

supplement	major functions	major insufficiency/ deficiency associations	optimal daily adult dose range	best food sources	cautions/ notes
Vitamins					
vitamin A	bone formation skin health vision	night blindness, dry eyes, skin diseases	5,000-10,000 IU	fish liver oils	Do not take more than 50,000 IU per day for 3 months without medical supervision.
beta-carotene	converted to vitamin A in the body; antioxidant	ulcerative colitis, skin diseases, smoking	10,000-50,000 IU	green and yellow vegetables; carrots	Use only natural beta carotene; high doses may cause yellow skin (harmless).
vitamin B1 (thiamine)	energy processes	fatigue, mental confusion, neuropathy	5-100 mg	eggs, berries, nuts, legumes, liver, yeast	Nontoxic.
vitamin B2 (riboflavin)	energy processes, wound healing, activates other B vitamins	infection, cataracts, blurred vision, eye surgery, migraine	5-100 mg	green leafy vegetables, eggs, organ meats	Nontoxic. Higher doses will make urine a harmless, bright yellow. May take up to 400 mg for migraine.
vitamin B3 (niacin)	energy processes	depression, tension headaches, memory loss	20-100 mg	milk, eggs, fish, whole meal wheat flour	Doses greater than 50mg may cause a skin flush. Take high doses only with doctors supervision.
vitamin B5 (pantothenic acid)	energy processes; adrenal gland function	allergies, morning stiffness; fatigue; muscle cramps	10-1,000 mg	eggs, yeast, liver	No known toxicity.
vitamin B6 (pyridoxine)	energy processes; antibody formation	insomnia, irritability, atherosclerosis	5-200 mg	wheat germ, yeast, whole grains	Oral contraceptive use increases need for this vitamin; phosphated version ("P5P") is better processed by some.
Folic acid	red blood cell formation, RNA/DNA synthesis	fatigue, depression, atherosclerosis	200-800 mcg	beans, green leafy veggies, yeast	Do not take with Phenobarbital or dilantin; up to 25% of population has difficulty processing; special pre-processed form is available.
vitamin B12	red blood cell formation; energy processes	atherosclerosis, memory loss, GI symptoms	10-1,200 mcg	fermented soy products; root veggies	Nontoxic.
Biotin	energy processes; blood sugar regulation	muscle pain, depression	300-600 mcg	egg yolks, whole wheat	No known toxicity.
vitamin C	collagen synthesis, anti-viral, wound healing, antioxidant	joint pain/arthritis, atherosclerosis, bleeding gums, decreased immunity	300-3,000 mg	broccoli, red pepper, citrus fruits, cabbage	At high doses, vitamin C will loosen the bowels.
vitamin D	calcium absorption, mood, immune function	osteoporosis, pain, dental disease, depression, autoimmune, cancer	400-800 IU or more	SUNSHINE, fish & liver oil, egg yolk	Do not use more than 1,000 IU per day without medical supervision. D3, not D2, is the better form.
vitamin E (tocopherol)	cellular respiration; antioxidant	heart disease neurological aging	200-800 IU	wheat germ oil, nuts, whole grains, egg yolk	No cheap dl-alpha; best is "mixed" tocopherols (alpha, beta, gamma, delta) of the d form.
vitamin K	blood clotting factor; bone formation	osteoporosis	20-100 mcg	broccoli, spinach, green tea, green cabbage, tomato	Do not supplement if you are on blood thinners.

Minerals					
Boron**	enhances the utilization of vitamin D; bone formation; immune system; inflammation	osteoporosis; osteoarthritis; auto-immune	2-3mg	fruits and vegetables	little data on toxicity
Calcium**	bone & tooth formation; heart & muscle function	osteoporosis, bone spurs, muscle cramps, rheumatism	200-1500 mg	barley, kale, unrefined grains; milk, green veggies	Prolonged excess may cause a mineral imbalance.
Chromium**	glucose metabolism; blood sugar regulation; heart function	atherosclerosis, diabetes, hypoglycemia, high cholesterol, overweight	200-500 mcg	whole grain cereals, molasses, meat, yeast	Nontoxic at therapeutic levels.
Copper**	Red blood cell production; skeletal, heart & muscle function	osteoporosis, digestive function, nerve disorders	2-3 mg	green leafy veggies, almonds, beans, sea food	Higher doses can be toxic. Zinc supplementation may decrease copper absorption (must take both).
Iodine	Necessary for thyroid hormone	Hypothyroid; goiter; fatigue	50-300 mcg	iodized salt; seaweed products; seafoods including fish and shellfish	toxicity over 1000 mcg per day; rash, headache, difficulty breathing, metallic taste
Iron	Red Blood cell production	dizziness, depression, anemia	10-30 mg	blackberries, cherries, spinach	Do NOT take iron unless told to do so by your doctor. Iron excess is associated with health problems.
Magnesium**	energy processes, nerve function, enzyme activation, muscle relaxation, bone strength	stress, senility, osteoporosis, insomnia, muscle and blood vessel spasms	150-1500 mg	avocados, almonds, whole grains, grapefruit	Doses over 400 mg can cause transient diarrhea in some people (increase slowly).
Manganese**	glandular function, bone & ligament health	diabetes, asthma, digestive disturbance	2-10 mg	nuts, seeds, avocados, grapefruit, apricots	High doses may create other mineral imbalances.
Phosphorus	energy production, bones/teeth, B Vit. activation	tooth/gum disorders, impotence, equilibrium	300-600 mg	barley, beans, fish, lentils, dark green veggies	Prolonged, large doses can cause calcium deficiency or mineral imbalance.
Potassium	pH balance, nerve function	stress, atherosclerosis, high blood pressure	1800-5625 mg	potato peel, bananas, beans, almonds, whole grains	Do not take high supplemental doses (food Sources are O.K.) when taking heart medicine without physician guidance.
Selenium**	antioxidant, synergistic with vitamin E	cancer prevention; aging	100-200 mcg	bran, whole grains, tuna, broccoli, onion	Prolonged excess may be toxic.
Sodium	pH balance, nerve function	Excess is more common and is assoc with high blood pressure	limit daily intake to 1,500 mg	okra, celery, black mission figs	Very few people (athletes, diarrhea /vomiting) need to supplement.

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Zinc**	co-factor in numerous metabolic processes	prostate enlargement, immune deficiency; atherosclerosis	15-50 mg	wheat germ, wheat bran, pumpkin seed, avocado, sea food	Large doses (50mg, day) can cause a copper deficiency & other mineral imbalances.
** indicates minerals most often deficient in the diet. Other minerals not marked with a * usually do not need to be supplemented. Other minerals and trace minerals include: molybdenum, flourine, chlorine, cobalt, silicon, sulphur, vanadium					

Oils					
Omega-3 Fatty Acids	These essential oils are anti-inflammatory	Cardiovascular disease, high cholesterol, high blood pressure, allergic and inflammatory conditions, autoimmune diseases, cancer, neurological disease, menopause, general health.	2000-5000 mg	are derived from fatty fish and flax seeds; can find "functional foods" such as eggs that have increased amounts. Ultimate source is green plants (algae, grass).	Only 5-10% of Flax oil is converted to DHA/EPA in many of the population. Fish consumption limited by potential mercury toxicity; must be certified PCB & mercury-free. Should not smell rancid.
Gamma Linolenic Acid (Omega-6 Fatty Acids)	A "good" omega-6 oil that can have anti-inflammatory effects.	similar to omega-3	500-1000 mg	found in evening primrose, black currant, borage and a number of vegetable oils.	Proper diet balances good omega-3 oils with good omega-6 oils. American diet is excessive in poor quality omega-6 oils.

Accessory Nutrients					
Bioflavonoids	Pigments found in colorful fruits and vegetables. They are potent antioxidants.		varies	colorful fruits and vegetables, like blueberries and other intensely colored fruits	
CoEnzyme Q10 - (ubiquinone)	A naturally-occurring compound that is a vital for muscle energy, including the heart	cardiovascular disease, CHF, immune deficiency, periodontal disease, cancer, mitral valve prolapse, others.	20-200 mg	None.	Depleted by statins (lipid lowering drugs) and red yeast rice--if on these agents, must take at least 100 mg/day.
Fiber	plant cell walls present in whole grains, legumes, fruits and vegetables. This part of the plant is usually lost in processing.	obesity, atherosclerosis, diabetes, constipation, diverticulosis, irritable bowel, colon cancer, high blood pressure, high cholesterol, other diseases	at least 15 gms		build up slowly
Pre-Biotics (FOS=fructo-oligo-saccharides)	Naturally-occurring sugar-like substances that act as food to friendly GI bacteria.	diarrhea, constipation, malabsorption, inflammatory conditions, candidiasis, IBS, B12 deficiency	varies		
Friendly bacteria - (probiotics)	The naturally-occurring bacteria of the colon help protect us from many conditions,	same as above	varies	yogurt has insufficient quantities	Damaged or destroyed by food poisoning, antibiotics, NSAID's, lack of stomach acid, other drugs, infections.
Friendly yeast	Good yeast that maintains the healthy ecology of the gut by eliminating bad bacteria and yeast.	same as above	varies		
Alpha Lipoic Acid	Potent anti-oxidant; helps the liver detoxify many compounds, including heavy metals	fatigue, toxic conditions, neuropathy, other conditions	200-600 mg		"R" form more expensive but may be more effective
Digestive Enzymes	helps the stomach and intestines digest proteins, fats and complex carbohydrates	malabsorption, fatigue, allergy, inflammatory conditions, IBS, many other conditions	varies		
Digestive Acid & Pepsin	as above	as above	varies		

Herbs					
Licorice	helps protect the stomach lining	GERD, stomach ulcers, malabsorption	varies		"DGL" is a special, recommended form that will not raise blood pressure
Aloe Vera	helps protect the lining of the GI tract	GERD, IBS, diarrhea, malabsorption,	varies		
Curcumin	the yellow pigment from the spice turmeric; has anti-inflammatory and anti-cancer properties	arthritis, inflammatory conditions, cancer	varies		
Cinnamon	helps regulate blood sugar	hypoglycemia, pre-diabetes	varies		
Ginger	has anti-inflammatory and stomach-protecting effect	arthritis, GERD	varies		
Green Tea	potent anti-oxidant; also stimulates the metabolism	obesity; cancer prevention, inflammatory conditions	varies		

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