

DO WE NEED MINERALS?

ABOUT MINERALS

- Minerals are chemical elements that originate from the earth and are found in the food we eat.
- Plants absorb minerals from the soil and when we eat the plants our bodies absorb the minerals. Animals also eat the plants, so when we eat meat, chicken or fish, we indirectly also absorb minerals.
- Our bodies cannot make minerals, so whatever we need, has to come from food or from taking supplements.
- In order to maintain normal function, the body requires small amounts of approximately 18 different minerals.
- Minerals work in harmony with vitamins; together they are referred to as micronutrients and both are essential for the body to function properly.
- Depending on how much the body needs, minerals are divided into two categories
 - macro (major) minerals
 - micro (trace) minerals.
- Macro minerals are needed in amounts of 100 mg or more a day. Examples are sodium, potassium, calcium, magnesium, phosphorus, chlorine and sulphur.
- The body requires less than 100 mg a day of micro minerals which include boron, chromium, iodine, iron, manganese, molybdenum, selenium, silicon, vanadium, copper, cobalt and zinc.

FUNCTION OF MINERALS

On their own, minerals are completely inactive like salt in a rock. Once in the body, they become multi-functional, health-enhancing heroes.

Here are just a few examples:

- Calcium and phosphorus are important in bone structure and growth
- Potassium and sodium are necessary for electrolyte balance
- Iron aids the transport of oxygen
- Chromium helps to move blood sugar (glucose) from the blood into the cells to be used as energy and turn fats, carbohydrates and proteins into energy
- Copper is needed to help the body use iron
- Iodine aids proper physical and mental development
- Magnesium helps maintain muscles, nerves and bones
- Manganese is required to manufacture the enzymes necessary for the metabolism of proteins and fat
- Molybdenum functions as a cofactor for a number of enzymes that activate important chemical transformations
- Potassium works with sodium to maintain the body's water balance
- Selenium is incorporated into proteins to make selenoproteins, which are important antioxidant enzymes
- Zinc functions as an antioxidant and is involved in many critical biochemical reactions.

WHY DO WE NOT ABSORB ENOUGH MINERALS FROM FOOD?

Despite trying to eat healthy, research has found that most people do not have enough minerals in their bodies. Although the shortage is not enough to be life-threatening, it has a huge effect on how well our bodies are functioning.

The main reason why we do not have enough minerals in our bodies, despite eating healthily, is because of the shortage of natural minerals in the soil.

Over-farming of land and modern farming methods have stripped the soil of its natural mineral content.

EFFECTS OF A SHORTAGE OF MINERALS

The following examples are just a few of the conditions that can develop due to a shortage of minerals in our bodies:

- Calcium is needed for over 300 different functions in the body. For instance, a lack of calcium will influence how well our muscles contract and relax, which can lead to tiredness. Calcium also plays a very important role in keeping our bones strong and healthy. A lack of calcium can lead to brittle bones, known as osteoporosis.
- A lack of chromium can affect how well the insulin in the body works, which will then affect the sugar balance in the blood. This imbalance can lead to changes in energy and concentration levels amongst others.
- Lack of iron may lead to unusual tiredness, shortness of breath and a decrease in physical performance, as well as learning problems in children and adults.
- Severe magnesium deficiency can result in low levels of calcium in the blood, because these two minerals usually work together. Lack of magnesium can cause muscle spasms, sleep difficulties, lack of concentration to name a few.
- A lack of potassium can lead to weakness, tiredness, or cramping in the arm or leg muscles. These symptoms are sometimes severe enough to cause inability to move the arms or legs due to weakness (much like a paralysis), tingling or a feeling of pins and needles and vomiting.
- Zinc deficiency can influence how well the immune system is working and it can cause problems in thinking properly and influence certain hormonal functions in the body.

EFFECTS OF AN OVER-DOSAGE OF MINERALS

Micronutrients work in conjunction with one another.

Taking large doses of any one mineral can upset the balance of mineral levels in the body and this can cause health problems.

Therefore, always read the labels when taking supplements, so that you do not duplicate certain minerals by taking different kinds of supplements together.

Here are some examples of what can happen when you take too much of certain minerals:

- Too much calcium may cause nausea, vomiting, loss of appetite, increased urination, kidney toxicity, confusion and irregular heart rhythm
- Too much iodine might lead to thyroid problems
- Too much iron can cause constipation
- Too much magnesium in the blood can lead to heart problems
- Too much potassium can cause irregular heart beats.

CONCLUSION

Minerals are extremely important and most of us do not take enough minerals in through diet.

A good multivitamin and mineral supplement every day will go a long way to keep one in a healthy condition.

Be careful not to duplicate any of the minerals by taking different supplements.

Ask your pharmacist to recommend one good multivitamin and mineral supplement and keep to that.

The information provided in this article is for education purposes only and does not serve as a medical diagnosis. Members should always consult their healthcare provider with serious symptoms.

Please note that Heritage Health plans do not necessarily cover the costs of the condition/s described.

