Trace Minerals: Their Functions for a Human Body

Minerals play a significant role in the normal growth and functioning of the human body and are as valuable as other essential nutrients. Your body needs several minerals to perform its various functions and must receive an adequate supply from time to time. If you are now wondering how many minerals are there in the human body, then the answer is simple — five major minerals and several trace minerals. Let us now understand these two categories of minerals and how they impact your body.

Major Minerals vs. Trace Minerals

Minerals can be broadly classified into two categories based on your bodily needs. There are some minerals that your body needs in larger quantities, which are known as major minerals. The five major minerals present in the human body include Calcium, Potassium, Sodium, Phosphorous, and Magnesium.

All other minerals present in the body are trace minerals, and some of the popular ones include iron, zinc, copper, iodine. As the name implies, your body needs trace minerals in very small quantities. You can supply your body with all these minerals through a healthy diet. Nevertheless, that seldom happens due to time constraint and erratic lifestyle.

In such cases, you can always identify the deficiency based on symptoms and nourish your body with specific foods or supplements. Minerals act as brain boosters, improve immune function, promote metabolism, regulate blood pressure and play a pivotal role in several other bodily functions. However, whether it is the major minerals or the trace minerals, you need to consume them in moderation.

Functions of Trace Minerals in The Body

We are aware of how important most major minerals are for the normal functioning of the human body. For example, Calcium and Magnesium promote teeth and bone health while Potassium helps muscle contraction. Likewise, Sodium helps balance bodily fluids and Phosphorous helps with the acid-base balance. However, there isn't enough attention being given to trace minerals and their functions.

Trace minerals aid the production of hormones and enzymes in the body. Also, they promote the transportation and distribution of vitamins and other nutrients within the body. As a result, deficiency of trace minerals may hamper all of this and more. The most dangerous part is that trace minerals and their deficiencies do not show up immediately but may gradually deteriorate physical and mental health. Let us now discuss some essential trace minerals and how they impact your bodily functions.

Iron

Iron deficiency is often caused due to a lack of proper diet or due to blood loss caused during menstruation, accidents, and surgeries. Iron is essential to regulate hemoglobin, which helps transport oxygen to the blood cells. Not many people are aware of the fact that iron deficiency not only tires your body but also the mind. As a result, iron-deficient individuals experience difficulties while trying to concentrate. So, if you've been experiencing those symptoms, consider supplementing your body with the required daily intake of this trace mineral.

Iodine

Iodine is crucial for the healthy functioning of the thyroid gland and has been linked to children born with bone and brain impairments. It is essential that the child receives an adequate supply of this trace mineral while in the mother's womb and thereafter. In fact, in many developing countries it is mandatory for salt manufacturers to iodize table salt. Some natural sources of iodine include milk, yogurt, cheese, and seafood.

Zinc

Zinc is present in each and every cell of your body and plays an important role in the replication of DNA. Also, it strengthens the immune system and helps the body fight harmful bacteria and viruses. So, although your body needs very little of this trace mineral, its present throughout your system. Some common sources of zinc are fortified processed foods, whole grains, milk, beans, cashews, and almonds.

Magnesium

Magnesium aids over 300 cellular functions in the human body and is also a key electrolyte. It is particularly known to relax the muscles and nerves in the body. Also, it helps regulate blood pressure and keep the heartbeat steady. You can easily supply your body with this trace mineral through Magnesium-rich green leafy veggies such as kale, spinach, collard greens. Add them to your sandwiches, salads, and soups to take care of your magnesium requirements. This trace mineral is also present in peas, cabbage, kidney beans and several other food ingredients that can be easily incorporated in your everyday diet.

Selenium

Selenium balances the cells in the body and helps produce antioxidant enzymes, which fight free radicals and thereby prevent cell damage. However, those suffering from certain health conditions such as HIV, Crohn's disease, or undergoing certain treatments such as dialysis may have to increase their Selenium intake. Your body can get a good supply of Selenium from foods such as Brazil nuts, brown rice, baked beans, spinach, milk, yogurt, and several other foods.

Now that you know how many minerals are there in the human body and have a fair clue of how they impact your body, its time to do a quick self-assessment. Start by listing out the common problems you are facing. If you are unable to concentrate on your studies or at work, then that could indicate an iron deficiency. So, you don't need a brain booster to level-up, but just some healthy iron supplements. Likewise, frequent immune breakdowns might indicate a zinc deficiency. So, if you've been picking Chinese fast food for dinner every night then maybe its time to start cooking some healthy homemade food. That is indeed the easiest and most natural way of supplementing your body with all the essential trace minerals.