

Nutrition News

Information for Senior Citizens

*Developed by Colorado State University Extension
Department of Food Science & Human Nutrition*

Mineral Supplements

We are constantly bombarded with the message, "You are not getting enough nutrients. You need to fortify your diet." It seems that each day brings a new supplement that you need to take. Are mineral supplements necessary? Are they harmful? This newsletter will address some common questions regarding the use of mineral supplements.



Which Minerals Do I Need?

The Food and Nutrition Board considers 16 minerals essential for humans; 6 are called macrominerals, measured in milligrams, and the other 10 are called microminerals, measured in micrograms.

Macrominerals: calcium, phosphorus, magnesium, sodium, potassium, and chloride.

Microminerals: cobalt, iron, zinc, iodine, copper, fluorine, manganese, chromium, selenium, and molybdenum.

Iron

The recommended intake for iron in men and women after menopause is 8 mg/day. Food sources include lean meats, dried legumes (beans and peas), enriched grains, fortified cereals, clams, oysters, and dark green leafy vegetables. Iron found in meat, called "heme" iron, is better absorbed than iron found in vegetables. Vitamin C increases the absorption of iron. So adding salsa to your bean burrito or drinking orange juice with your morning toast will help your body absorb the iron in those foods.

Vegetarians and menstruating women are at risk of iron deficiency. Symptoms of iron deficiency include fatigue, dizziness, irritability, headaches, pale appearance, brittle nails, and cracked lips. While fatigue is one of the symptoms of iron deficiency, it does not mean that iron deficiency is involved in every case of fatigue. A doctor should diagnosis iron deficiency.

INSIDE THIS ISSUE

- 1 Mineral Supplements
- 1 Which Minerals Do I Need?
- 1 Iron
- 2 The Importance of Calcium, Phosphorus and Magnesium for Bone Health
- 2 Chromium
- 2 The Three Electrolytes: Sodium, Potassium, and Chloride
- 3 General Recommendations
- 3 Questions and Answers
- 4 Quick and Nutritious Snacks

The Importance of Calcium, Phosphorus and Magnesium for Bone Health

Calcium, the most abundant mineral in the body, is important for healthy bones, cell maintenance, and proper heart function. Calcium is found in an abundance of foods such as milk, cheese, tofu made with calcium, and canned sardines and salmon with bones.

The Dietary Reference Intake (DRI) for calcium is 1200 mg/day for adults over 50 years old. However, many people are receiving more calcium than the recommendation by taking calcium supplements in addition to the calcium in their diets. Too much calcium, 2000+ mg/day, may cause kidney stones and calcium deposits in soft tissues. Some supplements made of bone meal and dolomite contain lead, which may cause lead poisoning.

Phosphorus is also important for bone maintenance. We need 1200 mg/day of phosphorus. Phosphorus is present in nearly every food including meat, poultry, fish, dairy products, eggs and soda pop. Phosphorus, in high amounts with high-protein diets, can promote calcium deficiency.

Along with calcium, magnesium forms part of the bone matrix. The recommendation for magnesium is 320 mg/day for women and 420 mg/day for men. Magnesium is found in many foods such as whole grains, dried beans and peas, nuts, and green leafy vegetables. It is also found in drinking water (except soft water); therefore, deficiency is rare. Some antacids and laxatives also contain magnesium. If you chronically use these drugs, it may lead to magnesium "intoxication" which is characterized by sweating, slurred speech, drowsiness, and unsteadiness. Please see your doctor if you experience any of these symptoms.

Chromium

We are hearing more about chromium these days. For people over 50 years old, the Adequate Intake (AI) for chromium is 20 micrograms/day for women and 30 micrograms/day for men. Food sources include meat products, cheeses, whole grains, eggs, and fresh fruits.

Chromium aids in glucose metabolism and regulation of the hormone insulin. Supplements are not necessary since chromium is widespread in foods. You should be aware that chromium poisoning occurs at levels 1,000 times the usual dietary intake. Chronic renal failure can occur from supplementation that provides excessive amounts of chromium.

The Three Electrolytes: Sodium, Potassium, and Chloride

The DRI or recommended intakes for sodium, potassium and chloride plus water may be found in a report available online at the following web site:

<http://www.nap.edu/books/0309091691/html>.



Maintaining blood pressure in normal range is important for good health. Eating foods with less salt and enjoying a diet rich in potassium helps lower blood pressure.

Potassium counterbalances the effect of salt on blood pressure and it also helps in maintaining healthy bone density. The 2005 Dietary Guidelines places greater emphasis on eating potassium-rich fruits and vegetables. In 2004 the DRI for potassium was set at 4700 mg per day. Enjoy fruits and vegetables at each meal.

General Recommendations

It's best to get the minerals you need by eating a variety of foods from each food group in MyPyramid. However, you may need a supplement if you eat too little food, exclude one of the food groups, take certain medications, have a certain chronic disease or are a strict vegetarian. Your doctor or a dietitian can help you decide if you need to take a supplement. If you decide that a supplement is right for you, use the tips below to help you choose one that is safe to use.

- To reduce the risk of toxicity, choose a supplement that provides no more than 100% of the recommended intake for each mineral and vitamin.
- Check the expiration date. Supplements lose their potency over time.
- Avoid supplements that contain items with no proven health benefits such as lecithin and PABA.
- Remember that there is no advantage to choosing a "natural" supplement over the synthetic one. Your body can't tell the difference.

If you take supplements, keep them out of the reach of young children. A final note, there is no study that has shown that there is a benefit to mega-dosing on any one particular mineral or vitamin. But, there are many cases that show that taking too much of one mineral or vitamin can cause serious harm.

Food Stamps:

To find out if you or someone you know qualifies for food stamps, call 1-800-221-5689.

Questions and Answers



Q: Where can I find more information on minerals and other supplements?

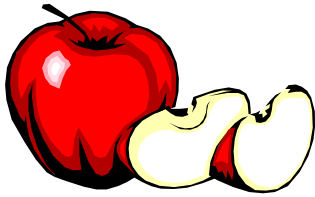
A: There are many excellent books, pamphlets, and other resources that provide unbiased information on a variety of different supplements. Contact your local Cooperative Extension office for suggestions on where to get more information locally.

Vitamin and Mineral Resources:

See CSU Fact Sheet 9.338 *Food vs. Pills*:
<http://www.ext.colostate.edu/pubs/foodnut/09338.html>

Q: Do vegetarians need to take supplements?

A: There are many different types of vegetarians. Strict vegetarians, also known as vegans, eat no animal products such as meat, fish, chicken, and milk. Lacto-ovo vegetarians are less strict and will consume eggs and dairy products. Strict vegetarians have to watch their calcium, iron, and vitamin B-12. If you are a vegetarian, check with your doctor or a dietitian if you are concerned about getting adequate vitamins and minerals.



Quick and Nutritious Snacks

Snack Mix

Rich in vitamin E, snack mix is good to have on hand for the evening.

- 1 cup bite-size low-sodium Triscuits® or spoon-size shredded wheat
- 1 cup Chex® cereal, any flavor
- 1/2 cup each raisins and dried apricots
- 1/2 cup roasted peanuts

Combine ingredients and store in an air-tight container.

Mini Pizzas



Quick and simple, mini pizzas are perfect for a light lunch or easy supper.

- 1 toasted English muffin, cut into two slices
- 1 tablespoon pizza or spaghetti sauce
- Grated cheese
- Your choice of pizza toppings - onions, mushrooms, olives, peppers, ham, etc...

Spread sauce on both slices of toasted English muffin. Sprinkle cheese and your choice of toppings. Heat in oven or microwave until cheese melts.

Bran Muffins

These muffins are lower in fat and sugar than the usual recipe, yet the flavor is great.

- 1 egg
- 1 cup skim milk
- 2 tablespoons vegetable oil
- 1½ cups bran cereal
- 1 cup flour
- 2½ teaspoons baking powder
- 1/2 teaspoon salt
- 2 tablespoons brown sugar or molasses
- 1/4 cup raisins



Beat together egg, milk, oil, and molasses (if used) in mixing bowl. Stir in bran cereal and let stand 5 minutes. Stir together flour, baking powder, salt, raisins and brown sugar (if used) in separate bowl. Add the liquid bran mixture and stir quickly until flour mixture is combined. Do not over mix. Fill muffin cups, lined with paper inserts, 2/3 full. Bake in a 400 degree oven for 20 minutes or until golden brown.

Yield: 12 muffins

Nutrient analysis per muffin: 117 calories, 3 gm fat, 24 mg cholesterol

More Snack Ideas for When You've got the Munchies:

- Crackers with low-fat cheese
- Bagels with peanut butter
- Carnation Instant Breakfast
- Carrot sticks with fat-free dressing
- Cereal with milk

- English muffin or a low-fat muffin
- Fresh fruit
- Rice cakes and cheese
- Sandwich: tuna or peanut butter
- Dried fruit