

NUTRIENT	SOURCES	DEFICIENCY SYMPTOMS
<i>Average Adult Daily Requirement</i> WATER 2-3 liters/day	Clean, untreated or filtered water	Dry mouth, eyes, nasal membranes, skin, hard, dry stool, chapped lips, dark urine, mental sluggishness, muscle injury.
VITAMINS		
A 5,000 i.u. (1500 mcg.)	Fish and fish liver oil, dairy products, liver and egg yolks. Yellow, orange and dark green fruits and vegetables provide beta carotene which a healthy, young body might convert to vitamin A.	Night blindness, sensitivity to bright light, frequent infections, skin problems (acne) dry hair, lowered immunity, red bumps on backs of arms, lowered fertility, dry eyes, conjunctivitis, styes, respiratory infections.
B1 Thiamine 10 mg.	Nutritional yeast, whole grains, pork, vegetables, fish, nuts, legumes, sunflower seeds, brown rice, eggs, broccoli	Digestive problems, irritability, loss of appetite, fatigue, foggy thinking, neuritis, heart changes, parasthesias (numbness, tingling of extremities), weakness, calf pain.
B2 Riboflavin 10 mg.	Milk products, almonds, nutritional yeast, liver, eggs, green veggies, (esp. sprouts), fish, legumes, poultry, whole grains, mushrooms. Destroyed by light.	Eyes sensitive to light, burning or blood-shot, acne rosacea, cataracts, cracks and sores at corners of mouth, depression, digestive problems, purple tongue.
B3 Niacin 200 mg.	Eggs, bran, peanuts, sesame, liver chicken, turkey, halibut, salmon, sunflower seeds, brown rice, pine nuts, mackerel, broccoli, wheat germ, avocados, nutritional yeast	Mood and personality changes, poor sense of balance, decreased muscle and joint mobility, nervousness, canker sores, diarrhea, digestive problems, cartilage tender to pressure, psychosis, depression, dermatitis
B5 Pantothenic Acid 200 mg.	Meat, fish, poultry, legumes, mushrooms, eggs, pecans, blue cheese, green vegetables, whole grains	Adrenal gland exhaustion, decreased stress tolerance, allergies, susceptibility to infections, irritability, headaches, poor blood sugar control, night sweats, poor memory, restless legs, dizziness, burning hands, feet.
B6 Pyridoxine 10-25 mg.	Whole grains, organ meats, salmon, egg yolks, soybeans, peanuts, walnuts, bananas, tuna, sunflower seeds, cruciferous vegetables. Many chemicals as well as birth control pills, steroids, estrogens and antidepressants antagonize B6.	Skin problems, digestive problems, rashes, weakness, depression, irritability, learning difficulties, water retention, headaches, sore tongue, poor memory, hair loss, numbness, carpal tunnel syndrome, gall bladder disease, hemorrhoids, eczema, dandruff, radiation, sea, pregnancy and motion sickness, poor dream recall.
B12 50 mcg. officially; 1000 mcg. sublingually, if correcting a deficiency	Eggs, dairy, meat, sardines, oysters, fermented soy (trace), sea vegetables, spirulina, nutritional yeast, bee pollen. Can be manufactured by beneficial bacteria in a healthy gut. Ingested B12 needs "intrinsic factor" in gut to be absorbed, often lacking in elderly.	General fatigue, dementia, psychosis, burning, numbness or prickly sensations in extremities, depression, abnormal gait, palpitations, moodiness, nervousness, spinal cord degeneration, pernicious anemia, confusion, stammer, dizziness diarrhea, infertility.

<u>Folic Acid</u> 800 mcg.; 1-4 mg. if on BCP or pregnant	Green leafy vegetables, oranges, organ meats, legumes, wheat germ and bran brown rice, barley, chicken, dates, lamb, dairy, mushrooms, fish, asparagus, beets	Anemia, birth defects, apathy and fatigue, memory problems, paranoia, grey hair, sore and red tongue, grey-brown skin pigmentation, depression, malabsorption.
<u>Biotin</u> 50-100 mcg.	Egg yolks, meat, fish, dairy, soy, whole grains, nutritional yeast, mushrooms, nuts, legumes, mung bean sprouts	Fatigue, muscle cramps, loss of appetite, cradle cap, depression, eczema, panic attacks, hair loss, sore tongue, nausea, nervous system disturbances.
<u>Choline</u> 1000 mg.	Egg yolks, lecithin, legumes (esp. soy), whole grains, nutritional yeast, liver	Impaired cognitive function and memory, fatty buildup in liver, high blood pressure, gastric ulcer, kidney disease, eczema.
<u>Inositol</u> 1000 mg.	Fruit, nuts, dairy products, whole grains, nutritional yeast, blackstrap molasses, lecithin, legumes, eggs, corn	Elevated cholesterol, hardening arteries, liver problems, disease, hair loss, mood swings, obsessiveness, constipation.
<u>C</u> 1000-3000 mg. with bioflavonoids (more when under stress or sick)	Fresh fruits and vegetables picked when ripe – esp. citrus, peppers, currants, dark greens, sprouts, potatoes	Poor collagen formation (bones, skin, cartilage), spinal disc degeneration, bruising easily, tender, swollen joints, bleeding gums, susceptibility to infections, slow wound healing, lack of energy, depression, macular degeneration, loss of blood vessel/skin elasticity, cataracts, high histamine
<u>D</u> 400 i.u. (10mcg.) officially 1-2000i.u. realistically 200-400 i.u. for children	Fish liver oil, eggs, dairy, dandelion greens, fish and sunshine (it is impossible to get too much vitamin D from sunbathing) D3 (cholecalciferol) supplements are recommended for those living in northern latitudes in winter. In summer, 50% of bare skin exposed for ½ hour in sun 3 times/week. Requires magnesium to convert to active form.	Bone, joint and dental problems, muscle numbness or spasms, burning sensation in mouth, visual problems, diarrhea, insomnia gluten intolerance, immune dysfunction, depression, associated with cancers of lung, breast, prostate, colon and with autoimmune disorders such as MS and with poor thyroid function (required for T4 to convert to T3).
<u>E</u> 200 i.u.	Expeller, cold pressed oils, unheated nuts and seeds, green leafy vegetables, whole grains, brown rice, legumes, butter, egg yolks, seafood, soy. If supplementing use all 4 tocopherols and all 4 tocotrienols	Heart and circulation problems, varicose veins, cramps in legs, muscle degeneration, tiredness, reproductive problems, tendency to form scar tissue, stretch marks and blood clots, age spots wrinkles, macular degeneration, impotence.
Vitamin K K2 - 100 mcg. consult doc if on blood thinners	K1 is found in broccoli, sprouts and dark leafy greens. K2 is found in naturally in fermented food and eggs, butter and meat from animals raised on green pastures.	K1 (phylloquinone): poor blood clotting. K2 (menaquinones): bone weakness and density loss, tooth decay, hardening of the arteries and veins, inflammatory diseases, type 2 diabetes.
<u>Essential Fatty Acids</u> (EFA's) specifically: omega 3 fats, EPA & DHA ; omega 6 fat, GLA	Cold water fish, unheated, untreated oils esp. flaxseed, hempseed and borage, chia seeds, unroasted nuts and seeds. Fish oil contains DHA and EPA and borage, black currant & evening primrose oils contain GLA. If you damage fats, you can damage DNA	Learning disabilities, poor cognitive function, depression, dry skin and hair, inflammatory diseases, eczema, hormone imbalance (GLA), high cholesterol/triglycerides, infertility, dry eyes, brittle nails. Lack of DHA and EPA has been linked to an increase in heart disease and and EPA with bipolar disorder and ADHD.

MINERALS

<u>Calcium</u> 500-700 mg. (more if pregnant or nursing)	Dairy foods, almonds, filberts, sesame seeds, (non-oxalic acid) leafy greens (collard, kale) figs, fermented soybeans, prunes, dates, broccoli, canned fish (with the bones)	Bone, joint and teeth decay, irritability, restlessness, insomnia, muscle cramping, spasms and tics, poor blood clotting, poor pain tolerance, heart palpitations, high blood pressure, poor nerve function, numbness of extremities, pain in arms, noise sensitivity, vertical ridges on nails
<u>Magnesium</u> 500-800 mg. (more if exercising vigorously, sweating, under stress or using fluoride or some pharmaceuticals)	Seafood and sea vegetables, nuts, green leafy vegetables, meat, poultry, brown rice, soy and other legumes, sesame, millet, figs, apples, apricots, tropical fruit, avocados, dark chocolate	Irritability, sensitive to noise, muscle weakness, tremors, cramps and spasms, convulsions (including eclampsia), racing irregular heart beat, high blood pressure, insomnia, kidney stones, bone loss, pain and spurs, nerve pain and tics, restless leg, foggy thinking, anxiety, depression, poor coordination, craving for chocolate.
<u>Potassium</u> 1000-5000 mg. (depends on sodium intake)	Fresh fruits and vegetables, nuts, legumes (esp. soy), brown rice, seafood, meat, whole grains, poultry, potatoes	Lack of energy, muscle weakness & sore, heart attacks, edema, high blood pressure, slow, rapid or irregular pulse, thirst
<u>Zinc</u> 10 - 20mg.	Seafood, pumpkin seeds, nuts, meat, poultry, soy, eggs, whole grains green leafy vegetables, brown rice, mushrooms, sunflower seeds	Lowered immunity, slow wound healing, white spots on fingernails, skin problems, loss of sense of taste and smell, hair loss, impotence, prostate problems, anorexia
<u>Copper</u> 3 mg.	Organ meats, green leafy vegetables, whole grains, legumes, nuts, beets, seafood, copper cookware and water pipes	Hair loss, grey hair, degeneration of myelin sheath (nerve covering), anemia not resolved by iron. Copper <u>excess</u> : joint and muscle pain, nausea, irritability, mental disorders, excessive hair loss
<u>Iron</u> men 4-10mg. women 18mg. pre-menopause, more if pregnant, nursing or exercising intensely	Meat, poultry, seafood, dried fruits, blackstrap molasses, eggs, whole grains, green leafy vegetables	Anemia, tiredness, paleness, brittle fingernails with vertical ridging, brittle hair, hair loss, dulled senses, headaches, constipation, itchiness, poor appetite, nausea after meals, cravings for ice, spoon-shaped nails
<u>Selenium</u> 100mcg. (do not exceed 200mcg. daily)	Meat, grains, nuts (specifically, Brazil) seafood, vegetables (depending upon the soil), sea vegetables	Cancer, heart disease, constant infections, muscular degeneration, cystic fibrosis. Disarms viruses. Selenium <u>excess</u> : garlic odour on breath, metallic taste in mouth
<u>Boron</u> 2 mg.	Apples, green leafy vegetables, whole grains, nuts, grapes, broccoli, depending on the soil	Bone loss not solved by calcium, magnesium and silica supplements, protein and weight bearing exercise

Manganese Sea vegetables, nuts, seeds, eggs, whole

Cardiac problems, pancreatic damage,

2 mg.	grains, green leafy vegetables, tropical fruits, tea, brown rice, avocados, ginger, blueberries, beans	sweating, hearing problems, muscle cramps, abnormal bone structure, joint clicking, poor equilibrium, sterility, convulsions, myasthenia gravis, lupus. Manganese <u>excess</u> : anorexia, compulsive actions, speech disorders, clumsy movements, seizures, violence
Silicon 4 mg.	Green leafy vegetables, oats, brown rice, whole grains, soybeans, peppers, horsetail herb tea	Poor bone development, joint problems, weak nails, dry, brittle hair, dry skin with loss of elasticity, brittle arteries
Iodine 200 mcg. officially 4 –6 mg realistically	Seafood, sea vegetables, sea salt, garlic, green leafy vegetables 1 tsp. powdered kelp contains 4 mg. of iodine	Underactive thyroid, excess estrogen in breast cells, infertility, constipation, slow mental reactions, brittle nails, feeling cold, dry hair, hair loss, heart palpitations, insomnia, depression <u>Excess</u> : racing heart, anxiety, weight loss
Sodium	Most foods, salt	Dehydration, abdominal cramps, headache, hallucinations, muscle weakness, nausea, lethargy, low blood pressure. Sodium <u>excess</u> : high blood pressure, edema, dry stools, seizures
Phosphorus	All foods, especially meat, fish, soft drinks, food additives, dairy substitutes, wheat germ, nutritional yeast, preserved foods	Phosphorus <u>excess</u> : should be in a 1:1 ratio with calcium - excess causes bone loss and poor calcium uptake.
Chromium 100 mcg.	Nutritional yeast, brown rice, whole grains, oysters, spirulina, turkey	Blood sugar regulation abnormalities, (low energy, poor metabolism, high cholesterol and blood fat levels). Chromium <u>excess</u> : dermatitis, ulcers
<u>BASIC NUTRIENTS</u>		
Protein 50-100 gms., depending on size, activity and if building new cells	Meat, fish, poultry, dairy, legumes, nuts, seeds, eggs, amaranth, quinoa, all whole grains have some protein, sea vegetables	Poor immune function, infertility, poor bone quality, wrinkles and sagging skin edema, hair loss, brittleness and lack of shine, toxemia of pregnancy, poor muscle tone or muscle wasting, torn cuticles, neurotransmitter imbalances that can cause mood disorders, attention deficit, insomnia, depression, and/or poor cognitive function
Fats	see “EFA’s” above	
Carbohydrates	Whole grains, legumes, vegetables, fruit, nuts, seeds, dairy, sweeteners	Lack of energy, headaches, cravings, foggy thinking, depression. <u>Excess</u> : obesity, agitation, type 2 diabetes

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