calcium</b> absorption in bones; improve muscle strength.	Recommended minimum intake is 200 IU per day for infants, children and adolescents. This amount of vitamin D can be obtained from drinking of vitamin D-fortified milk each day.
<b>Vitamin E</b>	Formation of red blood cells; Protection of cells from unstable free radicals, helping to use vitamin K.	Nuts and seeds, vegetable oils and products made from them, whole grains, leafy green vegetables, wheat germ, corn, olives, and asparagus.
<b>Vitamin K</b>	Not listed among the essential vitamins, but blood would not stick together, or clot, without it.	Cabbage, cauliflower, leafy green and other vegetables, cereals and soybeans. Also made by beneficial gastrointestinal bacteria.
<b>Biotin</b>	Proteins and carbohydrate Metabolism, production of hormones and "good" cholesterol.	Eggs, fish, dairy products, whole-grain cereals, legumes, yeast, broccoli and other vegetables in the cabbage family; white and sweet potatoes; lean beef
<b>Folic acid</b>	Works with vitamin B12 to help form red blood cells; production of DNA, which controls tissue growth and cell function; protects against certain birth defects, such as spina bifida.	Pregnant women should be sure to get enough folate. Many foods are now fortified with folic acid. Green, leafy vegetables
<b>Pantothenic Acid</b>	Food metabolism; production of hormones and "good" cholesterol.	Eggs, fish, dairy products, whole-grain cereals, legumes, yeast, broccoli and other vegetables in the cabbage family; white and sweet potatoes; lean beef