Dynamic Chiropractic

WOMEN'S HEALTH

Nutrition for Women: 6 Essential Minerals

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Minerals are essential micronutrients required in small amounts for the body to function properly. Untreated mineral deficiencies can cause serious health problems including endocrine (hormone) imbalances, osteoporosis and anemia. Different minerals play a primary role at different stages of life. For example, menstruating women often need extra iron until they hit menopause and then they can cross iron off their list, as it contributes to oxidative damage in the body. Another example is that women typically develop bone density during the first 35 years of life, creating a specific mineral reserve that forms the foundation for bone health during the postmenopausal years, when bone density tends to decline.

The main sources of minerals are certain types of whole foods, but following a diet that contains all the necessary nutrients can be a challenge for any woman. Taking a multivitamin with added essential minerals can help patients reach the recommended amount of minerals theyneed to stay healthy. Food-based natural mineral supplements are also very beneficial.

Natural mineral supplements can offer comprehensive nutritional support and help improve the body's absorption of certain other minerals and nutrients – for example, magnesium is necessary for calcium absorption. Most women are deficient in such common minerals as magnesium, calcium, iron, zinc, iodine and selenium, so it may be worth considering supplementation, as these minerals are critical for proper metabolic function, hormone balance and bone strength, among other health benefits.

Magnesium

Why women need it: Magnesium is an essential mineral that is involved in more than 300 enzyme and metabolic reactions. Low levels in the body can cause irritability, headaches, muscle weakness, irregular heartbeat, muscle spasms or twitches, constipation, and insomnia. In addition to

maintaining normal muscle and nerve function, magnesium helps to keep your heart rhythm steady and supports a healthy immune system. Magnesium is as important as calcium in developing and maintaining bone health, so an ideal bone support supplement will contain equal amounts of both calcium and magnesium. Magnesium is also involved in energy metabolism and protein synthesis, since the body requires it for completing certain chemical reactions pertaining to the metabolism of carbohydrates and fats. Finally, magnesium is required for the synthesis of the antioxidant glutathione, which is crucial for detoxification activities and a healthy immune system.

Sources: Although supplements are available, nature provides a number of dietary sources of magnesium, including leafy green vegetables, seaweed or green algae, avocados, nuts, beans, raw chocolate, and grains such as brown rice and millet.

Calcium

Why women need it: Calcium is the most abundant mineral in the body and is required for healthy muscle function, nerve transmission, intracellular signaling, and hormonal secretion. Almost all the calcium in the body is stored in the bones and teeth, where it is vital for their support and structure. It is especially important for women to get adequate amounts of calcium in order to reduce the risk of developing osteoporosis, which can lead to an increased incidence of fractures. In addition to its benefits for the bones, calcium is also effective in lowering blood pressure, treating migraines and reducing symptoms of premenstrual syndrome. The recommended daily allowance (RDA) for calcium is around 1,000 mg, while some research suggests that even higher levels may have added health benefits. Some forms of calcium have much better absorption than others, so it is best to choose sources such as calcium citrate, malate, chelate, and orotate, which are more easily absorbed by the body.

Sources: While some of the richest sources of calcium include dairy products such as milk, yogurt and cheese, it is best to stick to non-dairy sources such as sea vegetables, Chinese cabbage, kale and broccoli, as well as foods, juices, drinks and cereals that are fortified with calcium. The reason is that eating large amounts of dairy products can actually cause the body to leech calcium and minerals, due to dairy's extreme digestive challenges for even non-lactose-intolerant people. Dairy products also contain low amounts of magnesium and high levels of phosphorus, which can decrease the availability of calcium.

Iron

Why women need it: Iron is part of the protein hemoglobin, which carries oxygen in the body, but is also found in the protein myoglobin, which makes oxygen available for muscle contractions. An iron deficiency causes a hindrance in the delivery of oxygen to the cells, which can result in fatigue, decreased immunity and anemia – a condition in which red blood cells are immature, small or contain too little hemoglobin to carry the normal amount of oxygen to the tissues.

Sources: There are two forms of dietary iron: heme and non-heme iron. Heme iron is derived from the protein in red blood cells that delivers oxygen to cells and is contained in animal foods such as red meats, fish and poultry. Non-heme iron is found in plant foods such as lentils, beans, black-strap molasses, dried apricots, and raisins. Iron is a double-edged sword, however, as you need enough but not too much. Menstruating women lose blood on a monthly basis, for example, and may require supplementation, whereas most postmenopausal women do not need supplemental iron.

Zinc

Why women need it: Zinc is another mineral that is vital to healthy living, as even a small deficiency can cause decreased immunity. This mineral is most widely known for preventing and shortening the duration of colds, which is due to its powerful ability to strengthen the immune system and increase white blood cell count. Zinc is necessary for the function of many enzymes in the body, effectively assists in regulating hormones and has even been shown to increase fertility. This is a critical mineral in any supplement program, as it aids the body's absorption of minerals such as calcium, which can help to prevent osteoporosis. Finally, the anti-inflammatory and tissue-healing benefits of zinc can help improve numerous conditions such as acne and poor skin health, among others.

Sources: People who want to turn to dietary sources of zinc should consider foods such as oysters and pumpkin seeds, which are known to be rich in zinc. Other zinc-rich foods include most types of meat products, beans, nuts, whole grains, and many other seeds.

Iodine

Why women need it: Iodine was one of the first minerals recognized as essential to human health. It has been known to prevent and treat various thyroid issues, such as enlargement of the thyroid gland, which is important since hypothyroidism and iodine deficiency are associated with a higher incidence of breast cancer. There is also evidence of a link between low thyroid function and fibrocystic breast disease (FBD). This mineral strongly influences nutrient metabolism, detoxification, nerve and muscle function, nail, hair, skin and tooth condition, and has a profound impact on physical and mental development. It is especially important for women who are pregnant to monitor both their iodine levels as well as levels in their babies in order to prevent certain developmental problems.

Sources: In addition to supplementation, various foods provide the body with healthy levels of iodine, including most types of seafood, seaweeds such as kelp, clams, lobsters, oysters, and sardines. It is essential to monitor intake of some seafood, however, as patients may also put themselves at risk of consuming too much mercury.

Selenium

Why women need it: Selenium is also important for optimum health, as it is reported to mimic the action of insulin. Studies have shown that selenium effectively stimulates glucose uptake and regulates metabolic processes including glycolysis [glucose conversion that ultimately yields energy in the form of ATP], gluconeogenesis [which helps keep blood glucose from dropping too low] and fatty acid synthesis, among other key functions. Selenium also plays a role in reducing the oxidative stress associated with diabetes, which can help reduce the risk of developing the potential side effects of diabetes such as neuropathy, retinopathy and cataracts. Selenium deficiency can result in a number of functional disorders, including skeletal muscle dysfunction, cardiac dysfunction and pancreatic degeneration. Selenium acts as an antioxidant against free radicals that damage DNA and is often included with vitamins C and E to help fight against cancer, heart disease and even aging.

Sources: Natural food sources high in selenium include cereals, Brazil nuts, legumes, beef, chicken, eggs, and cheese.

Minerals:The Big 6 for Women

Mineral	Key Functions	Food Sources	RDA for Adult Women (Age 19 and older)*
Magnesium	Energy metabolism, protein synthesis, bone health,muscle and nerve function.	Leafy greenvegetables, seaweed or green algae, avocados, nuts, beans, raw chocolate, andgrains such as brown rice and millet.	Age 19-30: 310 mg Age 31+: 320 mg
Calcium	Healthymuscle function, nerve transmission, intracellular signaling, and hormonalsecretion; support and structure of bones and teeth.	Dairy products; nondairy sources (preferable) includesea vegetables, Chinese cabbage, kale andbroccoli, as well as foods, juices, drinks and cereals fortified withcalcium.	Age 19-50: 1,000 mg Age 51+: 1,200 mg
Iron	Part of theprotein hemoglobin, which carries oxygen in the body; also found in theprotein myoglobin, which makes oxygen available for muscle contractions.	Red meats,fish and poultry, lentils, beans, black strap molasses, dried apricots,raisins.	Age 19-50: 18 mg Age 51+: 8 mg
Zinc	Strengthens immune system, increases white blood cellcount, helps regulate hormones; supports absorption of calcium.	Oysters,pumpkin and many other seeds, most meat products, beans, nuts, whole grains.	Age 19+: 8 mg Pregnant: 11 mg Lactating: 12 mg
Iodine	Stronglyinfluences nutrient metabolism, detoxification, nerve and muscle function,nail, hair, skin and tooth condition and mental development.	Seafood,seaweeds such as kelp; clams, lobsters, oysters, and sardines.	Age 19+: 150 mcg Pregnant: 220 mcg Lactating: 290 mcg
Selenium	Stimulatesglucose uptake and regulates metabolic processes including fatty acidsynthesis; acts as an antioxidant against free radicals.	Cereals,Brazil nuts, legumes, beef, chicken, eggs, and cheese.	Age 19+: 55 ug Pregnant: 60 ug Lactating: 70 ug
*_Source:_ National Institutes of Health, Office of Dietary Supplements. DietarySupplements Fact Sheets.			

Complete nutrition is a must for optimal health, so it is crucial to supply the body with sufficient amounts of nutrients by eating a wide variety of vitamin- and mineral-rich foods. The best and most bioavailable form of any mineral is its natural food form, although supplementation is also an option. If you do recommend mineral supplementation, I suggest you endorse a brand that is made from natural food-based sources of minerals, rather than synthetic ones. A diet based on mineral- and nutrient-rich whole foods is linked with increased antioxidant activity, improved digestion, healthy inflammation response, healthy glucose metabolism, healthier lipid profiles and increased immune activity, among other benefits.