

Dietary Vitamins

Vitamin generic descriptor name	Vitamer chemical name(s)	Solubility	Recommended dietary allowances (male, age 19–70) ^[14]	Deficiency disease	Upper Intake Level (UL/day) ^[13]	Overdose disease
Vitamin A	Retinoids (retinol, retinoids and carotenoids)	Fat	900 µg	Night-blindness and Keratomalacia ^[15]	3,000 µg	Hypervitaminosis A
Vitamin B₁	Thiamine	Water	1.2 mg	Beriberi	N/D ^[16]	?
Vitamin B₂	Riboflavin	Water	1.3 mg	Ariboflavinosis	N/D	?
Vitamin B₃	Niacin, niacinamide	Water	16.0 mg	Pellagra	35.0 mg	
Vitamin B₅	Pantothenic acid	Water	5.0 mg ^[17]	Paresthesia	N/D	?
Vitamin B₆	Pyridoxine, pyridoxamine, pyridoxal	Water	1.3-1.7 mg	Anaemia ^[18]	100 mg	Impairment of proprioception, nerve damage
Vitamin B₇	Biotin	Water	30.0 µg	Dermatitis, enteritis	N/D	?
Vitamin B₉	Folic acid, folinic acid	Water	400 µg	Deficiency during pregnancy is associated with birth defects, such as neural tube defects	1,000 µg	Refer to deficiency of Vitamin B ₆
Vitamin B₁₂	Cyanocobalamin, hydroxycobalamin, methylcobalamin	Water	2.4 µg	Megaloblastic anaemia ^[19]	N/D	?
Vitamin C	Ascorbic acid	Water	90.0 mg	Scurvy	2,000 mg	?
Vitamin D	Ergocalciferol, cholecalciferol	Fat	5.0 µg-10 µg ^[20]	Rickets and Osteomalacia	50 µg	Hypervitaminosis D
Vitamin E	Tocopherols, tocotrienols	Fat	15.0 mg	Deficiency is very rare; mild hemolytic anemia in newborn infants. ^[21]	1,000 mg	?
Vitamin K	phylloquinone, menaquinones	Fat	120 µg	Bleeding diathesis	N/D	?

Ref: National Academy Press 2000. Institute of Medicine.

Dietary Minerals

Mineral	% of Body	Where Located	Some Good Sources
Calcium	1.5-9	99% in bones, teeth. Aids in blood clotting, muscle activity, nerve function, heart action; activates certain enzymes. (Most persons do not get enough calcium.)	Milk, other dairy products, cabbage, kale, etc., unrefined cereals, legumes, bone meal.
Phosphorus	1.0	75% in bones, teeth. Aids in cell life, re-production utilization of carbohydrates, fats in maintaining acid base balance; nourishes brain etc.	All protein foods: meats, fish, nuts, legumes, dairy products, unrefined cereals.
Potassium	.35	Found in cells. Plays leading role in utilization of proteins, carbohydrates; helps maintain normal heartbeat.	All fruits, vegetables. Potato peelings richest source. (Must be taken daily.)
Sulphur	.25	Found in (and important to) skin, fingernails, hair; the "beauty mineral."	Protein foods, onion, cabbage families.
Sodium	.15	Found throughout body. Maintains water balance, osmotic pressure in body fluids; aids in maintaining acid-base balance; indispensable for kidney function.	Table and sea salt, cheese, butter, cereals. "A diet truly low in sodium would be hard to achieve."
Chlorine	.15	Mostly in extra cellular fluids, part of hydrochloric acid in stomach. Aids liver function, maintaining acid-base balance.	Salt, meat, leafy vegetables, milk, tomatoes, etc.
Magnesium	.05	Bones, soft tissues. Important to heart, nerve tissue; vital to a host of enzyme functions.	Nuts, legumes, fish, whole grains, blackstrap molasses, raw leafy vegetables.
Iron	.004-7	In haemoglobin. Aids in bringing oxygen to cells; aids certain cellular enzymes. (Women need dark leafy greens, more iron than do men.)	Liver, lean meats, legumes, egg yolks, molasses, raisins, apricots, berries, onions, oysters, whole grains.
Manganese	.0003	Essential for bone formation, body growth, normal metabolism; activates many essential enzymes.	Whole grains, legumes, beet tops, pineapple, bananas, blue berries, saltwater fish.
Copper	.0002	Aids in utilization of iron; activates many essential enzymes. "Key element to life itself."	Liver, kidney, shellfish, legumes, nuts, raisins, unrefined cereals.
Iodine	.00004	Mostly in thyroid gland. Controls metabolism rate, aids in forming thyroid hormone, prevents goiter, etc.	Seafood (animal and vegetable), mushrooms, crops grown near oceans, iodized salt.
Zinc	Trace	Mostly in sex organs and thyroid. Plays vital role in enzymes needed for growth and body functioning.	Animal proteins, fish, whole grains, maple sugar.
Molybdenum	Trace	Essential for bone formation, normal metabolism, body growth.	Legumes, whole grains, dark leafy greens, organ meats.
Cobalt	Trace	In pancreas, liver, spleen. Aids in blood formation, vital part of vitamin B-12.	Liver, legumes, whole grains.
Fluorine	Trace	Found in bones and teeth. Prevents tooth decay.	Seafood, tea.
Chromium	Trace	Contributes to growth, longevity, resistance to disease, especially diabetes.	Raw sugar.
Bromine	Trace	Persons suffering from depressive psychoses found to have less than average in blood.	Watermelons, tomatoes.