



VITAMINS & MINERALS: Recommended Intakes for Individuals

Dietary Reference Intakes (DRIs)

Nutrient	Function	Food Sources	Suggested Intake*	Suggested Intake*	Upper Limit **	Overdose Effects
			Adults ages 19-50	Adults 51+		
Vitamin A	Night vision Skin health Immunity	organ meat, egg yolk, tomatoes dark green or yellow veg, peaches apricots, milk products	M 900ug/d F 700ug/d	M 900ug/d F 700ug/d	3000 ug/d	Accumulates in liver Acute nausea, headache, dizziness Chronic dry/itchy skin, loss of hair, muscle stiffness, birth defects
Thiamin (B1)	Releases energy to body Normal growth and appetite	pork, organ meats, nuts, seeds, peas, beans, lentils, enriched and whole grain bread and cereals	M 1.2 mg/d F 1.1 mg/d	M 1.2 mg/d F 1.1 mg/d	ND***	unknown
Riboflavin (B2)	Skin and eye health Nervous system health Releases energy to body	organ meats, white flour, whole grain flour, breads, milk	M 1.3 mg/d F 1.1 mg/d	M 1.3 mg/d F 1.1 mg/d	ND	unknown
Niacin (B3)	Growth and development Nervous system health Stomach and intestinal health	organ meats, poultry, dried peas, fish, beans, lentils, milk, eggs, beef, peanut butter	M 16mg/d F 14 mg/d	M 16mg/d F 14 mg/d	35 mg/d	unknown
Vitamin B6	Helps body use protein Antibody production Red blood cell production	organ meats, bananas, beef, ham, egg yolk, fish, cabbage, spinach, enriched cereals	M 1.3 mg/d F 1.3 mg/d	M 1.7 mg/d F 1.5 mg/d	100 mg/d	Tingling sensation, unsteady walk
Vitamin B12	Red blood cell production Nervous system health Stomach and intestinal health	organ meats, beef, pork, fish, eggs, shellfish, milk products	M 2.4 ug/d F 2.4 ug/d	M 2.4 ug/d F 2.4 ug/d	ND	unknown
Folic Acid	Red blood cell production Prevents neural tube defects May prevent heart disease	organ meats, peas, beans, lentils, eggs, green leafy veg, nuts, oranges, bananas, mushrooms, enriched cereals	M 400 ug/d F 400 ug/d Preg 600 ug/d	M 400 ug/d F 400 ug/d	1000 ug/d	Masks B12 deficiency, Impaired zinc absorption
Vitamin C	Teeth and gum health Blood vessel wall strength Iron absorption	fruits esp. citrius fruits, tomatoes, broccoli, cauliflower, green pepper, raw cabbage, potatoes, fortified juices	M 90 mg/d F 75 mg/d	M 90 mg/d F 75 mg/d	2000 mg/d	Stomach upset, kidney stones disrupts copper levels, iron overload, destroys red blood cells
Vitamin D	Helps body use Calcium Helps body use phosphorous Bone and teeth development	fortified milk and margarine, salmon, tuna, organ meats, eggs	M 5 ug/d F 5 ug/d 5 ug = 200 IU	M 10 ug/d F 10 ug/d 10 ug = 500 IU Age >71 15ug/d	50 ug/d	Accumulates in liver Increases blood levels of calcium Fatigue, thirst, frequent urination, abdominal pain
Vitamin E	Protects the fat from oxidation	vegetable oils, margarine, egg yolk, salad dressings, nuts, dark green leafy veg	M 15 mg/d F 15 mg/d	M 15 mg/d F 15 mg/d	1000 mg/d	Builds up in fat cells Digestive disturbances Decreases blood clotting time
Vitamin K	Helps blood clot	dark green leafy veg, liver, vegetable oils, margarine	M 120 ug/d F 90 ug/d	M 120 ug/d F 90 ug/d	ND	Rapidly metabolized by liver oxidation of membrane phospholipids

Nutrient	Function	Food Sources	Suggested Intake* Adults ages 19-50	Suggested Intake* Adults 51+	Upper Limit **	Overdose Effects
Calcium	Bone and teeth development Nervous system health Blood clotting	milk and milk products, sardines, salmon w/ bones, mackerel, oysters, soybeans, tofu, nuts, seeds, broccoli, turnips, blackstrap molasses	M 1000 mg/d F 1000 mg/d	M 1200 mg/d F 1200 mg/d	2500 mg/d	Constipation, soft tissue calcification
Chromium	Blood sugar regulation Helps with insulin action	mushrooms, prunes, asparagus, organ meats, whole grain bread and cereals	M 35 ug/d F 25 ug/d	M 30 ug/d F 20 ug/d	ND	Skin rashes, stomach ulcers, poor kidney & liver function
Copper	Red blood cell production Nerves & collagen synthesis Structural protein component	organ meats, seafoods, nuts, seeds, eggs, meats, legumes	M 900 ug/d F 900 ug/d	M 900 ug/d F 900 ug/d	10000 ug/d	Nausea, vomiting, diarrhea, jaundice, decreased urine output
Fluoride	Strengthens bones and teeth	fish bones, fluoridated water, tea	M 4 mg/d F 3 mg/d	M 4 mg/d F 3 mg/d	10 mg/d	Tooth cavities, poor bone health,
Iodine	Component of thyroid hormone	salt water fish, sunflower seeds, eggs iodized salt, mushrooms, liver	M 150 ug/d F 150 ug/d	M 150 ug/d F 150 ug/d	1100 ug/d	Thyroid dysfunction
Iron	Red blood cell production	organ meats, red meats, poultry fish, enriched breads and cereals, pulses, dried fruit	M 8 mg/d F 18 mg/d	M 8 mg/d F 8mg/d	45 mg/d	Tissue damage Increase risk heart disease
Magnesium	Bone and teeth development	nuts, soybeans, whole grains, pulses pulses, molasses, shellfish, spinach, beef liver	M 420 mg/d F 320 mg/d	M 420 mg/d F 320 mg/d	350 mg/d	Diarrhea, dehydration, nausea, flushing, double vision, weakness, slurred speech
Manganese	Fat metabolism Connective tissue Energy & DNA production	whole grains and cereals, lettuce, legumes, beet tops, blueberries, pineapple, seafood, poultry, meat	M 2.3 mg/d F 1.8 mg/d	M 2.3 mg/d F 1.8 mg/d	11 mg/d	Loss of appetite, hallucinations, impaired memory, sleeplessness, muscle pains
Molybdenum	Iron metabolism Cofactor for many enzymes	buckwheat, lentils, rice bread, soybeans, oats, barley,	M 45 ug/d F 45 ug/d	M 45 ug/d F 45 ug/d	2000 ug/d	Build up of uric acid resulting in a gout-like syndrome (deposits of sodium urate in joints)
Phosphorous	Bones and teeth development	cheese, peanuts, fish, beef, pork, poultry, bread, eggs, milk, pulses	M 700 mg/d F 700 mg/d	M 700 mg/d F 700 mg/d	4000 mg/d 3000 mg/d if age >70	Low serum calcium and tetany (cramps and muscle spasms)
Selenium	Antioxidant Immunity	seafood, kidney, liver, muscle meats, dairy products	M 55 ug/d F 55 ug/d	M 55 ug/d F 55 ug/d	400 ug/d	Hair loss, brittle nails, poor immune function
Zinc	Immunity	shellfish, liver, meat, fish, poultry nuts, eggs, pulses, soy products, whole grains, seeds, sprouts	M 11 mg/d F 8 mg/d	M 11 mg/d F 8 mg/d	40 mg/d	Metallic taste, abdominal cramps bloody diarrhea, nausea stomach pain, copper deficiency

* Suggested intake based on Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs).

** Upper limit is the maximum nutrient intake level documented to not cause adverse effects.

ND = Not determinable due to lack of data of adverse effects

M = Male F= Female

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