



Food contain nutrients include carbohydrates, protein, fat, vitamins, and minerals. The body needs to absorb appropriate minerals from food to maintain the normal functions of cells and organs, and to promote growth and development. Inadequate or excessive amounts of minerals intake may have adverse effects.

Functions

Minerals play a part in the coagulation and oxygen binding capacity in blood, beating of the heart, transmission in the nervous system, and metabolism of our body.

Should we take mineral supplements?

There are various kinds of mineral supplements available on the market. Should we take these “tonics” to maintain good health?

We should maintain a balanced diet with a wide variety of food choices. Eating according to the “Food Pyramid” and we will get sufficient and appropriate minerals from our daily intake. There is no need to take extra mineral supplements to stay healthy.

If you have to control diet because of any disease, please consult a doctor or dietitian. Never take any mineral supplements on your own.

Mineral	Function	Food sources	Symptom of deficiency	Symptom of excess
Iron	Produces red blood cells	Meats, entrails, egg yolks, dark green vegetables, whole-wheat cereals, beans, dried fruits	<ul style="list-style-type: none"> Iron deficiency anaemia 	<ul style="list-style-type: none"> Liver failure Constipation
Zinc	<ul style="list-style-type: none"> Helps produce protein and male hormone Maintains enzyme functions Maintains normal muscle contraction Promotes wound-healing 	Meats, dairy products, egg, whole-wheat cereals, seafood, beans	<ul style="list-style-type: none"> Retarded growth in children Poor immunity Fatigue Hair loss 	<ul style="list-style-type: none"> Impaired immune system Gastrointestinal discomfort
Calcium	<ul style="list-style-type: none"> Maintains healthy bones and teeth Helps blood coagulation Helps in muscles and heart contraction Helps nervous impulse transmission 	Dairy products, beans, dark green vegetables, sardines (with bones) or salmon, sesame seeds	<ul style="list-style-type: none"> Osteoporosis Tooth problems Retarded growth in children 	<ul style="list-style-type: none"> Kidney stones Gastrointestinal discomfort
Magnesium	<ul style="list-style-type: none"> Maintains healthy bones and teeth Helps produce proteins Helps in regulation of heart beat, muscle contraction, and nervous impulse transmission 	Dark green vegetables, whole-wheat cereals, meat, beans, nuts, unprocessed rice, banana	<ul style="list-style-type: none"> Muscle weakness Heartbeat problems Susceptible to fatigue, depression 	<ul style="list-style-type: none"> Increased calcium loss Gastrointestinal discomfort
Phosphorus	<ul style="list-style-type: none"> Maintains healthy bones and teeth Maintains pH level Helps in carbohydrate and fat metabolism Keeps kidney healthy 	Whole-wheat cereals, dairy products, meat, egg, beans, fish, poultry, dried fruits, nuts	<ul style="list-style-type: none"> Fragile bones Muscle weakness 	<ul style="list-style-type: none"> Muscle cramps Increased calcium requirement
Potassium	<ul style="list-style-type: none"> Maintains proper water and pH balance in the body Maintains beating of the heart Maintains normal transmission of nervous impulse 	Whole-wheat cereals, meat, fruits, dried fruits, vegetables	<ul style="list-style-type: none"> Fatigue Dizziness Cramps Heartbeat problems 	<ul style="list-style-type: none"> Affect heart functions

Mineral	Function	Food sources	Symptom of deficiency	Symptom of excess
Sodium	Maintains water and pH level in the body, so that our muscles and nerves can function normally	Table salt, processed foods such as pickles, preserved meat, roasted meat, ham	<ul style="list-style-type: none"> Poor appetite Gastrointestinal discomfort 	<ul style="list-style-type: none"> High blood pressure Increased calcium loss
Iodine	<ul style="list-style-type: none"> Maintains normal functions of the thyroid Generates thyroid hormone Regulates metabolism Maintains healthy hair, skin and nails 	Seafood, laver	<ul style="list-style-type: none"> Goiter Retarded mental and physical development in children 	<ul style="list-style-type: none"> Goiter