

MINERALS

Mineral salts are essential to the organism and make up around 4% of our body mass. In combination with other nutrients, they ensure that the organism functions properly.

Mineral salts are essential to the organism, in particular because they:

- control the hydrous balance (osmotic pressure)
- regulate the acid-alkali balance
- are part of certain structures (bones, teeth)
- are involved in the structure of enzymes and hormones
- catalyze many of the metabolism's reactions.
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Among these minerals, seven are essential to the organism in moderate quantities (0.2 g to 10 g per day), and a dozen, known as trace elements, are needed in minute quantities.

Bones are natural reservoirs for mineral salts, particularly for calcium and phosphorus. They can be regarded as banks that receive and distribute these salts constantly within the body as needed.

Mineral salts:

- Calcium is mainly found in milk and other dairy products, but also in leafy green vegetables, egg yolk and seafood. It is needed by the organism to ensure solid bones and teeth.
- Chlorine and sodium serve, amongst other roles, to keep the body hydrated. They are mainly ingested in the form of table salt.
- Sulphur is an essential component of proteins and vitamins. It is found throughout the organism and mainly comes from meat, milk, eggs and pulses.
- Potassium is essential for keeping the body hydrated, but also for muscular contraction, for example. It is found in many foodstuffs, including avocados, dried apricots and meat.
- Magnesium is necessary, especially for muscular and nervous response. It is present in large quantities in dairy products and whole grain cereals.

- Finally, phosphorus is a component of bones and teeth and is involved in many essential processes. It is found in high-protein food such as meat and fish.

Trace elements:

- Fluorine is a component of bones and teeth in particular.
- Cobalt and chrome are present throughout the organism.
- Copper is concentrated in the liver.
- Iodine is necessary for the production of thyroid gland hormones.
- Iron is essential for transporting oxygen in the blood.
- Lastly, manganese, selenium and zinc are mainly concentrated in the liver.

Calcium builds bones and teeth; activates enzymes throughout the body; helps regulate blood pressure; and helps muscles to contract, nerves to send messages, and blood to clot.

Chromium helps maintain normal blood sugar levels and helps cells draw energy from blood sugar.

Copper assists with metabolizing fuel, making red blood cells, regulating neurotransmitters, and mopping up free radicals.

Iron helps make hemoglobin (the oxygen-carrying chemical in the body's red blood cells) and myoglobin (a protein in muscle cells). Iron is essential for activating certain enzymes and for making amino acids, collagen, neurotransmitters, and hormones.

Magnesium, like calcium, builds bones and teeth. It also helps to regulate blood pressure and blood sugar and enables muscles to contract, nerves to send messages, blood to clot, and enzymes to work.

Manganese helps form bones and helps metabolize amino acids, cholesterol, and carbohydrates.

Molybdenum activates several enzymes that break down toxins and prevents the buildup of harmful sulfites in the body.

Potassium balances fluids in the body, helps to maintain a steady heartbeat and to make muscles contract, and may benefit bones and blood pressure.

Sodium balances fluids in the body, helps send nerve impulses, and helps make muscles contract.

Zinc helps blood clot, helps make proteins and DNA, bolsters the immune system, and helps with wound healing and cell division.

Mineral	RDA/AI		Best Sources	Functions
	Men	Women		
Calcium	1,000mg	1,000mg	Milk and milk products	Strong bones, teeth, muscle tissue; regulates heart beat, muscle action, and nerve function; blood clotting
Chromium	35ug	25ug	Corn oil, clams, whole-grain cereals, brewer's yeast	Glucose metabolism (energy); increases effectiveness of insulin
Copper	900ug	900ug	Oysters, nuts, organ meats, legumes	Formation of red blood cells; bone growth and health; works with vitamin C to form elastin
Fluoride	4mg	3mg	Fluorinated water, teas, marine fish	Stimulates bone formation; inhibits or even reverses dental caries
Iodine	150ug	150ug	Seafood, iodized salt	Component of hormone thyroxine, which controls metabolism
Iron	8mg	18mg	Meats, especially organ meats, legumes	Hemoglobin formation; improves blood quality; increases resistance to stress and disease
Magnesium	420mg	320mg	Nuts, green vegetables, whole grains	Acid/alkaline balance; important in metabolism of carbohydrates, minerals, and sugar (glucose)
Manganese	2.3mg	1.8mg	Nuts, whole grains, vegetables, fruits	Enzyme activation; carbohydrate and fat production; sex hormone production; skeletal development
Molybdenum	45ug	45ug	Legumes, grain products, nuts	Functions as a cofactor for a limited number of enzymes in humans
Phosphorus	700mg	700mg	Fish, meat, poultry, eggs, grains	Bone development; important in protein, fat, and carbohydrate utilization
Potassium	4700mg	4700mg	Lean meat, vegetables, fruits	Fluid balance; controls activity of heart muscle, nervous system, and kidneys
Selenium	55ug	55ug	Seafood, organ meats, lean meats, grains	Protects body tissues against oxidative damage from radiation, pollution, and normal metabolic processing
Zinc	11mg	8mg	Lean meats, liver, eggs, seafood, whole grains	Involved in digestion and metabolism; important in development of reproductive system; aids in healing