

Vitamins are organic substances that are essential in small quantities for normal growth and health in humans. They are different from other biological compounds such as proteins, lipids, carbohydrates, etc. Vitamins are essential nutrients which means that the human cannot produce these compounds on their own.

Vitamins functions are of a catalytic or regulatory nature, facilitating or controlling vital chemicals reactions in the body's cells. If a vitamin is lacking in diet or is not properly absorbed by the body, a particular deficiency disease may develop. In this article, we are providing complete notes on vitamins and tricks to remember them.

Water-soluble				
Vitamin Name	Other Names of Vitamin	Biological Function	Food Sources	Symptoms of deficiency
Thiamin	Vitamin B ₁	Component of a coenzyme in the carbohydrate metabolism; supports normal nerve function	Pork, Oatmeal, Brown Rice, Vegetables, Potatoes, Liver, Eggs	Impairment of the nerves and heart muscle wasting
Folic Acid (B9)	Folate, Folacin, Pteroylglutamic Acid	Component of coenzymes in DNA synthesis, metabolism of amino acids; required for cell division, maturation of red blood cells	Leafy Vegetables, Pasta, Bread, Cereal, Liver	Impaired formation of red blood cells, weakness, irritability, headache, palpitations, inflammation of mouth, neural tube defects in fetus
Niacin (B3)	Nicotinic Acid, Nicotinamide	Component of coenzymes used broadly in cellular metabolism, oxidation of fuel molecules, and fatty acid and steroid synthesis	Meat, Fish, Eggs, Many Vegetables, Mushrooms, Tree Nuts	Skin lesions, gastrointestinal disturbances, nervous symptoms
Riboflavin	Vitamin B ₂	Component of coenzymes required for energy production and lipid, vitamin, mineral, and drug metabolism; antioxidant	Dairy Products, Bananas, Popcorn, Green Beans, Asparagus	Inflammation of the skin, tongue, and lips; ocular disturbances; nervous symptoms
Vitamin B₆	Pyridoxine, Pyridoxal, Pyridoxamine	Component of coenzymes in the metabolism of amino acids and other nitrogen-containing compounds; synthesis of hemoglobin, neurotransmitters; regulation of blood glucose levels	Meat, Vegetables, Tree Nuts, Bananas	Dermatitis, mental depression, confusion, convulsions, anemia
Pantothenic Acid	Vitamin B ₅	As a component of coenzyme A, essential for the metabolism of carbohydrate, protein, and fat; cofactor for elongation of fatty acids	Fortified cereals, Organ meats (liver, kidney) Chicken breast, Mushrooms, Avocado, Nuts, seeds, Dairy milk	Weakness, gastrointestinal disturbances, nervous symptoms, fatigue, sleep disturbances, restlessness, nausea

Vitamin B₁₂	Cobalamin, Cyanocobalamin	Cofactor for enzymes in the metabolism of amino acids (including folic acid) and fatty acids; required for new cell synthesis, normal blood formation, and neurological function	Meat And Other Animal Products	The smoothness of the tongue, gastrointestinal disturbances, nervous symptoms
Vitamin C	Ascorbic Acid	Antioxidant; synthesis of collagen, carnitine, amino acids, and hormones; immune function; enhances absorption of non-heme iron (from plant foods)	Many Fruits and Vegetables, Liver	Swollen and bleeding gums, soreness and stiffness of the joints and lower extremities bleeding under the skin and in deep tissues, slow wound healing, anemia
Biotin (B7)		Cofactor in carbohydrate, fatty acid, and amino acid metabolism	Raw Egg Yolk, Liver, Peanuts, Leafy Green Vegetables	Dermatitis, hair loss, conjunctivitis, neurological symptoms
Fat-Soluble				
Vitamin Name	Other Names of Vitamin	Biological Function	Food Sources	Symptoms of deficiency
Vitamin A	Retinol, Retinal, Retinoic Acid, Beta-Carotene (Plant Version)	Normal vision, the integrity of epithelial cells (mucous membranes and skin), reproduction, embryonic development, growth, immune response	Liver, Orange, Ripe Yellow Fruits, Leafy Vegetables, Carrots, Pumpkin, Squash, Spinach, Fish, Soya Milk, Milk	Ocular disturbances leading to blindness, growth retardation, dry skin, diarrhea, vulnerability to infection
Vitamin D	Calciferol, Calatriol (1,25-Dihydroxy Vitamin D ₁ Or Vitamin D Hormone), Cholecalciferol (D ₃ ; Plant Version), Ergocalciferol (D ₂ ; Animal Version)	Maintenance of blood calcium and phosphorus levels, proper mineralization of bones	Fish, Eggs, Liver, Mushrooms	Defective bone growth in children, soft bones in adults
Vitamin E	Alpha-Tocopherol, Tocopherol, Tocotrienol	Antioxidant; interruption of free radical chain reactions; protection of polyunsaturated fatty acids, cell membranes	Many Fruits And Vegetables, Nuts And Seeds	Peripheral neuropathy, breakdown of red blood cells
Vitamin K	Phylloquinone, Menaquinone, Menadione, Naphthoquinone	Synthesis of proteins involved in blood coagulation and bone metabolism	Leafy Green Vegetables Such as Spinach, Egg Yolks, Liver	Impaired clotting of the blood and internal bleeding

Chemical Name of Vitamins

Trick to Remember: रथ एक टॉफी

र- A रेटीनाल (Retinol)

थ- B थायमिन (Thymine)

ए- C एस्कोर्बिक एसिड (Ascorbic acid)

क- D कैल्सिफेराल (Calciferol)

टा- E टोकोफेराल (Tocopherol)

फी- K फिलिक्वोनान (Phylloquinone)

Chemical Name of Vitamin B

Trick to Remember: थोरा न्यू पेंट पर बसा

थो- B1 थाइमिन (Thiamine)

रा B2 रैबोफ्लोविन (Riboflavin)

न्यू B3 निकोटिनेनाइड या नियासिन (Niacin)

पेंट B5 पैंटोथेनिक अम्ल (Pantothenic acid)

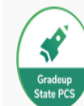
पर- B6 पाईरीडोक्सिन (Pyridoxine)

ब- B7 बायोटिन (Biotin)

सा- B12 सएनोकोबाल्मिन (Cyanocobalamin)



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