Like vitamins, minerals are also necessary to maintain proper body functions. There are 22 minerals that are needed in varying amounts; 250mg and higher are the major minerals, while the trace minerals are 20mg or less.

**Major Minerals**

**Phosphate**

**Adults:** 700mg  
**Food sources:** Meat and milk  
**Functions:** Helps build teeth and bones, used in energy production

**Magnesium**

**Adult females:** 310-320mg  
**Adult males:** 400-420mg  
**Food sources:** Dark, green leafy vegetables, nuts, fruits and vegetables  
**Function:** Muscle contraction, enzyme function, energy transport, and building protein

**Chloride**

**Adults:** 2.3g  
**Food sources:** Table salt and vegetables  
**Function:** Balance body fluids and major component of stomach fluids

**Potassium**

**Adults:** 4700mg  
**Food sources:** Milk, yogurt, nuts, citrus fruits, meat and fish, bananas  
**Functions:** Maintains heart function, builds muscle and protein, growth, and acid-base balance

**Sodium**

See the article on Sodium for more information

**Trace Minerals**

**Chromium**

**Adult males:** 35mcg  
**Adult females:** 25mcg  
**Food sources:** Meat, eggs, apples, bananas, spinach  
**Function:** Stimulates fatty acid and cholesterol synthesis, breaks down insulin

**Copper**

**Adults:** 900mcg  
**Food sources:** Whole grains, nuts, beans, potatoes and organ meats  
**Functions:** Maintains health of nerves, blood vessels, bones and helps form blood cells

**Fluoride**

**Adult Males:** 4mg  
**Adult Females:** 3mg  
**Food sources:** Fluoridated water  
**Function:** Builds strong teeth and bones

**Iodine**

**Adults:** 150mcg  
**Food Sources:** Iodized salt, seafood, kelp  
**Functions:** Normal thyroid function and normal metabolism of cells.

**Manganese**

**Adult males:** 2.3mg  
**Adult females:** 1.8mg  
**Food sources:** Whole grains, nuts, legumes  
**Functions:** Fight off free radicals, formation of connective tissue, blood, and bones
**Selenium**

**Adults:** 55mcg  
**Food sources:** Plants and animals  
**Functions:** antioxidant

**Zinc**

**Adult males:** 11mg  
**Adult females:** 8mg  
**Food sources:** Meat, poultry, seafood, grains, nuts  
**Functions:** Immunity, growth and development, wound healing, and synthesis of proteins and DNA

**Iron**

See Iron article for information on this mineral.

Sodium, chloride, and potassium are **electrolytes** meaning they regulate body fluids in and out of cells and transmit nerve impulses. Deficiency for sodium and chloride are rare but potassium deficiency can take place if a balanced diet is not eaten.

All of these minerals are important for the day to day function of our bodies no matter the amount needed. Deficiencies of minerals tend to be rare as they are easily obtained from our diets. However, two minerals are associated with deficiencies: **calcium** and **iron**. These minerals are really important to our bodies, yet tend to be the hardest to get due to certain properties of the minerals as well as from eating habits.

For more information:

**MedLine Plus** - information on variety of minerals.

**University of Maryland Medical Center** - search for minerals that you are interested in.