

The image is a vertical collage of fresh vegetables. The top section shows several mushrooms with light brown caps and stems, alongside a few red tomatoes and a green bean. The middle section is a solid teal color with white text. The bottom section shows a close-up of several bright green beans, with a tomato and a piece of garlic visible on the edges.

HOW TO GET THEM  
NATURALLY FROM FOOD

# *Minerals*

Learn the basic information of  
minerals



## *Minerals*

Minerals play a huge role in the human body, and they are critical for human life. They aid in maintaining acid-base balance, helping with growth and strength and regulating enzymes. We can find them in the foods we eat. We can even produce many of them in our bodies. We have to be careful when we take mineral supplements because they may have interactions with one another.



# CALCIUM

Daily intake 1000 mg

Strengthens the bones, teeth and muscle tissue, regulates the heartbeat and nerve function. It also helps with blood clotting.

## Benefits

Builds and protects bones and teeth  
Helps with muscle contractions/relaxation  
Blood clotting  
Nerve impulse transmission  
Hormone secretion and Enzyme activation  
Helps maintain healthy Blood pressure

## Deficiency

Hypocalcemia  
Muscle problems  
Extreme fatigue  
Lack of energy  
Nail and skin problems (psoriasis, eczema)  
Osteopenia & Osteoporosis  
Painful PMS  
Dental problems  
Depression

## Found in

yogurt, cheese, milk  
tofu, sardines, salmon,  
**fortified juices**  
**leafy green vegetables**  
not spinach/swiss chard



# CHLORIDE

Daily intake 3400 mg

Is one of the most important electrolytes in the blood. It helps maintain proper blood volume, blood pressure, and PH of your body fluids.

## Benefits

Balances fluids in the body  
A component of stomach acid,  
essential to digestion

## Deficiency

Muscle weakness  
Dizziness  
Episode of unconsciousness

## Found in

salt  
soy sauce  
processed foods



# CHROMIUM

Daily intake 120 mcg

Is an essential trace mineral that can improve insulin sensitivity and enhance protein carbohydrates and lipid metabolism.

## Benefits

Enhances the activity of insulin  
Helps maintain normal blood glucose levels, and is needed to free energy from glucose

## Deficiency

Blood sugar metabolism  
Anxiety, fatigue  
Cholesterol metabolism

## Found in

meat, poultry, fish, eggs  
**berries, leafy greens,**  
**potatoes, sprouts**  
**some cereals**  
**nuts, asparagus**  
cheese

# COPPER

Daily intake 2 mg

Together with iron, it enables the body to form red blood cells. It helps maintain healthy bones, blood vessels, nerves and immune function, and it contributes to iron absorption.

## Benefits

Plays an important role in iron metabolism and immune system  
Helps make red blood cells

## Found in

liver, shellfish  
**nuts, seeds,**  
**sprouts**  
**whole-grain products**  
**beans**  
**prunes**  
**cocoa**  
black pepper

## Deficiency

Pale skin  
Vision loss  
Fatigue and weakness  
Premature gray hair  
Weak and brittle bones  
Difficulties walking  
Sensitivity to cold  
Memory problems and learning  
Frequent sickness

# IRON

Daily intake 18 mg

Improves the blood quality, helps the formation of hemoglobin and increases our resistance to stress and diseases.

## Benefits

Helps in red blood cells helps in muscle cells  
Needed for chemical reactions in the body and for making amino acids, collagen, neurotransmitters and hormones

## Found in

red meat, poultry, eggs  
**fruit**  
**green vegetables**  
**fortified bread/grain products**  
**asparagus, sprouts**  
**berries, cherries**

## Deficiency

Unusual tiredness, fatigue, feeling anxious  
Paleness, weakness  
Loss of appetite  
Shortness of breath,  
Vomiting, nausea  
Headaches and dizziness  
Heart palpitations, more  
Frequent infections  
Dry and damaged nail and skin  
Swelling & soreness of the tongue and mouth  
Restless legs, cold hands and feet  
Strange cravings (ice, clay, dirt, chalk, paper)



# MAGNESIUM

Daily intake 400 mg

Very important in the metabolism of carbohydrates and glucose.

## Benefits

Needed for chemical reactions in the body  
Works with calcium in muscle contraction, blood clotting, and regulation of blood pressure  
Helps build bones and teeth

## Found in

**green vegetables**  
**broccoli, berries**  
**legumes**  
**cashews, sunflower seeds**  
**other seeds**  
**asparagus, leafy greens**  
halibut  
whole-wheat bread, milk

## Deficiency

Crohn's disease  
Celiac disease  
Type 2 diabetes  
Bone density  
Osteoporosis  
Brain function, personality changes, seizures  
Nerve & muscle function  
Digestive system, high blood pressure  
Heart disease, abnormal heart rhythm  
Slower calcium, potassium  
Numbness and tingling in the extremities

# MANGANESE

Daily intake 2 mg

Helps active many enzymes in metabolism and plays a role in a variety of chemical processes in the body.

## Benefits

Helps form bones  
Helps metabolize amino acids,  
cholesterol and carbohydrates

## Deficiency

Poor bone growth or skeletal  
defects  
Slow or impaired growth  
low fertility  
Impaired glucose tolerance  
Abnormal metabolism of  
carbohydrates and fats

## Found in

fish  
nuts  
whole grains  
leafy greens  
onions, sprouts

# PHOSPHORUS

Daily intake 1200 mcg

It plays an important role in how the body uses carbohydrates and fats. It is also needed for the body to make protein for the growth, maintenance, and repair of cells and tissue.

## Benefits

Helps build and protect bones and teeth  
Part of DNA and RNA  
Helps convert food into energy  
Helps shuttle nutrients into and out of cells

## Found in

milk, dairy products  
liver, meat, fish, poultry, eggs  
**green peas**  
**broccoli, asparagus**  
**potatoes, almonds**

## Deficiency

Anxiety, fatigue  
Irregular breathing  
Irritability  
Joint stiffness  
Numbness  
Weakness  
Changes in body weight



# POTASSIUM

Daily intake 3500 mg

Helps with the activity of the heart muscle and kidneys as well as with the nervous system and it helps keep the fluid.

## Benefits

Balances fluids in the body  
Helps maintain steady heartbeat  
and sends nerve impulses  
Needed for muscle contractions  
Lower blood pressure  
Benefits bones

## Found in

meat  
milk  
**fruits**  
**vegetables**  
**grains, legumes**  
**leafy greens**  
**potatoes**

## Deficiency

Psychosis, hallucinations,  
Depression  
Weakness, confusion, delirium  
Tiredness, constipation  
Cramping in arm and leg  
muscles tingling or numbness  
Nausea or vomiting  
Abdominal cramping, bloating  
Palpitations, fainting from low  
Blood pressure  
Passing large amounts of urine  
or feeling thirsty most of the  
time

# SODIUM

Daily intake 2400 mg

Are electrolytes that are needed for the body to function normally and help maintain fluid and blood volume in the body.

## Benefits

Balances fluids in the body  
Helps send nerve impulses  
Needed for muscle contractions  
Impacts blood pressure

## Found in

salt  
soy sauce  
processed foods  
**vegetables**

## Deficiency

Hyponatremia  
Headaches  
Seizures  
Restlessness  
Muscle spasms or cramps  
Weakness  
Nausea & vomiting  
Confusion or altered mental state  
Tiredness

# SULPHUR

Daily intake 1.5 g

Needed for the synthesis of glutathione, which acts as a potent antioxidant, protecting your cells from damage.

## Benefits

Helps form bridges that shape and stabilize some protein structures needed for healthy hair, skin and nails

## Found in

protein-rich foods  
meats, fish, poultry  
**nuts**  
**legumes**  
**leafy greens**  
**sprouts**

## Deficiency

Acne  
Arthritis  
Brittle nails & hair  
Convulsions  
Depression, memory loss  
Insulin resistance, obesity  
Gastrointestinal issues  
Alzheimer's disease  
Slow wound healing  
Heart disease  
Chronic fatigue  
Rashes



# ZINC

Daily intake 15 mg

Helps in healing from an infection or disease.

## Benefits

Helps form many enzymes and proteins and create new cells  
Frees vitamin A from storage in the liver needed for immune system, taste, smell and wound healing

## Found in

red meat, poultry, oysters  
some other seafood  
**fortified cereals**  
**beans, nuts**  
**onions, sprouts**  
**berries, cherries**

## Deficiency

Hair loss  
Acne  
Eye and skin lesions  
Chronic disease  
Slow healing of wounds  
Vision getting worse  
Food doesn't taste as good  
Trouble hearing, mental lethargy  
Stopped growing (kids)  
Diarrhea  
Weight loss  
Impotence

# QUESTIONS

Do you feel that you get enough minerals daily from the food that you are consuming?

Do I have any deficiency symptoms from the lack of minerals in my diet?

What minerals am I low on?

Are you going to start eating healthier food to make sure you are getting your minerals in a day?

# *REFERENCES*

Encyclopedia of Vitamins, Minerals and  
Supplements by Tova Navarra

The real vitamin and mineral book by Shari  
Lieberman

Vitamin, mineral, and Dietary supplements by  
American Dietetic Association

Vitamin and Minerals by Alan H. Pressman

and many more books are available on this  
subject