

A to zinc: a guide to vitamins and minerals

Vitamin Recommended daily amount for adults	Role in the body	Best sources	
A (retinol, carotene) Males: 900 µg Females: 700 µg	<ul style="list-style-type: none"> ▪ growth and tissue repair ▪ immune system functions ▪ vision 	<ul style="list-style-type: none"> ▪ liver ▪ eggs 	<ul style="list-style-type: none"> ▪ dark green & yellow fruits and vegetables ▪ dairy products
B1 (thiamin) Males: 1.2 mg Females: 1.1 mg	<ul style="list-style-type: none"> ▪ processing of carbohydrates and amino acids (protein) ▪ appetite regulation ▪ nervous system functions 	<ul style="list-style-type: none"> ▪ wheat germ ▪ pork ▪ whole & enriched grains 	<ul style="list-style-type: none"> ▪ beans ▪ peas
B2 (riboflavin) Males: 1.3 mg Females: 1.1 mg	<ul style="list-style-type: none"> ▪ processing of carbohydrates, proteins & fats ▪ cell respiration and maintenance ▪ anti-oxidant activity 	<ul style="list-style-type: none"> ▪ dairy products ▪ green leafy vegetables ▪ legumes 	<ul style="list-style-type: none"> ▪ beef ▪ salmon ▪ almonds ▪ eggs
B3 (niacin, nicotinic acid) Males: 16 mg Females: 14 mg	<ul style="list-style-type: none"> ▪ processing of carbohydrates, proteins & fats ▪ energy metabolism ▪ DNA repair ▪ nerve function ▪ circulation of blood 	<ul style="list-style-type: none"> ▪ meat ▪ fish ▪ whole & enriched grains 	<ul style="list-style-type: none"> ▪ beans ▪ peas ▪ nuts
B5 (pantothenic acid) Males: 5 mg Females: 5 mg	<ul style="list-style-type: none"> ▪ converting nutrients into energy ▪ vitamin utilization ▪ production of many important compounds used by the body 	<ul style="list-style-type: none"> ▪ whole-grain cereals ▪ legumes ▪ meats 	<ul style="list-style-type: none"> ▪ avocado ▪ sweet potato
B6 (pyridoxine, pyridoxal, pyridoxamine) Males: 1.3–1.7 mg Females: 1.3–1.5 mg	<ul style="list-style-type: none"> ▪ processing of carbohydrates, proteins & fats ▪ red blood cell formation ▪ cardiovascular health ▪ formation of antibodies & neurotransmitters 	<ul style="list-style-type: none"> ▪ fish ▪ poultry ▪ red meat ▪ whole grains 	<ul style="list-style-type: none"> ▪ fortified cereal ▪ potatoes ▪ spinach

A to zinc: a guide to vitamins and minerals

Vitamin Recommended daily amount for adults	Role in the body	Best sources
B12 (cobalamin) Males: 2.4 µg Females: 2.4 µg	<ul style="list-style-type: none"> ▪ converting proteins & fats into energy ▪ nervous system functions ▪ formation of blood cells ▪ cardiovascular health 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ lean beef <li style="width: 50%;">▪ eggs <li style="width: 50%;">▪ fish <li style="width: 50%;">▪ dairy products <li style="width: 50%;">▪ poultry <li style="width: 50%;">▪ clams
Folate (folic acid) Males: 400 µg Females: 400 µg* *Pregnancy: 600 µg	<ul style="list-style-type: none"> ▪ cell division and growth ▪ DNA synthesis ▪ red blood cell formation ▪ processing of proteins 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ green leafy vegetables <li style="width: 50%;">▪ oranges <li style="width: 50%;">▪ dried beans <li style="width: 50%;">▪ pasta <li style="width: 50%;">▪ fortified cereals <li style="width: 50%;">▪ rice
C (ascorbic acid) Males: 90 mg Females: 75 mg	<ul style="list-style-type: none"> ▪ anti-oxidant activity ▪ collagen maintenance ▪ wound healing ▪ infection resistance ▪ healthy gums and blood vessels 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ citrus fruits <li style="width: 50%;">▪ melons <li style="width: 50%;">▪ tomatoes <li style="width: 50%;">▪ berries <li style="width: 50%;">▪ green & red peppers <li style="width: 50%;">▪ broccoli
D (calciferol) Males: 400–600 IU Females: 400–600 IU	<ul style="list-style-type: none"> ▪ bone & tooth formation ▪ immune functions ▪ mineral balance (calcium and phosphorous) 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ egg yolk <li style="width: 50%;">▪ Vitamin D is produced in the skin when exposed to sunlight <li style="width: 50%;">▪ salmon <li style="width: 50%;">▪ sardines <li style="width: 50%;">▪ fortified milk
E (α-tocopherol) Males: 15 mg Females: 15 mg	<ul style="list-style-type: none"> ▪ anti-oxidant activity (free radical scavenger) ▪ possible immune system support 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ wheat germ <li style="width: 50%;">▪ vegetable & nut oils <li style="width: 50%;">▪ nuts <li style="width: 50%;">▪ dark green vegetables <li style="width: 50%;">▪ whole grains
K Males: 120 µg Females: 90 µg	<ul style="list-style-type: none"> ▪ blood clotting ▪ bone metabolism 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ green leafy vegetables (e.g., spinach, broccoli, collards) <li style="width: 50%;">▪ olive oil <li style="width: 50%;">▪ soybean oil
H (biotin, vitamin B7) Males: 30 µg Females: 30 µg	<ul style="list-style-type: none"> ▪ cell growth ▪ production of fatty acids ▪ processing of fats and amino acids ▪ maintain blood sugar levels ▪ strengthen hair and nails 	<ul style="list-style-type: none"> <li style="width: 50%;">▪ liver <li style="width: 50%;">▪ cheese <li style="width: 50%;">▪ eggs <li style="width: 50%;">▪ yeast <li style="width: 50%;">▪ meat <li style="width: 50%;">▪ avocado <li style="width: 50%;">▪ wheat bran

A to zinc: a guide to vitamins and minerals

Mineral Recommended daily amount for adults	Role in the body	Best sources	
calcium Males: 1000–1200 mg Females: 1000–1200 mg	<ul style="list-style-type: none"> ▪ support and formation of bones, and teeth ▪ regulates heartbeat, muscle action, nerve function & blood clotting 	<ul style="list-style-type: none"> ▪ low-fat or nonfat milk products ▪ cheese ▪ red beans ▪ spinach 	<ul style="list-style-type: none"> ▪ broccoli ▪ rhubarb ▪ kale ▪ calcium-set tofu
chromium Males: 30–35 µg Females: 20–25 µg	<ul style="list-style-type: none"> ▪ needed for using glucose as an energy source ▪ increases effectiveness of insulin ▪ metabolizes fat and protein 	<ul style="list-style-type: none"> ▪ whole grains ▪ peas ▪ beans 	<ul style="list-style-type: none"> ▪ beef ▪ processed turkey ▪ broccoli
copper Males: 900 µg Females: 900 µg	<ul style="list-style-type: none"> ▪ formation of red blood cells ▪ needed for bone health ▪ iron metabolism ▪ involved in the normal function of the nervous system ▪ anti-oxidant activity 	<ul style="list-style-type: none"> ▪ organ meats ▪ shellfish ▪ nuts ▪ seeds 	<ul style="list-style-type: none"> ▪ oysters ▪ cocoa powder ▪ whole grain products
fluoride Males: 4 mg Females: 3 mg	<ul style="list-style-type: none"> ▪ prevention of tooth decay ▪ stimulates new bone formation 	<ul style="list-style-type: none"> ▪ seafood ▪ tea ▪ grape juice 	<ul style="list-style-type: none"> ▪ Fluoridated water (and food prepared in fluoridated water) and fluoridated dental products (e.g., toothpaste) will contain fluoride
iodine Males: 150 µg Females: 150 µg	<ul style="list-style-type: none"> ▪ thyroid functioning 	<ul style="list-style-type: none"> ▪ iodized salt ▪ cod ▪ shrimp 	<ul style="list-style-type: none"> ▪ cow's milk ▪ potatoes
iron Males: 8 mg Females: 18 mg* *post-menopausal women: 8 mg/day	<ul style="list-style-type: none"> ▪ formation of components of red blood cells that supply and transport oxygen ▪ DNA synthesis ▪ anti-oxidant activity 	<ul style="list-style-type: none"> ▪ red meat ▪ poultry ▪ fish ▪ liver ▪ beans 	<ul style="list-style-type: none"> ▪ whole & enriched grains ▪ green leafy vegetables ▪ tofu ▪ oysters
magnesium Males: 420 mg Females: 320 mg	<ul style="list-style-type: none"> ▪ enzyme activation ▪ nerve & muscle function ▪ bone structure ▪ energy production 	<ul style="list-style-type: none"> ▪ nuts ▪ beans ▪ bran cereal ▪ spinach 	<ul style="list-style-type: none"> ▪ green leafy vegetables ▪ whole & enriched grains ▪ banana

A to zinc: a guide to vitamins and minerals

Mineral Recommended daily amount for adults	Role in the body	Best sources	
manganese Males: 2.3 mg Females: 1.8 mg	<ul style="list-style-type: none"> ▪ bone growth & development ▪ wound healing ▪ metabolism of carbohydrates, amino acids, and cholesterol ▪ anti-oxidant activity 	<ul style="list-style-type: none"> ▪ nuts ▪ whole grains ▪ tea ▪ coffee 	<ul style="list-style-type: none"> ▪ bran ▪ legumes ▪ pineapple
molybdenum Males: 45 µg Females: 45 µg	<ul style="list-style-type: none"> ▪ biological reactions ▪ processing of sulfur-containing amino acids, drugs, and toxins 	<ul style="list-style-type: none"> ▪ beans ▪ lentils ▪ peas 	<ul style="list-style-type: none"> ▪ grain products ▪ nuts
phosphorous Males: 700 mg Females: 700 mg	<ul style="list-style-type: none"> ▪ bone structure ▪ energy production and storage 	<ul style="list-style-type: none"> ▪ dairy products ▪ meats ▪ fish 	<ul style="list-style-type: none"> ▪ eggs ▪ beans ▪ whole grains
potassium Males: 4.7 g Females: 4.7 g	<ul style="list-style-type: none"> ▪ fluid balance ▪ normal body function ▪ heart activity ▪ muscle contraction ▪ nervous system functions 	<ul style="list-style-type: none"> ▪ orange juice ▪ potatoes ▪ bananas ▪ tomato juice 	<ul style="list-style-type: none"> ▪ soybeans ▪ apricots ▪ plums
sodium Males: 1.5 g Females: 1.5 g	<ul style="list-style-type: none"> ▪ maintenance of blood volume and blood pressure ▪ transmission of nerve impulses ▪ heart activity ▪ muscle contraction ▪ various internal functions 	<ul style="list-style-type: none"> ▪ table salt ▪ processed meats (e.g., bacon, sausage, ham) ▪ canned soups and vegetables 	<ul style="list-style-type: none"> ▪ worcestershire sauce ▪ soy sauce ▪ onion salt ▪ garlic salt ▪ bouillon cubes
selenium Males: 55 µg Females: 55 µg	<ul style="list-style-type: none"> ▪ anti-oxidant activity ▪ regulation of thyroid hormone 	<ul style="list-style-type: none"> ▪ cereals (e.g., corn, wheat, and rice) ▪ brazil nuts ▪ walnuts ▪ pork 	<ul style="list-style-type: none"> ▪ poultry ▪ eggs ▪ shrimp ▪ halibut ▪ crab meat
zinc Males: 11 mg Females: 8 mg	<ul style="list-style-type: none"> ▪ taste & smell sensitivity ▪ growth and development ▪ healing ▪ immune system function 	<ul style="list-style-type: none"> ▪ lean meat ▪ oysters ▪ eggs ▪ seafood 	<ul style="list-style-type: none"> ▪ yeast-containing whole grains ▪ low-fat milk products