Minerals

Minerals have many important roles in the structure and function of the body. The body needs minerals to build and maintain healthy teeth and bones, carry nerve signals to and from the brain, carry oxygen to the cells, regulate blood sugar levels, and maintain a healthy immune system.

A total of 60 minerals have been discovered in the body, and 22 are essential to health. Minerals include calcium, sodium, and iron. Eating a variety of foods is the healthiest way for a body to receive all the minerals it needs.

Overview
Some minerals are essential to your health. Essential minerals are sometimes divided into major minerals (macrominerals) and trace minerals (microminerals). Trace minerals are needed in smaller amounts than major minerals.

Essential minerals

Major minerals

Mineral	What it does	Where it's found
Sodium	Needed for proper fluid balance, nerve transmission, and muscle contraction.	Table salt, soy sauce; large amounts in processed foods; small amounts in milk, breads, vegetables, and unprocessed meats.
Calcium	Important for healthy bones and teeth; helps muscles relax and contract; important for nerve functioning, blood clotting, blood pressure.	Milk and milk products; canned fish with bones (salmon, sardines); fortified tofu and fortified soy beverage; greens (broccoli, mustard greens); legumes.
Chloride	Needed for proper fluid balance, stomach acid.	Table salt, soy sauce; large amounts in processed foods; small amounts in milk, meats, breads, and vegetables.
Magnesium	Found in bones; needed for making protein, muscle contraction, nerve transmission, immune system health.	Nuts and seeds, legumes, leafy green vegetables, seafood, chocolate, artichokes, "hard" drinking water.
Phosphorus	Important for healthy bones and teeth; found in every cell; part of the system that maintains acid-base balance.	Meat, fish, poultry, eggs, milk.
Potassium	Needed for proper fluid balance, nerve transmission, and muscle contraction.	Meats, milk, fresh fruits and vegetables, whole grains, legumes.
Sulfur	Found in protein molecules.	Occurs in foods as part of protein: meats, poultry, fish, eggs, milk, legumes, nuts.

Trace minerals

Mineral	What it does	Where it's found
Iron	Part of a molecule (hemoglobin) found in red blood cells that carries oxygen in the body; needed for energy metabolism.	Organ meats, red meats, fish, poultry, shellfish (especially clams), egg yolks, legumes, dried fruits, dark leafy greens, iron-enriched breads and cereals, and fortified cereals.
Zinc	Part of many enzymes; needed for making protein and genetic material; has a function in taste perception, wound healing, normal fetal development, production of sperm, normal growth and sexual maturation, immune system health.	Meats, fish, poultry, leavened whole grains, vegetables.
Chromium	Works closely with insulin to regulate blood sugar (glucose) levels.	Liver, brewer's yeast, whole grains, nuts, cheeses.
Copper	Part of many enzymes; needed for iron metabolism.	Legumes, nuts and seeds, whole grains, organ meats, drinking water.
Fluoride	Involved in formation of bones and teeth; helps prevent tooth decay.	Drinking water (either fluoridated or naturally containing fluoride), fish, and most teas.
Iodine	Found in thyroid hormone, which helps regulate growth, development, and metabolism.	Seafood, foods grown in iodine-rich soil, iodized salt, bread, dairy products.
Manganese	Part of many enzymes.	Widespread in foods, especially plant foods.
Molybdenum	Part of some enzymes.	Legumes, breads and grains, leafy greens, leafy green vegetables, milk, liver.
Selenium	Antioxidant.	Meats, seafood, grains.

Other trace minerals known to be essential in tiny amounts include nickel, silicon, vanadium, and cobalt.