

2020

Module 5: Minerals



ACADEMY OF QUEST FOR HEALTH®

RX BALANCE Technology Inc.

8/6/2020

Module 5

Education with Excellence

5.0 Minerals

Calcium, chloride, magnesium, phosphorus, potassium, sodium, and sulphur are major minerals that are required in amounts greater than 100 mg/day.

Other minerals are needed by the body but only in trace amounts: iron, zinc, copper, manganese, fluoride, chromium, molybdenum, selenium, and iodine. Trace minerals are required in amounts less than 100 mg/day in our diets.

5.0.1 Major Minerals

Calcium

This is not only the most abundant mineral in the body but one of the most essential, as it is required for so many bodily functions. Calcium ensures strong bones and teeth. In addition, the body depends on this mineral for normal nerve conduction, muscle contraction, acid-alkaline balance, and blood clotting.

Food sources of calcium include broccoli, kale, tahini (sesame butter), dandelion greens, seafood, oats, organic dairy products, and figs.

Chloride

This mineral is a component of stomach acid, hydrochloric acid (HCl). It is also needed to maintain the acid-alkaline balance of bodily fluids and the water balance within the body.

Most chloride in the diet comes from salt (sodium chloride).

Chloride is considered an electrolyte, as well.

Magnesium

A good teammate to calcium and phosphorus, magnesium works to build bones, conduct nerve impulses, and contract muscles. During metabolism, it increases enzymatic activity essential for the production of energy, especially in the heart, brain, and other vital organs.

Green leafy vegetables, lima beans, whole grains, seafood, nuts, and seeds are excellent sources of magnesium.

Phosphorus

Next to calcium, phosphorus is the second-most common mineral in the body. Intricately related to calcium, the two are needed for nerve conduction and muscle contraction. Together they also lend structure to the bones and teeth. Phosphorus is also a component of adenosine triphosphate (ATP), the main energy currency in cells, and of DNA and RNA. Phosphorus is readily available in all kinds of foods. Most people tend to ingest an overabundance of it in the form of phosphates, especially from meat products and soft drinks. Too much phosphorus interferes with calcium absorption.

Dairy products, meats, seeds, and nuts are sources of phosphorus.

Potassium

This mineral works with sodium to regulate the water and acid-alkaline balance in the body and to stimulate nerve impulses and muscle contractions in conjunction with calcium. It is an important mineral in kidney function and helps supply the brain with oxygen. As an electrolyte, potassium transmits electrochemical impulses to regulate the heartbeat. The actions of potassium are strongly tied to the other electrolytes, sodium and chloride. While a balance of these minerals is important, excessive sodium and chloride can cause high blood pressure.

Eating fresh fruits and vegetables and whole grains regularly provides abundant potassium for the body's requirements.

Sodium

Sodium is found throughout the body. The main function of sodium is to regulate the water and acid-alkaline balance in the body, although it performs a multitude of other functions. Sodium is essential for nerve stimulation and muscle contraction. Almost all foods contain some amount of sodium.

Except to replace electrolytes in dehydration, sodium should not be supplemented in the diet; it should be avoided. Excess amounts of sodium have contributed to water retention and high blood pressure in some cases.

Sulphur

Both essential and abundant, sulphur is a mineral that is readily available in food. Sulphur is a part of thiamine and biotin and thus plays an essential role in fat, carbohydrate, and protein metabolism. Since some amino acid contain this mineral, adequate amounts of protein ensure an ample supply of sulphur.

5.0.2 Trace minerals

Iron

Known for its critical role in transporting oxygen in red blood cells, iron not only improves energy and prevents anemia but also provides each cell with oxygen to function better. As the most abundant trace mineral in the body, iron is also involved in other body functions, metabolism, and DNA.

Those who require more iron may obtain it from eating lean, organic red meat, eggs, green leafy vegetables, whole grains, blackstrap molasses, dulse, almonds, beans, and whole grains.

Zinc

One of our most important trace minerals, zinc helps the immune system fight a wide variety of infections. Essential for healthy skin, zinc also helps with quicker healing of burns and wounds. Zinc is needed by many hormones and supports a healthy reproductive system.

Food sources of zinc include beans, lean beef, seafoods, whole grains, egg yolk, and soybeans.

Copper

Essential for many enzymatic reactions, copper is a trace mineral required for a variety of body processes. Together with iron, copper helps the red blood cells transport oxygen. Among its long list of functions, copper also lends both strength and elasticity to connective tissue.

Food sources of copper include almonds, avocados, mushrooms, salmon, nuts, beets, beans, and barley.

Manganese

This mineral is essential for the metabolism of carbohydrates, fats, and proteins. It is also a part of an antioxidant enzyme, thus helping to protect the cells of the body from oxidative damage.

The best food sources of manganese include spinach raspberries, nuts, whole grains, and tea.

Fluoride

This mineral is crucial for the formation of healthy teeth and bones.

Fluoridated water, seafood, and tea are sources of fluoride.

Chromium

The mineral chromium is known for its ability to stabilize sugar imbalances in the blood by enhancing the capability of insulin to move glucose from the blood to the cells. It also contributes to immune system health and growth.

To increase chromium in the body, eat more whole grains, blackstrap molasses, seafood, mushrooms, and potatoes.

Molybdenum

This mineral works as a coenzyme, helping other enzymes detoxify alcohol, metabolize sulphur, and release iron from the liver so that oxygen can be transported to body cells and tissues.

Food sources of molybdenum include whole grains, dark green leafy vegetables, dairy, and beans.

Selenium

An antioxidant, selenium works with vitamin E to fight free-radical damage. This trace mineral is also playing a role in helping maintain body temperature and basal metabolic rate as it is needed to make thyroid hormone.

The amount of selenium in foods is greatly affected by the condition of the soil it is grown in. Generally, selenium should be available in Brazil nuts, broccoli, brown rice, chicken, seafoods, garlic, and onions.

Iodine

This mineral is crucial for regulating the body's metabolism. Found mainly in the thyroid gland, it is needed to produce thyroid hormones that stimulate the body's basal metabolic rate. This is important for burning fat and increasing energy, and for normal growth and development in children.

While too little iodine leads to an underactive thyroid, or hypothyroidism, over supplementing is also harmful to the thyroid gland. For this reason, food source of iodine, especially kelp, are recommended

instead of inorganic sources such as potassium or sodium iodide. This important mineral may be consumed in the form of sea vegetables and saltwater fish.

DO NOT COPY



Chromium Picolinate

Nature's Harmony® Chromium Picolinate is formulated from a potent bioactive source of the trace mineral chromium that helps maintain healthy glucose levels. Chromium picolinate is the most popular form of this supplement, binding chromium to picolinic acid to make it more readily absorbed.

PRODUCTS CODES: 400894

HEALTH SOLUTIONS:

RECOMMENDED USE	DOSAGE FORM	RECOMMENDATIONS
A factor in the maintenance of good health. Provides support for healthy glucose metabolism. Helps the body to metabolize carbohydrates and fats. Helps to prevent chromium deficiency.	Capsules	Adults take 1 capsule daily. Consult a health care practitioner for use beyond six months.

DESCRIPTION:

Chromium is a vital trace element required for normal glucose metabolism and for the proper digestion and absorption of carbohydrates. Nature's Harmony® Chromium Picolinate, available in 500 mcg potencies, provides support for normal, healthy insulin action and glucose utilization.

Recommended Daily Allowance:

500 mcg is considered to be the safe upper limit for adults in good health; higher amounts should be taken only on the recommendation and under the supervision of a health care practitioner.

Food Sources:

Calf's liver, chicken breasts, oysters, refried beans, brewer's yeast, wheat germ, wheat bran, whole grains, mushrooms, peas, apples (skin on).

Causes of Deficiency:

Consuming highly processed foods.

Symptoms of Deficiency:

Insulin concerns.

Complementary Nutrients: Multi-vitamin.

HOW IT WORKS:

Chromium picolinate stimulates enzymes in metabolism and helps the hormone insulin to regulate blood sugar. It also helps enhance insulin function by making insulin receptors function properly. People with type 2 Diabetes may find that chromium picolinate helps them to manage their blood sugar levels, as well as possibly reduce elevated blood cholesterol and triglyceride levels. Chromium picolinate supplements do not seem to affect normal glucose levels.



DID YOU KNOW...

Food processing strips foods of chromium, particularly in refined grains.

RESEARCH:

Several published clinical studies support the use of chromium picolinate to help maintain healthy glucose levels. One large human trial showed that increased chromium intake could improve glucose and insulin factors in people with type 2 Diabetes. The USDA conducted an impressive review of 20 years of research on chromium picolinate and found it to be more effective than other types of chromium for improving glucose and insulin variables associated with diabetes.

SIDE EFFECTS:

Dietary intake and regular doses of supplemental chromium picolinate are considered quite safe with few if any side effects. However, high doses of chromium picolinate may result in headaches, insomnia and mood changes. High doses may also cause serious damage to kidney and liver function.

INTERACTIONS AND SAFETY CONSIDERATIONS:

Consult your health care practitioner before use if you are pregnant or breastfeeding, or taking medication which lowers blood sugar. Do not supplement with chromium picolinate if you suffer from a pre-existing kidney or liver problem. Chromium picolinate supplements may interact with oral drugs for diabetes, NSAIDS and psychiatric medications. If you are taking any medications on a regular basis, consult with your health care practitioner before supplementing with chromium picolinate.

OTHER CONSIDERATIONS:

N/A

LABEL:



Natures Harmony®

PICOLINATE DE CHROME

500MCG

Contribue au sain métabolisme du glucose

GESTION DE LA GLYCÉMIE

90 capsules
NPN 80016239



Usage recommandé: Contribue au sain métabolisme du glucose.

Dose recommandée (adultes): Prendre 1 capsule par jour. Pour un usage de plus de six mois, consulter un praticien de soins de santé.

Ingédient médicamenteux: Chaque capsule contient: Chrome (sous forme de picolinate de chrome) ... 500 mcg

Ingédients non médicamenteux: stéarate de magnésium, dioxyde de silicium, cellulose, gélatine.

Information sur les risques: Ne pas utiliser si vous êtes enceinte ou allaitante. Consulter un praticien de soins de santé avant d'en faire l'usage si vous souffrez d'une maladie rénale et/ou de diabète.

Ce produit ne contient pas de: médicaments, produits laitiers, gluten, crustacés, soja, ni colorants, arômes ou agents de conservation artificiels.

RANGER DANS UN ENDROIT FRAIS ET SEC. TENIR HORS DE PORTÉE DES ENFANTS.

Recommended Use: Provides support for healthy glucose metabolism.

Recommended Dose (Adults): Take 1 capsule daily. Consult a health care practitioner for use beyond six months.

Medicinal Ingredient: Each capsule contains: Chromium (from chromium picolinate) ... 500 mcg

Non-medicinal Ingredients: Magnesium stearate, silicon dioxide, cellulose, gelatin.

Risk Information: Do not use if pregnant or breastfeeding. Consult a health care practitioner prior to use if you have a kidney disorder and/or diabetes.

This product does not contain: corn, dairy, egg, gluten, shellfish, soy, or artificial colours, flavours or preservatives.

STORE IN A COOL, DRY PLACE. KEEP OUT OF REACH OF CHILDREN.



Natures Harmony®

CHROMIUM PICOLINATE

500MCG

Support for Healthy Glucose Metabolism

BLOOD GLUCOSE MANAGEMENT

90 Capsules
NPN 80016239



Actual Size
Grandeur réelle

DO NOT USE IF SEAL UNDER CAP IS BROKEN. NE PAS UTILISER SI L'OPÉRICULE INTÉRIEUR EST ENDOMMAGÉ.

www.naturesharmony.com
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Magnesium Bisglycinate 200 mg

Quest® Magnesium Bisglycinate provides magnesium 200 mg in the easily absorbed form of bisglycinate and citrate. Magnesium is a vital component of bone and tooth metabolism, and participates in energy production, muscle contraction, nerve function, and the maintenance of the acid-alkali balance of body fluids.



PRODUCTS CODES:

338133

HEALTH SOLUTIONS:

RECOMMENDED USE	DOSAGE FORM	RECOMMENDATIONS
A factor in the maintenance of good health. Helps the body to metabolize carbohydrates. Helps the body to metabolize fats. Helps the body to metabolize proteins. Helps in the development and maintenance of bones. Helps in the development and maintenance of teeth. Helps in tissue formation. Helps to maintain proper muscle function.	Vegetarian Capsules	Adults take 1 capsule daily.

DESCRIPTION:

Each vegetable capsule of Quest® Magnesium Bisglycinate contains 200 mg of element magnesium (bisglycinate, citrate). Both forms are high in effectivity, absorbability and bioavailability. Magnesium bisglycinate is a kind of organic magnesium salt, which also is the source of an amino acid called glycine. Besides, magnesium bisglycinate is considered as one of the gentlest forms of magnesium salt on the stomach. Formulated as a capsule, this supplement is easily absorbed and easy to swallow.

This product contains no corn, dairy, egg, gluten, shellfish, soy, sulfites, animal derivatives, artificial colours, flavours or preservatives.

Recommended Daily Allowance:

Dosage varies, depending on age and gender.

Food Sources:

Legumes, nuts and seeds, whole grains, green leafy vegetables, blackstrap molasses, wheat germ.

Causes of Deficiency:

Diet of refined foods, excess calcium intake, alcoholism, surgery foods, diuretics, liver and kidney disease, some oral contraceptives.

Symptoms of Deficiency:

Loss of appetite, nausea, vomiting, fatigue, weakness, problems in nerve conduction and muscle contraction, muscle cramps, seizures, abnormal heart rhythm, personality changes, irritability, insomnia, predisposition to stress.

Complementary Nutrients:

Calcium, phosphorus, vitamin B6.

HOW IT WORKS:

Besides its role in maintaining healthy bones by promoting the absorption of calcium, magnesium is involved in maintaining a healthy nervous system. In addition, magnesium is required for muscle relaxation, energy production, protein formation, cellular replication, the regulation of sodium and potassium in the cells, and efficient heart muscle function.



DID YOU KNOW...

Study shows that magnesium is one of the nutrients with the highest prevalence of inadequate intakes. In 2012 research, more than 34% of Canadians over the age of 19 consumed magnesium in quantities below the Estimated Average Requirement, with the prevalence of inadequate intakes rising to greater than 40% in half the adult age and sex groups.

RESEARCH:

Magnesium supplementation for bone and muscle health (including heart muscle) is supported by lots of scientific research. Extensive research shows that magnesium is important for many processes in the body, including regulating muscle and nerve function, blood sugar levels, and blood pressure and making protein, bone, and DNA. Magnesium also helps to maintain the body's ability to metabolize nutrients, and helps in energy metabolism as well as tissue formation.

SIDE EFFECTS:

No known side effects at recommended dosage.

INTERACTIONS AND SAFETY CONSIDERATIONS:

Consult a health care practitioner before use if you have a serious illness or are on any medications.

OTHER CONSIDERATIONS:

Some people may experience diarrhoea. For adult use only. Keep out of reach of children.

LABEL:

 QUEST PRÉVENTION Bisglycinate de magnésium 200 mg NPN 80025846 90 capsules végétales Un facteur dans le maintien d'une bonne santé Sans colorants, arômes ou agents de conservation artificiels SUPÉRIEURE QUALITÉ ASSURÉE	Usage recommandé: Aide l'organisme à métaboliser les glucides, les lipides et les protéines. Aide au développement et au maintien des os et des dents, et au bon maintien des fonctions musculaires. Dose recommandée (adultes): Prendre 1 capsule par jour. Ingédient médicamenteux: Chaque capsule contient: Magnésium (bisglycinate de magnésium) ... 200 mg Ingédients non médicamenteux: Cellulose, stéarate de magnésium, dioxyde de silicium, hypromellose. Ce produit ne contient pas de maïs, ingrédients laitiers, œuf, gluten, crustacés, soja, sulfites, ni dérivés d'origine animale. Recommended Use: Helps the body to metabolize carbohydrates, fats and proteins. Helps in development and maintenance of bones and teeth and maintains proper muscle function. Recommended Dose (Adults): Take 1 capsule daily. Medicinal Ingredient: Each capsule contains: Magnesium (magnesium bisglycinate, magnesium citrate) ... 200 mg Non-medicinal Ingredients: Cellulose, magnesium stearate, silicon dioxide, hypromellose. This product does not contain corn, dairy, egg, gluten, shellfish, soy, sulfites or animal derivatives. RANGER DANS UN ENDROIT SEC ET FRAIS. TENIR HORS DE PORTÉE DES ENFANTS.	 QUEST PREVENTATIVE Magnesium Bisglycinate 200 mg NPN 80025846 90 vegetable capsules A factor in the maintenance of good health No artificial colours, flavours or preservatives PREMIUM QUALITY ASSURED	DO NOT USE IF SEAL UNDER CAP IS BROKEN. NE PAS UTILISER SI LE SCAU DE SÉCURITÉ SOUS LE CAPSOTON EST ROMPU. www.questvitamins.com 1-877-266-2615 RxBALANCE A Proud Canadian Company Une compagnie canadienne fière de l'être. F.P.O. - 80% UNE COÛTE TO BE 0.05271 30123 4 0 00000 00000 0
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RX BALANCE® The Quest for Health® with knowledge

Education with Excellence

Module 5: Minerals

quiz

1. Which of the following are trace minerals?
 - a. calcium, chloride, and sodium
 - b. magnesium, potassium, and sulphur
 - c. iron, copper, and zinc
 - d. all of the above
 - e. a and b only

2. Magnesium is required by the body for:
 - a. energy production.
 - b. nerve conduction.
 - c. bone health.
 - d. all of the above
 - e. b and c only

3. A deficiency of chromium may result from:
 - a. a poor diet of refined foods.
 - b. increased consumption of whole grains.
 - c. lack of antacid use.
 - d. all of the above
 - e. a and b only

4. Molybdenum can be obtained in the diet from:
 - a. whole grains.

- b. dark green leafy vegetables.
 - c. beans.
 - d. all of the above
 - e. a and b only
5. The term “major” when referring to minerals means:
- a. all minerals are essential.
 - b. all minerals are important.
 - c. the minerals are required by the body in amounts greater than 100mg/day.
 - d. all of the above
 - e. a and b only
6. Potassium and sodium regulate the acid-alkaline balance in the body. True or false?
7. Next to calcium, magnesium is the second-most common mineral in the body. True or false?
8. Nature’s Harmony® Chromium Picolinate helps to maintain normal blood glucose levels. True or false?
9. Seafood such as oysters and fish are good food sources of zinc. True or false?
10. Vitamin D helps with calcium absorption. True or false?