

VITAMINS



VITAMINS, THEIR BENEFITS AND SOURCES

Vitamin in RDI	Benefits	Deficiency	Plant sources	Animal sources	Example for RDI	Additional information
Vitamin A RDI 800 mcg	It plays a role in the growth and development of cells and tissues, iron metabolism, healthy mucous membranes, skin, good eyesight.	Vitamin A deficiencies may result in night blindness and increased risk of infections, dry, rough, or scaly skin, fatigue, weakness.	Vegetables and fruits of yellow (corn, yellow pepper, lemon, pineapple), orange (carrot, melon, papaya) and red (red pepper, tomato, beetroot, cherry, strawberry, pomegranate).	Dairy products, egg yolk, oily fish, beef, chicken, pork (liver, kidney).	100 g carrots 300 g kale	Vitamin A is fat-soluble, as are vitamins D, E and K. It is therefore a good idea to eat vegetables with vitamin A with foods that contain some healthy fat.
Vitamin C RDI 80 mg	Healthy nervous system, cartilage, blood vessels, bones, teeth, skin, helps collagen formation, increases iron absorption, helps with colds.	With a sufficient intake of vitamin C, you can avoid scurvy, bleeding gums, poorer wound healing and poorer collagen structure, joint and muscle pain, mood changes.	Dark leafy greens, green peppers, red peppers, citrus fruits, bananas, kiwi, strawberries, pineapple, blueberries, cauliflower, tomatoes, broccoli, white cabbage, potatoes.	In small amounts, this vitamin can be found in meat (liver), eggs, dairy products.	60 g red peppers 220 g cabbage	Note that an increased vitamin C intake is recommended for smokers, pregnant women and patients. Vitamin C increases iron absorption.
Vitamin D RDI 20 mcg	Bone and tooth development, improves immune, respiratory and muscle function, increases calcium and phosphorus absorption, regulates blood pressure, prevents depression, inflammation and cardiovascular disease.	With a sufficient intake of vitamin D, you can avoid fatigue, drowsiness, lack of motivation, osteoporosis, reduced muscle tone, calcium metabolism disorders.	D2: mushrooms, seaweed, berries, bananas, avocados, peanuts, pine nuts, olive oil, rapeseed oil, occasionally dark chocolate.	D3: oily blue seafood (anchovies, anchovies, sardines, sea bass, sea bream), also found in liver, egg yolk and dairy products.	30 g mackerel 30 g salmon 100 g shiitake mushrooms	Vitamin D is recommended in the form of a supplement or increased dietary intake from October to April, and is synthesized by the sun during the other months.

Vitamin in RDI	Benefits	Deficiency	Plant sources	Animal sources	Example for RDI	Additional information
Vitamin E RDI 12 mg	Reduction of free radicals, as it is the main antioxidant that strengthens the immune system, takes care of cell signaling.	Low intake of vitamin E can cause nerve problems, but deficiency is rare and can occur as a result of anorexia.	Sunflower oil (cold pressed), soybean oil, olive oil, wheat germ oil, sunflower seeds, nuts, kiwifruit. Mango, blueberries, spinach, sweet potatoes, avocado and dandelion.	Egg yolk, liver, butter, fatty fish and prawns, shrimps.	50 g almonds 30 g sunflower seeds	The intake of fat-soluble vitamin E is important for people who have Chron's disease and for those who have a fat absorption disorder.
Vitamin K RDI 75 mcg	Blood clotting for faster wound healing, bone health, helps cardiovascular health and cognitive abilities.	Osteoporosis, blood clotting problems, liver disease, intestinal diseases, fat absorption disorders, helps to reduce morning sickness.	Dark green vegetables (chard, broccoli, avocado, chervil), malate, also found in beans, soya, carrots, tomatoes and nuts, as well as olive oil and fermented foods.	Liver from beef, chicken, pork, eggs, fatty fish, yoghurt, cheese (gouda, edam, cheddar).	20 g kale 80 g red cabbage	Vitamin K absorption is better when it is taken with or after foods containing fat, as is the case for vitamins A, D and E.
Thiamine (B1) RDI 1,1 mg	It is also important for heart health and energy production, as well as for the nervous system.	Headache, weight loss, muscle weakness, heart health problems, beriberi.	Sunflower seeds, pine nuts, walnuts, hazelnuts, kale, legumes (beans, peas, lentils), spinach, orange, yeast.	Pork (especially lean cuts), beef, chicken, fish.	170 g hazelnuts 150 g pork	Deficiency can occur in people who drink alcohol excessively. The elderly and people with diabetes are also susceptible.
Riboflavin (B2) RDI 1.4 mg	Vitamin B2, which is called riboflavin, has a role in helping the metabolism, nervous system, red blood cell production. It cares for our vision, enabling good eyesight. Our skin can benefit from this vitamin as well.	Deficiencies of riboflavin may result in skin changes, sore throat, cracks or sores on the lips (cheilosis), inflammation and redness of the tongue (glossitis), and skin issues like dermatitis, normocytic anemia.	Plant based sources of riboflavin are grains (especially soya), mushrooms, sunflower seeds, pine nuts, leafy green vegetables, sprouts, sun-dried tomatoes, almonds, yeast, pomegranates and mushrooms, legumes (soya, peas, lentils, chickpeas).	Animal based sources of riboflavin are pork and veal liver, fish, eggs (particularly egg whites), milk and dairy products.	160 g soya beans 350 g mushrooms	Found in high-quality food supplements or fortified foods such as soya products, rice products, most often plant-based or cereal-based drinks. People who have had surgery and people who consume large amounts of alcohol have an increased need for this vitamin. A higher intake is also recommended after intense physical activity.

Vitamin in RDI	Benefits	Deficiency	Plant sources	Animal sources	Example for RDI	Additional information
Niacin (B3) RDI 16 mg	It helps to release energy, the nervous system, healthy skin and mucous membranes, and plays a role in normal psychological functioning.	(Pellagra), exhaustion and fatigue, headache, apathy, memory impairment, vomiting, diarrhea.	Bran, yeast, peanuts, peanut butter, sunflower seeds, pine nuts, mushrooms, beans, avocados, including kale, carrots, whole grains.	Fish (tuna, salmon, trout, pollock), red meat, poultry, milk and dairy products.	235 g wheat sprouts 170 g chicken	The need for niacin increases in people who consume alcohol in large quantities, in pregnant women and in people suffering from chronic diarrhea.
Pantothenic acid (B5) RDI 6 mg	It plays a role in energy release, cognitive processes, nervous system function and stress reduction, it can reduce fatigue and tiredness.	Deficiency is very rare, as it is present in many foods. If your food is poor, then watch for the signs of skin problems, digestive issues, susceptibility to infection.	Avocados, mushrooms, broccoli, potatoes, eggplant, sunflower seeds, hazelnuts, soya, beans, nuts, wholegrain products, grain sprouts.	Poultry, beef and pig liver, fish and seafood, dairy products, eggs.	400 g chicken 400 g avocado	Pantothenic acid is important for the metabolism of vitamin D. Heat, smoking or intense exercise can increase the need for pantothenic acid by 50%.
Pyridoxine (B6) RDI 1.4 mg	It plays a role in cysteine synthesis, energy release, the nervous system, psychological functioning, protein and glycogen metabolism, immune function and cognitive health.	Fatigue, manifested as lack of energy, mood changes, muscle cramps, pains in muscles, skin changes, increased susceptibility to infections.	Whole wheat flour, soya, beans, bananas, red peppers, avocados, spinach, kale, including onions, carrots, potatoes and other starchy vegetables.	Poultry, pork, lean cuts of beef, fish (tuna, salmon, trout), dairy products.	359 g beans 200 g pork	Severe deficiencies of this vitamin are manifested as microcytic anemia, nervous disorders and hearing problems in infants.
Biotin (B7) RDI 50 mcg	It supports the health of the nervous system, metabolism, liver, hair, mucous membranes and skin, and allows normal psychological functioning.	Low intake of biotin may have the following consequences: hair loss (alopecia), fragile hair, lack of energy, tendency to depression.	Dry yeast, nuts, seeds, oats, mushrooms, whole wheat flour, including peas, spinach, cauliflower, sweet potatoes, bananas.	Salmon, tuna, sardines, beef and chicken liver, milk, egg yolk.	310 g mushroom 25 g liver	The term 'biotin' is of Greek origin and means that this vitamin vitalizes and energizes the body.

Vitamin in RDI	Benefits	Deficiency	Plant sources	Animal sources	Example for RDI	Additional information
Folate, Folic acid (B9) RDI 200 mcg	It is important for the development of maternal tissue during pregnancy, amino acid synthesis, blood formation, the immune system, cell division, psychological functioning and reducing exhaustion.	Deficiencies of folate can cause megaloblastic anemia, fatigue, constipation, atherosclerosis, thrombosis, vision problems, confusion, depression, mouth ulcers.	Yeast, sunflower seeds, spinach, asparagus, avocado, broccoli, kale, cauliflower, pumpkin, peas, eggplant, oranges, lemons, strawberries, melons, bananas, hazelnuts, walnuts, grains (quinoa, amaranth), legumes (beans, soya, lentils).	Meat, especially beef, chicken and pork liver, egg yolk, traces of B9 can be found in dairy products.	120 g asparagus 100 g spinach	For pregnant women, an RDI of 400 mcg is recommended. It is also important during growth and adolescence and for patients with coeliac disease and eating disorders. Folate is the natural form and folic acid is added to fortified foods.
Cobalamin (B12) RDI 2.5 mcg	It helps metabolism, reduces fatigue and exhaustion, is important for the blood as it helps red blood cells to form, improves memory, and helps fight constipation and depression.	Constipation, depression, megaloblastic anemia leading to nervous system damage (fatigue, increase in homocysteine levels, possibly leading to heart disease), infertility, miscarriage.	Foods fortified with vitamin B12, bacterially fermented foods: tofu, tempeh, seaweed wakame.	Fish (tuna, trout), shellfish, liver, muscle, dairy, eggs.	30 g trout 160 g edam cheese	Deficiencies can occur in vegans and older people with absorption disorders. Better quality vitamin B12 supplements are cyanocobalamin and hydroxocobalamin.

RDI – recommended daily intake)

DISHES WITH A SPECIFIC VITAMIN CONTENT

Vitamin	Specific dishes containing this vitamin
Vitamin A	Egg halves with yolk, carrot, cheese or cottage cheese filling
Vitamin C	Berry smoothie; or glass of pineapple juice; or citrus juice
Vitamin D	A piece of wholegrain bread with a spread of anchovies, pickles and mayonnaise; or a seagrass salad; or a smoothie of banana, blueberries and yoghurt
Vitamin E	Baked sweet potato sticks sprinkled with herbs; or a blueberry shortcake on a nut and seed cake
Vitamin K	Salad of cooked broccoli, kale and carrots with olive oil and herbs; or a plate of cheese, ham and olive salad from the brine
Vitamin B1, thiamine	Kale or broccoli soup with a sprinkling of sunflower seeds or pine nuts; or a smoothie of banana, spinach leaves and orange juice
Vitamin B2, riboflavin	Stuffed baked mushrooms; or stuffed egg halves; or cannelloni with mushrooms
Vitamin B3, niacin	Cannelloni with mushrooms; or cannelloni with chicken meat
Vitamin B5, pantothenic acid	Broccoli with melted cheese; or lentil, soya, bean and barley stew
Vitamin B6, pyridoxine	Red peppers stuffed with cottage cheese and walnut filling
Vitamin B7, biotin	Salmon fillet with any side dish; or mushroom soup
Vitamin B9, folate	Potato, courgette and eggplant dish, with egg dressing
Vitamin 12, cobalamin	Seaweed wakame salad sprinkled with sesame seeds; or seafood risotto; or grilled cheese with herbs

