

## **Minerals**

Minerals are important to a healthy diet. Essential inorganic nutrient minerals are included into the body through plants. Minerals crucial for human life are classified by nutritionists as *macrominerals* (major minerals) or *trace elements*. *Macrominerals* include electrolytes (mineral compound when dissolved in water becomes iron). *Trace element* minerals are needed in small amounts in the body.

## *Macrominerals:*

- Calcium involved in the bones & teeth. Helps in muscle contraction. Control nerve impulses transmission. Calcium is involved in vitamin b12 absorption, fat digesting enzyme (pancreatic lipase) and in the secretion of insulin from the pancreas. Needed for normal clotting of blood.
- Chloride (also known as principal electrolytes)
- Magnesium used to make body tissue
- Phosphorous essential for strong bones and teeth
- Potassium (also known as principal electrolytes) balance & interact with sodium in controlling blood pressure and support electrical impulses across cell membranes.
- Sodium (also known as principal electrolytes) regulate the body fluid balance
- Sulfur (a diet that provides adequate protein also provides adequate sulfur) -Sulfur helps the body to resist bacteria, cleanse the blood, and protects protoplasm of cells.

## Trace Elements:

• Chromium – helps insulin facilitate the entrance of glucose into cells, requirement of energy



- Copper important in production of hemoglobin. Prostate gland functions and oil gland activities help prevent acne. Nerves and joints require copper for healthy functioning.
- Fluoride have toxicity concerns and is associated with increased cancer risk
- Iodine
- Iron found in hemoglobin and myoglobin, two proteins that store and transport and oxygen
- Manganese helps metabolize carbohydrates and synthesize fats and cholesterol
- Molybdenum assists with fats and carbohydrates metabolism of. Molybdenum mobilizes iron from the liver reserves. It helps prevent anemia and enhance general feeling of well-being.
- Selenium antioxidant and cancer prevention mineral
- Zinc protects nerve and brain tissue, bolsters the immune system

The body stores amounts of minerals but keeps more than 5 grams ( $\sim$ 1/6 of an ounce) of each of the macrominerals and principal electrolytes on hand.

The body needs to consume more than 100 milligrams a day of each macrominerals to maintain a steady supply and to make up for losses.

The body stores less than 5 grams of each trace element and need to take in less than 100 milligrams a day to stay even.