

Vitamins

	DAILY VALUE* (USRDI)	SOLUBILITY	FOOD SOURCES	DEFICIENCY SYMPTOMS	IMPORTANCE	INHIBITS ABSORPTION	ENHANCES ABSORPTION
VITAMIN A (beta carotene)	2,500 IU 5,000 IU 8,000 IU	Fat	Eggs, colored fruits and vegetables, fish liver oil, dairy products, beef liver, milk	Defective teeth and gums, allergies, dry hair, retarded growth, susceptibility to infections, eye irritations, night blindness, sinus trouble, dry skin, loss of smell	Healthy formation of bones, teeth, skin; maintenance of outer layer of many tissues & organs; promotes growth & vitality; essential in pregnancy & lactation; necessary for night vision; good for growth & repair of body tissues; good for health of hair & eyes	Coffee, alcohol, excessive iron, mineral oil, D deficiency	Vitamins C, D, E, F, B-complex, zinc, calcium, choline
VITAMIN B (complex)	See Individual B Vitamins	See Individual B Vitamins	Whole grains, liver, brewer's yeast	Poor appetite, rough dry skin, fatigue, dull hair, constipation, acne, insomnia	Helps functioning of nervous system; good for healthy skin, muscle tone, maintenance in the gastrointestinal tract; gives energy; maintains healthy hair, eyes, liver, mouth; carbohydrates-fat-protein metabolism	Stress, excessive sugar, coffee, alcohol, birth control pills, infections, sleeping pills, sulfonamides	Calcium, vitamins E, C, phosphorus
VITAMIN B-1 (thiamin)	0.7 mg 1.5 mg 1.7 mg	Water	Organ meats, pork, nuts, wheat germ, poultry, fish, brown rice, egg yolks, legumes, whole grains, blackstrap molasses, brewer's yeast, whole wheat	Depression, constipation, impaired growth in children, shortness of breath, numbness of hands and feet, weakness, fatigue, nervousness, sensitivity to noise, loss of appetite	Maintains health of skin, mouth, eyes, hair; stabilizes appetite; necessary for carbohydrate metabolism; essential for normal functioning of heart, nerve tissues, muscles, digestion, learning capacity, growth	Tobacco, stress, fever, coffee, alcohol, surgery, raw clams	Sulfur, manganese, niacin, vitamins B-2, C, E, B-complex, folic acid
VITAMIN B-2 (riboflavin)	0.8 mg 1.7 mg 2.0 mg	Water	Cheese, milk, egg yolks, brewer's yeast, nuts, organ meats, whole grains, blackstrap molasses	Inflammation of the mouth, eye problems, dizziness, poor digestion, sore tongue, dermatitis	Carbohydrate-fat-protein metabolism; necessary for antibody and red blood cell formation; good for healthy eyes, hair, skin, nails	Alcohol, tobacco, excessive sugar, coffee	Phosphorus, niacin, vitamins B-6, C, B-complex
VITAMIN B-6 (pyridoxine)	0.7 mg 2.0 mg 2.5 mg	Water	Milk, cabbage, cantaloupe, legumes, blackstrap molasses, meat, organ meats, peas, wheat germ, whole grains, brown rice, prunes, leafy green vegetables, brewer's yeast, desiccated liver	Possible loss of muscle control, nervousness, dermatitis, insulin sensitivity, hair loss, mouth disorders, acne, irritability, muscular weakness, convulsions in infants, depression, learning disabilities, anemia, arthritis	Necessary for carbohydrate-fat-protein metabolism; weight control; good for healthy skin, nerves, muscles, antibody formation, digestion	Alcohol, birth control pills, tobacco, radiation exposure, coffee	Linoleic acid, sodium, vitamins B-1, B-2, C, B-complex, pantothenic acid, magnesium
VITAMIN B-12 (cobalamin)	3 mcg 6 mcg 8 mcg	Water	Pork, beef, cheese, milk/milk products, eggs, fish, organ meats	Tiredness, general weakness, poor appetite, speaking difficulties, pernicious anemia, nervousness, neuritis, brain damage, growth failure in children	Necessary for normal formation of red blood cells; carbohydrate-fat-protein metabolism; healthy nervous system; good appetite; healthy cells	Tobacco, coffee, alcohol, laxatives	B-complex, folic acid, vitamins B-6, C, choline, inositol, sodium, potassium
BIOTIN (Vitamin H)	150 mcg 300 mcg 300 mcg	Water	Sardines, liver, legumes, egg yolks, unpolished rice, lentils, mung bean sprouts, whole grains, organ meats, brewer's yeast	Extreme exhaustion, loss of appetite, impairment of fat metabolism, muscle pain, depression, grayish skin color, dermatitis	Growth-promoting factor; fatty acid production; carbohydrate-fat-protein metabolism; utilizes B vitamins; good for healthy hair, skin, muscles	Alcohol, avidin (raw egg white), coffee	Sulfur, vitamins B-12, C, B-complex, folic acid, pantothenic acid
CHOLINE	No Daily Value Has Been Established	Water	Leafy green vegetables, heart, brain, lecithin, egg yolks, brewer's yeast, fish, legumes, organ meats, soybeans, wheat germ	May result in cirrhosis and fatty degeneration of liver, hemorrhaging of kidney, intolerance to fats, bleeding stomach ulcers, high blood pressure, growth problems	May minimize excessive deposits of fat in liver; metabolism and transport of fats and cholesterol; normal nerve transmission; gall bladder regulation; lecithin formation; good for hair, thymus gland	Excessive sugar, alcohol, coffee	Linoleic acid, folic acid, inositol, vitamins A, B-12, B-complex
FOLIC ACID (folate)	200 mcg 400 mcg 800 mcg	Water	Root vegetables, tuna, milk/milk products, organ meats, oysters, salmon, leafy green vegetables, brewer's yeast, whole grains	Gastrointestinal disorders, B-12 deficiency, anemia, retarded growth, graying hair	Necessary for growth and division of cells; formation of red blood cells; reproduction and growth; good for glands and liver	Stress, alcohol, coffee, tobacco	Pantothenic acid, vitamins C, B-12, B-complex, biotin
INOSITOL	No Daily Value Has Been Established	Water	Citrus fruits, nuts, milk, meat, brewer's yeast, blackstrap molasses, whole grains, vegetables, lecithin	Eye problems, high cholesterol, skin problems, constipation	Vital for hair growth, metabolism of fats and cholesterol; formation of lecithin; good for vital organs	Excessive sugar, corn, coffee, alcohol, antibiotics	Vitamins B-12, B-1, B-2, C, B-complex, phosphorus, choline, linoleic acid

ABBREVIATIONS: USRDI: United States Reference Daily Intake • IU: International Units • g: grams • mg: milligrams • mcg: micrograms

*DESCRIPTION OF DAILY VALUE (USRDI) LISTING: With more than one listing: The top line represents the Daily Value for children twelve months to four years old; the second line represents the Daily Value for persons four years and older; the third line represents the Daily Value for pregnant and lactating women.

Vitamins (continued)

	DAILY VALUE* (USRDI)	SOLUBILITY	FOOD SOURCES	DEFICIENCY SYMPTOMS	IMPORTANCE	INHIBITS ABSORPTION	ENHANCES ABSORPTION
NIACIN (nicotinic acid)	9 mg 20 mg 20 mg	Water	Beans, green vegetables, rice bran, whole wheat, nuts, brewer's yeast, fish, dairy products, poultry, lean meats, milk, desiccated liver	Gastrointestinal disturbances, dermatitis, nervous disorders, muscular aches, loss of appetite, insomnia, tiredness, halitosis	Promotes growth, proper functioning of nervous system; maintenance of healthy skin, tongue, digestive system; carbohydrate-fat-protein metabolism	Excessive sugar, corn, coffee, alcohol	Vitamins B-1, B-2, C, B-complex, phosphorus
PANTOTHENIC ACID	5 mg 10 mg 10 mg	Water	Egg yolks, orange juice, brewer's yeast, legumes, liver, whole grains, mushrooms, salmon, wheat germ	Stomach stress, sensitivity to insulin, eczema, hair loss, hypoglycemia, vomiting, diarrhea, kidney trouble	Resistance to stress; aids in formation of some fats, energy; stimulates growth; good for skin, adrenal glands, formation of antibodies	Coffee, alcohol	Sulfur, vitamins C, B-6, B-12, B-complex, folic acid, biotin
PABA (para-aminobenzoic acid)	No Daily Value Has Been Established	Water	Leafy green vegetables, organ meats, yogurt, wheat germ, blackstrap molasses, brewer's yeast	Nervousness, anemia, constipation, tiredness, headaches, digestion problems, eczema	Growth-promoting factor; sunscreen; acts as coenzyme in breakdown and utilization of protein; formation of red blood cells; color restoration; aids bacteria in producing folic acid; maintains healthy skin, hair	Sulfonamides, coffee, alcohol	Vitamins C, B-complex, folic acid
VITAMIN C (ascorbic acid)	40 mg 60 mg 60 mg	Water	Tomatoes, acerola cherries, sprouted alfalfa seeds, peppers, citrus fruits, papaya, cantaloupe, broccoli, strawberries	Muscular weakness, anemia, appetite loss, skin hemorrhages, swollen joints, slow healing wounds & fractures, bleeding gums, easy bruising, low resistance to infections	Prevention of permeability; healthy teeth, gums, bones; strengthens blood vessels; increased absorption of iron; resistance to infections; vitamin protection; collagen production	Stress, high fever, tobacco, antibiotics, aspirin, cortisone	Bioflavonoids, calcium, magnesium, all vitamins and minerals
VITAMIN D (calciferol)	400 IU 400 IU 400 IU	Fat	Fat, butter, fish liver oil, herring, sardines, egg yolks, salmon, tuna, organ meats, bone meal	May lead to rickets, lack of vigor, muscle weakness, inadequate absorption of calcium, phosphorus retention (in kidneys), diarrhea, insomnia, nervousness, soft bones and teeth, myopia	Very important in infancy and childhood; healthy bone formation; healthy nervous system maintenance; good for thyroid gland, skin, teeth, normal blood clotting	Mineral oil	Phosphorus, calcium, choline, vitamins A, C, F
VITAMIN E (tocopherol/tocopheryl)	10 IU 30 IU 30 IU	Fat	Margarine, cold pressed oils, whole wheat, sweet potatoes, molasses, nuts, dark green vegetables, eggs, organ meats, oatmeal, desiccated liver, wheat germ	Fragility of red blood cells, dry dull hair, sterility, impotency, miscarriages, gastrointestinal problems, heart disease, enlarged prostate	Protects fat-soluble vitamins; slows aging; protects red blood cells; male potency; prevents blood clots; maintains healthy muscles and nerves; strengthens capillary walls; good for hair, skin, mucous membranes	Mineral oil, rancid fat & oil, chlorine, birth control pills	Phosphorus, selenium, manganese, inositol, vitamins A, B-1, C, F, B-complex
VITAMIN F (unsaturated fatty acids) (linoleic acid)	No Daily Value Has Been Established	Fat	Butter, wheat germ, vegetable oils, sunflower seeds	Acne, dandruff, dry hair, diarrhea, eczema, varicose veins, underweight, weak nails, gallstones	Growth-promoting factor; necessary for healthy skin, hair; makes calcium available to cells; normal glandular activity; helps maintain resilience and lubrication; regulates blood coagulation, destroys cholesterol; prevents hardening of the arteries	X-rays, radiation	Phosphorus, vitamins D, C, A, E
VITAMIN K (phylloquinone)	80 mcg	Fat	Cauliflower, soybeans, polyunsaturated oils, fish liver oils, egg yolks, yogurt, kelp, cow's milk, alfalfa, leafy green vegetables, blackstrap molasses	Tendency to hemorrhage resulting from prolonged blood clotting time, intestinal malabsorption, nose bleeding, miscarriages, diarrhea, cellular disease	Necessary for blood coagulation, normal liver functioning, longevity factor; needed for formation of prothrombin	Mineral oil, X-rays, aspirin, rancid fat, radiation	None
VITAMIN P (bioflavonoids, rutin, hesperidin)	No Daily Value Has Been Established	Water	Buckwheat, black currants, cherries, grapes, other fruits	Tendency to bruise and bleed easily (same as symptoms caused by deficiency of Vitamin C)	Colds and flu prevention; good for healthy capillary walls and connective tissue; infrequent bruising	(Same as for Vitamin C)	(Same as for Vitamin C)

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NOTE: The symptoms referred to on these pages can occur only when the daily intake of the vitamins mentioned has been less than the U.S. Daily Value over a prolonged period of time. These nonspecific symptoms do not alone prove nutritional deficiency, but may be caused by any number of conditions or may have functional causes. If these symptoms persist, they may indicate a condition other than a vitamin deficiency.