

VITAMINS AND MINERALS

Vitamins and minerals are essential micronutrients. They are essential because, for the most part, they cannot be made in the body. They are “micro” because the amounts we need are much smaller than carbohydrates, protein and fats, which are macronutrients.

TOP TEN FACTORS THAT DEplete VITAMIN AND MINERAL STORE IN THE BODY:

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| <ul style="list-style-type: none"> • Alcohol • Antibiotics • Corticosteroids • Diuretics • Sugar | <ul style="list-style-type: none"> • Caffeine • Stress • Aspirin • Oral contraceptives • Tobacco |
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Fat Soluble Vitamins

Vitamin	Generally used for:	Nutrient Dense Foods:
A	Vision, respiratory diseases, boosting immune cells	Orange and dark green vegetables, beef and chicken liver, egg yolks, cheese, fish
D	Increases calcium absorption, enhances immune system	Seafood, eggs
E	Antioxidant, skin problems, muscle cramps, preventing cardiovascular disease, aids in male infertility, diabetes	Seeds, nuts, avocados, oils, sweet potatoes, apples, asparagus
K	Blood clotting mechanisms, activating certain types of protein, fights inflammation	Dark green leafy vegetable, cabbage, asparagus

Water Soluble Vitamins

Vitamin	Generally used for:	Nutrient Dense Foods:
Thiamin, B1	Metabolizing carbohydrates, healthy nervous system, brain function, diabetes, production of fatty acids and sterols	Pork, liver, fish, beans, peas, wheat germ, asparagus, lentils, oranges
Riboflavin, B2	Energy production, fat and carbohydrate metabolism, making healthy red blood cells, promoting healthy immune system	Eggs, milk, yogurt, cheese, Pork, beans, green leafy vegetables, avocados
Niacin, B3	Lowering cholesterol, hormone production, immune function, diabetes, healthy nervous	Tuna, chicken, mushrooms, Salmon, Pork, Beef, beans,

	system, fatigue, stress, anxiety, PMS	peas, turkey
Pantothenic Acid, B5	Stress, fatigues, nerve disorder, allergies, headaches, metabolism, lowering cholesterol	Mushrooms, crab, yogurt, peas, cauliflower, broccoli, sweet potato, eggs, avocado
Pyridoxine, B6	Enzyme production, cardiovascular and immune systems, nerve function, red blood cells, asthma, diabetes, PMS, high blood pressure	Peppers, pork, Salmon, spinach, bananas, beef, chicken, wheat germ,
Biotin, B7	Metabolizing fats and cholesterol, healthy skin, nails and hair, reduces blood sugar, converts food into energy	Oysters, kale, eggs, mushrooms, kefir, carrots, wheat germ, yogurt, oats
Folate, B9	Preventing birth defects, heart disease, red blood cell production, increase cognitive function	Dark leafy green vegetables, beans, lentils, peas, peppers, seaweed
Cobalamin, B12	Cardiovascular disease, converts food into energy, production of red blood cells	Meat, poultry, eggs, dairy, seafood
Vitamin C	Generally used for: Antioxidant, enhancing immune system, formation of collagen, liver detox, fighting allergies and asthma, lowering cholesterol	Nutrient Dense Sources: Peppers, kiwi, citrus fruits, guava, papaya, broccoli, kale

Minerals

Mineral	Generally used for:	Nutrient Dense Sources:
Calcium	Regulating heart beat and blood pressure, structure of bones and teeth, muscle contraction, nerve transmission, blood clotting	Yogurt, milk, cheese, salmon, sesame seeds, shrimp
Copper	Forming hemoglobin, cell respiration, heart and blood vessels, nervous system, lower cholesterol	Mushrooms, oysters, crab, potatoes, cashews, beans, blackberries, guava, lentils
Iron	Protein metabolism, energy production, respiratory and immune systems, prevents cardiovascular disease	Shellfish, bison, potato skins, peas, lentils, soybeans, asparagus, liver
Magnesium	Relaxing all muscles, produces energy in every cell, enzyme production, cardiovascular system, protein and carbohydrate metabolism	Dark green leafy vegetables, beans, seeds, seaweed, crab, squash, cashews
Manganese	Structure of bones, energy production, glucose and protein metabolism, antioxidant properties	Mussels, wheat germ, blackberries, pineapple, spinach, ginger, raspberries
Phosphorous	Structure of bones and teeth, metabolizes carbs and fats, kidney function, contraction of all muscles, nerve transmission, tissue growth	Seafood, milk, yogurt, wheat germ, seeds, pork, lentils, cheese

Potassium	Regulating fluids, nerve impulses, regulating heart rate and blood pressure	Spinach, squash, cantaloupe, tomatoes, cabbage, guava, carrots, potatoes, pumpkin
Selenium	Antioxidant properties, stimulates immune system, regulates thyroid hormones	Brazil nuts, oysters, tuna, fish, crab, mushrooms, pork
Sodium	Regulates fluids, transfers glucose to cells, regulates heart rate and blood pressure, nervous system function	Table salt, crab, capers, shrimp, seaweed, cheese, eggs, milk, hummus
Zinc	Enzyme production, immune, nervous and reproductive functions, growth and development in children, metabolizes carbs, proteins, and fats, heals wounds	Oysters, crab, beef, bison, venison, mushrooms, turkey, yogurt

20 Primary Amino Acids

Amino Acid	Generally used for:	Nutrient Dense Sources:
Alanine	The metabolism of glucose and tryptophan, reduce cholesterol	Meat, poultry, fish, eggs, avocados, dairy Alfalfa, celery, carrots, lettuce, cucumber, turnips, green peppers, spinach, plums, apples, guava, grapes, oranges, almonds, strawberries
Arginine	Stimulates immune system, helps with clogged arteries, makes muscles make energy and muscle growth	Nuts, whole grains, chocolate Alfalfa, carrots, green leafy vegetables, beetroots, cucumber, celery, lettuce, radishes, potatoes
Asparagine	Nervous system to maintain equilibrium, assists for changing some amino acids into others	Dairy, beef, poultry, eggs
Aspartic Acid	Converts amino acids into proteins, removes toxins in blood stream, DNA and RNA processes, immune function	Dairy, beef, poultry, sprouting seeds Carrots, celery, radishes, cucumber, mint, tomatoes, turnips, lemons, grapefruit, apples, plums, pineapple, melons, almonds
Cysteine	Antioxidant properties, rids toxins	Eggs, meat, dairy, whole grains Alfalfa, beetroots, carrots, cabbages, cauliflower, onion, garlic, apples, pineapple, raspberries, raisins
Glutamic Acid		Carrots, turnips, cabbages, celery, beetroots, mint, lettuce, spinach, papaya
Glutamine	Brain and nerve function, intestinal	

	problems	
Glycine	Kidney function, nervous system health	Carrots, turnips, celery, mint, alfalfa, spinach, garlic, potatoes, figs, oranges, raspberries, pomegranates, melons, almonds
Histidine	Improving immune function	Dairy, meat, poultry, fish, wheat, rye Apples, pomegranates, alfalfa, beets, carrots, celery, cucumber, garlic, radish, spinach, turnips
Isoleucine	Promote muscle recovery after exercise	Almonds, cashews, chickpeas, lentils, eggs, fish, chicken, liver, meat
Leucine	Assist the prevention of muscle protein breakdown, regulate blood sugar levels, growth and repair of muscle tissue	Coconuts, almonds, apricots, papaya, olives, pistachios, walnuts, brown rice, beans, whole wheat
Lysine		Tofu, tempeh, quinoa, pistachios, legumes, potatoes, rice
Methionine	Aiding cholesterol levels, help treat depression	Egg, fish, milk, meat, Corn, potatoes, tofu, brown rice, sunflower seeds, pumpkin seeds, sesame seeds, peanuts, lentils
Phenylalanine	Helping depression, raise blood pressure, building block for proteins	Apples, pineapples, eggs, sesame seeds and flour, soy beans, pumpkin and squash seeds, cheeses, peanuts, nuts, lima beans, avocados, bananas, dried milk
Proline	Maintain skin health, muscle and joint health	Carrots, beetroots, lettuce, turnips, cucumber, plums, cherries, figs, grapes, olives, oranges, pineapples, coconuts, almonds, meat products
Serine	Metabolism of fat, immune function, cell membranes, protect nerves	Radishes, garlic, onion, carrots, beetroots, celery, cucumber, mint, spinach, cabbage, alfalfa, papaya, apples, pineapples, meat, dairy sources, wheat gluten, peanuts, soy
Threonine	Maintain proper protein balance in body, formation of collagen and elastin in the skin	Sesame seeds, wheat germ, papaya, alfalfa sprouts, lima beans, kale, chives, spinach, dairy, eggs, meat
Tryptophan	To help with sleep, depression	Turkey, avocados, oranges, cottage cheese, fish, lean meat, milk Spinach, sesame seeds, soy beans, sunflower, alfalfa, Brussel sprouts, carrots, celery, chives

Tyrosine	Depression, raise blood pressure building block for protein	Alfalfa, carrots, beetroots, cucumber, lettuce, mint, spinach, green peppers, plums, strawberries, cherries, apples, melons, figs, almonds
Valine	Stimulating muscle metabolism, repair and growth of tissue, maintains nitrogen balance in body	Dairy, meat, grain, mushrooms, soy, peanuts Apples, alfalfa, beets, carrots, celery, parsley, squash, tomatoes, sesame seeds, cashew, almond, chia seeds