



## HSE ALERT # 160

# MINERALS

The **minerals and trace minerals** are an essential factor for proper function and structure of all living cells. Similar to vitamins, minerals function as Coenzymes, promoting the body performance, energy, growth and healing.

The chemical balance is essential in proper functioning of body similarly an **imbalance of minerals in the human body may lead to various types of illnesses**. Maintaining mineral balance is essential for good health.



### Sources of Minerals:

Minerals are found throughout the body, originally came from earth, in the form of small particles of rock. These small particles eventually find their way through soil to all living organisms such as plants. As plants grow, nutrients including minerals are taken up through the roots and are deposited in the cellular structure of the plant. When the plant is digested by humans or animals, the minerals are easily absorbed into our systems. Absorption of minerals taken in from live plant food is significantly more efficient than taking mineral supplements. Plant synthesis is very efficient, while mineral synthesis using supplements is much less efficient.

Minerals are broken into two classes, macro minerals, and micro (trace) minerals.

**Macro minerals:** include calcium, magnesium, sodium, potassium, and phosphorus. Typically, macro minerals are needed in the tissues in larger amounts than trace minerals.

**Micro (trace) minerals:** include boron, chromium, copper, germanium, iodine, iron, vanadium, and zinc.

### Supplementation:

Although it is possible to receive adequate amounts of minerals through diet alone, supplementation is generally thought of as being essential for good health. Research indicates that there is a very low mineral content in the farm soils in many parts of the world. Farmers are concerned with rate of growth of their products and pay little or no attention to minerals, other than those that promote growth of their products. Therefore the vegetables and fruits we eat have a very low trace mineral content.

### Conclusion:

It is essential to take supplemental minerals in balanced amounts, because cells of the body compete for minerals that are needed. Too much of one mineral can cause cells to ask for and look for other minerals, which if not present, can create an imbalance in the mineral and trace mineral makeup of the cellular structure.