

## ESSENTIAL NUTRIENTS 101: QUICK REFERENCE GUIDE

NUTRIENT	WHY WE NEED IT	WHERE IT'S FOUND	SYMPTOMS & PROBLEMS
VITAMIN A	Eyes, immune function, skin, essential cell growth and development	Eggs, liver, orange or green vegetables, fruits	Night blindness, immune function, zinc deficiency, fat malabsorption
VITAMIN C	Enzyme activation, second messenger roles (transmitting hormonal information), blood clotting, cell & cell organelle membrane function, nerve impulse transmission & muscular contraction, tone and irritability	Supplementation, broccoli, brussel sprouts, cantaloupe, cauliflower, citrus, guava, kiwi, papaya, parsley, peas, potatoes, peppers, parsley, rose hips, strawberries and tomatoes	Muscular & nervous irritability, muscle spasms, muscle cramps & tetany, tooth decay, periodontal disease, depression, possibly hypertension
VITAMIN D	Calcium & phosphorus levels, calcium absorption, bone mineralization	Sunlight, eggs yolks, liver, fish	Osteoporosis, calcium absorption, thyroid
VITAMIN E	Antioxidant, regulates oxidation reactions, stabilizes cell membrane, immune function, protects against cardiovascular disease, cataracts, macular degeneration	Liver, eggs, nuts, seeds, cold pressed vegetable oils, dark leafy greens, sweet potatoes, avocados, asparagus	Skin, hair, rupturing red blood cells, anemia, bruising, PMS, hot flashes, eczema, psoriasis, cataracts, wound healing, muscle weakness, sterility
VITAMIN K	Aids in the formation of clotting factors & bone proteins and the formation of glucose into glycogen for storage in the liver	Kale, green tea, turnip greens, spinach, broccoli, lettuce, cabbage, beef liver, asparagus, watercress, peas	Excessive bleeding, a history of bruising, appearance of ruptured capillaries or menorrhagia (heavy periods)
VITAMIN B1	Carb conversion, breaks down fat & proteins, digestion, nervous system, skin, hair, eyes, mouth, liver, immune system	Pork, organ meats, brown rice, blackstrap molasses	Heart, age related cognitive decline, alzheimer's, fatigue
VITAMIN B2	Metabolism, carb conversions, breaks down fats & protein, digestion, nervous system, skin, hair, eyes, mouth, liver	Almonds, organ meats, eggs, green vegetables	Anemia, decreased free radical protection, cataracts, poor thyroid function, B6 deficiency, fatigue, elevated homocysteine
VITAMIN B3	Energy, digestion, nervous system, skin, hair, eyes, liver, eliminates toxins, sex/stress hormones, improves circulation	Beets, meat, poultry, organ meats, fish, seeds, nuts	Cracking, scaling skin, digestive problems, confusion, anxiety, fatigue
VITAMIN B5 (PANTOTHENATE)	RBC production, sex & stress related hormones, immune function, healthy digestion, helps use other vitamins	Meats, vegetables, lentils, egg yolks, sweet potatoes, seeds, nuts, salmon	Stress tolerance, wound healing, skin problems, fatigue
VITAMIN B6	Enzyme, protein metabolism, RBC production, reduces homocysteine, nerve & muscle cells, DNA/RNA, B12 absorption, immune function	Poultry, tuna, salmon, shrimp, beef liver, lentils, seeds, nuts, avocados, bananas, carrots, brown rice	Depression, sleep & skin problems, confusion, anxiety, fatigue
BIOTIN	Carbs, fat, amino acid metabolism (the building blocks of protein)	Salmon, meats, vegetables, grains, lentils, egg yolks, milk, sweet potatoes, nuts	Depression, nervous system, premature gray hair, skin
FOLATE	Mental health, infant DNA/RNA, adolescence & pregnancy, with B12 to regulate RBC production, iron function, reduce homocysteine	Supplementation, tomato juice, green vegetables, black eyes peas, lentils, beans	Anemia, immune function, fatigue, insomnia, hair, high homocysteine, cardiovascular disease
VITAMIN B12	Healthy nerve cells, DNA/RNA, red blood cells production, iron function	Fish, meat, poultry, eggs	Anemia, fatigue, constipation, loss of appetite/weight, numbness & tingling in the hands and feet, depression, dementia, poor memory, oral soreness
CALCIUM	Bones, teeth, helps heart, nerves, muscles, body systems work properly, needs other nutrients to function	Molasses, brazil nuts, broccoli, cabbage, dark leafy greens, hazelnuts, sardines	Osteoporosis, osteomalacia, osteoarthritis, muscle cramps, irritability, acute anxiety, colon cancer risk
CHROMIUM	Assists insulin function, increases fertility, carbohydrate/fat metabolism, essential for fetal growth/development	Supplementation, seafood, green beans, broccoli, nuts, potatoes, meat	Metabolic syndrome, insulin resistance, decreased fertility
COPPER	Bone formation, involved in healing process, energy production, hair and skin coloring, taste sensitivity, stimulates iron absorption, helps metabolize several fatty acids	Seeds, dark leafy vegetables, organ meats, nuts, chocolate, blackstrap molasses	Osteoporosis, anemia, baldness, diarrhea, general weakness, impaired respiratory function, myelopathy, decreased skin pigment, resistance to infection
MAGNESIUM	300 biochemical reactions, muscle/nerve, function, heart rhythm, immune system, strong bones, regulates calcium, copper, zinc, potassium, vitamin D	Green vegetables, beans, peas, nuts, seeds	Appetite, nausea, vomiting, fatigue cramps, numbness, tingling, seizures, heart spasms, personality changes, heart rhythm
IODINE	Metabolism, thyroid function, hormone production	Salt, seafood, eggs, kelp, plants grown in iodine rich soil	Goiter, hypothyroidism (decreased metabolism, fatigue, weight gain, weakness, depressed, cold sensation, dry skin, or constipation), pregnancy related issues such as miscarriages, stillbirth, etc.
SELENIUM	Antioxidant, works with Vitamin E, immune function, prostaglandin productions	Liver, butter, cold water fish, garlic, sunflower seeds, brazil nuts	Destruction to heart/pancreas, sore muscles, fragility of red blood cells, immune system
PHOSPHORUS	Energy production, protein synthesis, neutralizing, building strong bones & teeth, and assisting with blood	Meat, fish, eggs, nuts, beans	Muscle and neurological dysfunction, disruption of muscle and blood and organs
POTASSIUM	Brain and neuron function, maintaining fluid balance, support heart and muscle function	Yam, parsley, nuts (especially almonds and pistachios), chocolate, potatoes, bamboo shoots, bananas, avocados, meat, fish	Weakness, tiredness, cramping in the arms or legs, vomiting, nausea, numbness or tingling, constipation, abdominal cramping, palpitations, fainting, depression, increased urination or feeling thirsty
ZINC	Supports enzymes, immune system, wound healing, taste/smell, DNA synthesis, normal growth & development during pregnancy, childhood and adolescence	Red meat, poultry, beans, nuts, seafood	Growth retardation, hair loss, diarrhea, impotence, eye & skin lesions, loss of appetite, taste, weight loss, wound healing, mental lethargy

