

# VITAMINS & MINERALS

NUTRIENTS/TYPE/DO dosage	NATURAL SOURCES	BEST IF TAKEN WITH	DEFICIENCY SYMPTOMS	TOXICITY SYMPTOMS
<b>Biotin</b> Water-Soluble Vitamin 170-300 mcg	Cheese, fruits, berries, avocados, poultry, green tea, and whole, unrefined	None required	Fatigue, frequent viral infections	Generally considered safe
<b>Biotin</b> Water-Soluble Vitamin 300 mcg	Eggs, rolled oats, eggs, buckwheat, buckwheat, oat, almond, rice, milk, oranges, tomatoes, whole wheat bread	None required	Depression, hair loss, fatigue, muscle atrophy, elevated glucose and cholesterol	Generally considered safe
<b>Boron</b> Mineral 1-2 mg	Fruit, legumes, nuts, vegetables	None required	Osteoporosis, arthritis	Very low toxicity
<b>Calcium</b> Mineral 1,000-1,200 mg	Milk, milk, yogurt, kefir, cheese, cottage cheese, canned salmon and sardines with bones, canned green beans, almonds, figs, calcium-fortified orange juice, seeds, nuts, prunes, apricots, sesame seeds, soybeans, tofu, macaroni, soy	None, unless increased fatty acids, fatty acid, iron, zinc, magnesium, manganese, chromium, A, C, D, E, zinc	Muscle spasms, rickets, osteoporosis, osteopenia	Generally considered safe; calcium supplements are not recommended for individuals with kidney disease or a history of kidney stones
<b>Choline</b> Water-Soluble Vitamin 30-300 mg	Beef liver, beef, whole eggs, cod, shrimp, salmon, Brussels sprouts, lentils, wheat germ, cauliflower, soy beans, milk, almonds, peanuts	Good fat	Fatty liver, muscle damage	Fatty liver, vision, vomiting, irritability, neuronal irritation
<b>Chromium</b> Trace Mineral 200-400 mcg (taken as chromium picolinate or Cr supplement)	Brewer's yeast, broccoli, beer, grape juice, banana, rice, chicken, whole grains, dried beans, cauliflower, eggs, potatoes, mushrooms, wine, beer	None required	None. Interference in metabolism of fat, carbohydrates, proteins, and amino acids	Generally considered safe; chromium supplements are not recommended for individuals with kidney disease as a history of kidney stones
<b>Cyanocobalamin (B12)</b> Water-Soluble Vitamin 60-300 mcg	Fish, fish, organ meats, whole grains	Good fat	Heart disease and arthritis, high blood pressure, psoriasis, stomach ulcers	None. Thrombotic thrombocytopenic syndrome, or TTP, may increase the effectiveness of water blood pressure and blood-thinning medications
<b>Copper</b> Trace Mineral 0.5-2 mg	Shellfish, nuts, seeds, cocoa beans, whole grains, mushrooms, whole wheat, almonds, barley, beans, broccoli, lentils, milk, oranges, cauliflower, spinach, avocados, green leafy vegetables	Coffee, fatty acid, iron, zinc	Osteoporosis, inability of body to manufacture collagen, fatigue, hair loss, slow growth, slow nervous system development and circulation	None, vomiting, abdominal pain, diarrhea, headache, metallic taste, hemolytic anemia
<b>Fluoride</b> Trace Mineral 1.5-4 mg	Fluoridated water, tea, canned salmon, seafood, kidney, liver	None required	Dental caries, brittle bones	Metabolic bone, osteoporosis, osteopenia
<b>Folate Acid</b> Water-Soluble Vitamin 400-1,000 mcg (taken as folic acid or folate salt)	Fortified cereal, pasta, beans, soy beans, asparagus, spinach, broccoli, citrus, Brussels sprouts, barley, lentils, peas, brown rice, brewer's yeast, chicken, chicken, dates, green leafy vegetables, lentils, legumes, lentils, liver, milk, mushrooms, oranges, split peas, pork, trout, whole grains	Multi-vitamin	Anemia, irritability, weakness, dizziness, depression, pale, sore and reddened tongue	Generally considered safe
<b>Iodine</b> Mineral 150 mcg (most individuals) 150-300 mcg (for those living in low iodine areas or for those with low iodine diet)	Seaweed, salt, shellfish, iodized salt, milk, seaweed	Iron, manganese, phosphorus	Goiter and mental development delays in children, goiter	Generally considered safe; excessive intake of iodine (more than 1,000 mcg per day) can cause hypothyroidism, irritability, hair loss, and weight gain. Those over 50,000 mcg per day have been associated with health issues
<b>Iron</b> Mineral 10-25 mg (men) 15-30 mg (women)	Raw, fortified cereal, beef, beef, potatoes, chicken, pumpkin seeds, soybeans, eggs, fish, trout, green leafy vegetables, whole grains, nuts, almonds, beans, brewer's yeast, dates, prunes, peas, lentils, prunes, raisins, sesame seeds	None required	Anemia, dry or coarse hair, dysphagia, depression, fatigue, hair loss, cracked lips or tongue, constipation, elevated serum ferritin	Generally considered safe; excessive intake of iron (more than 100 mg per day) can cause abdominal cramps, vomiting, and diarrhea; severe overdose of iron can be fatal if medical attention is not sought
<b>Lithium</b> Mineral 1-10 mg (for adults or dependent)	Tea, whole grains, leafy vegetables, leafy green, seafood, legumes	None required	Depression, irritability, weakness	None at nutritional levels; neurotoxicity at high doses; hypothyroidism at prescription levels (300 mg or higher); avoid during pregnancy and lactation

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