The best way to meet your mineral needs is through food. Eating a variety of foods from all the major food groups will help you achieve this goal. If you use supplements, be careful to stay within the recommended limits to avoid overconsumption problems. Here are some common questions about minerals.

How will I know if I am getting adequate amounts of minerals?

Because minerals are widely dispersed throughout the body, there is really no simple test that will give you this information. (Scientific studies do not support the accuracy of hair analysis.) The best way to be sure that you are getting adequate amounts of minerals is to consume a wide variety of healthful foods. Use the chart on the opposite page to guide you in selecting foods that are good sources of the different minerals.

I've been told I need to take a calcium supplement. Which one should I take?

While experts prefer people to get their calcium from foods, supplements are sometimes necessary due to an increased need for calcium or specific food preferences. Supplemental calcium is always combined with another substance: calcium carbonate, calcium citrate, calcium phosphate, calcium lactate, and calcium gluconate.

Calcium carbonate is the most common and least expensive form. It is found in at least 90 percent of calcium pills as well as in antacids such as Rolaids and Tums. A variety of factors affect how well calcium from a supplement is absorbed including age, other foods in the diet, the amount of calcium in the diet, vitamin D intake, estrogen levels and the non-calcium compound in the pill. The decision to choose one supplement over another should be based on cost, how easy the pills are to swallow, and how well you tolerate them. Supplements made from coral, dolomite, bone meal and oyster shell may contain traces of lead and are not recommended. For the best results, take a calcium supplement with or shortly after a meal and take no more than 500 milligrams at one time

If I don't eat red meat, can I still get enough iron?

Yes. Although lean red meat is an excellent source of iron, there are other iron-containing foods you can include in your diet (refer to chart for other food sources) and still get the recommended 8 to 18 mg you need each day. Iron from animal sources is usually used best by the body. However, eating a food high in vitamin C at the same meal will increase iron absorption from both plant and animal foods. Good sources of vitamin C include oranges, grapefruit, peppers, peaches, strawberries, broccoli, tomatoes, and potatoes.

The amount of iron found in one-a-day type of vitamin-mineral supplements (including children's chewables) is usually well tolerated by most people. However, if you have been diagnosed with iron deficiency, you may need to take an iron supplement in a higher dose. This should be directed and supervised by your doctor.

I've heard that fluoride can help prevent tooth decay. Should I give my child fluoride supplements?

Fluoride is important for the optimal health of our bones and teeth, and its major dietary source is fluoridated water. In Nevada, Clark County is the only county that has added fluoride to the public water supply. While most of the other water sources in Nevada do not contain adequate fluoride, private wells should be checked to be sure that they do not contain too much fluoride. If your child does not drink fluoridated water, you should talk with your dentist about prescribing supplement fluoride.

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References: **Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc (2000)** Food and Nutrition Board, Institute of Medicine. **Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride** (1997) Food and Nutrition Board, Institute of Medicine

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AN APPLE A DAY

Minding Your Minerals

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University of Nevada Cooperative Extension

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Minerals	Recommended Intakes for Healthy Adults*	Some Significant Food Sources	Some Major Physiological Functions	Tolerable Upper Intake Levels (UL)** and Some Symptoms of Overconsumption
Calcium	19-50 years: 1000 mg 51+ years: 1200 mg	Milk, cheese, yogurt, and other dairy products, calcium-fortified juices, calcium-fortified cereals and breads; dark leafy greens, broccoli, sardines and salmon with bones, tofu prepared with calcium, legumes, almonds, lime-processed corn tortillas	Builds bone and teeth; maintains normal muscle action, normal nerve behavior and blood clotting. Import in blood pressure regulation.	UL = 2,500 mg – High intakes may cause constipation and increased risk of kidney stone formation. May also inhibit absorption of iron, zinc, and other essential minerals.
Chromium	19-50 years: F: 25 mcg, M: 35 mcg 51+ years: F: 20 mcg, M: 30 mcg	Whole grain products, broccoli, brewer's yeast, seafood, meat, potatoes.	Necessary for normal carbohydrate, protein, and fat breakdown.	UL – Not determined – Not seen nutritionally.
Copper	900 mcg	Beef liver, seafood, nuts, seeds, whole grains, legumes.	Component of many enzymes; helps the body use iron when forming hemoglobin and red blood cells.	UL=10,000 mcg – Adverse effects uncommon.
Fluoride	Females: 3.0mg Males: 4.0 mg	Fluoridated drinking water, tea, coffee, grains, legumes, leafy vegetables.	Essential in the formation of bones and teeth. Ideal amounts in water and diet reduces tooth decay and bone loss.	UL=10 mg – Affects bone health, kidney function, and possibly muscle and nerve function. Causes blotches or spots on teeth of children.
Iodine	150 mcg	Iodized table salt, seafood.	Important in the production of thyroid hormones	UL=1,100 mcg
Iron	Females 19-50 years: 18 mg Males: 19+ years and Females 51+ years: 8 mg	Fortified cereals and breads, clams, liver, red meat, whole or enriched grains, dark green vegetables, legumes, black-strap molasses.	Carries oxygen to the cells, helps in the immune system, necessary for energy use.	UL= 45 mg – The major cause of iron overload is hereditary hemochromatosis.
Magnesium	Females: 320 mg Males: 420 mg	Whole grains, green leafy vegetables, nuts, seeds, legumes, chocolate	Essential in muscle action, nerve function, energy production and bone formation.	UL=350 mg – Not seen nutritionally.
Manganese	Females: 1.8 mg Males: 2.3 mg	Whole grains, cereals, legumes, nuts, fruits, vegetables.	Component in many enzymes needed in energy production and in different metabolic pathways.	UL=11 mg – Central nervous system disorders.
Molybdenum	45 mcg	Legumes, whole grains, nuts.	Necessary part of many enzymes.	UL=2,000 mcg – No known adverse effects.
Phosphorous	700 mg	Yogurt, cheese, eggs, milk, meat, fish, poultry, whole grain bread, legumes, nuts.	Important in bone and teeth, transfers energy, essential for maintenance of normal fluid balance and the formation of genetic material.	UL=4,000 mg – Decreased calcium levels in the body.
Potassium	4,700 mg	Fruits, vegetables, legumes, fresh meat, milk, yogurt, most unprocessed foods.	Important in muscle contraction and formation, heart and kidney function. Helps regulate water balance.	UL not determined – Muscular weakness, vomiting, cardiac arrest
Selenium	55 mcg	Brazil nuts, other nuts, seafood, fish, poultry, meat, whole grains.	Antioxidant (neutralizes some harmful substances). Works with vitamin E to fight cell damage.	UL=400 mcg – Skin and nail changes, decay of teeth, nervous system disorders.
Sodium	19-50 years: 1,500 mg 51-70 years: 1,300 mg 71+ years: 1,200 mg	Table salt, processed foods, smoked and salted meats and fish, fast foods, salted snacks, canned soups.	Helps maintain normal fluid balance inside and outside cells. Helps in nerve transmission and control of muscle contraction.	UL = 2,300 mg – Edema (fluid retention), hypertension (high blood pressure).
Zinc	Females: 8 mg Males: 11 mg	Oysters, fortified ready-to-eat cereals, red meat, shellfish, legumes.	Important in the formation and breakdown of carbohydrate, protein, and fat, and nucleic acid (genetic material).	UL=40 mg – Stomach and intestinal irritation, nausea, vomiting, diarrhea, cramps, headaches, copper deficiency.

* The recommended daily intake values are established by the Food and Nutrition Board of the Institute of Medicine of the National Academies and are based on the most recent available scientific evidence. These recommendations are expressed in either milligrams (mg), or micrograms (mcg) ** The Tolerable Upper Intake Level (UL) is the highest level of daily nutrient intake that is likely to pose no risk of adverse health effects for almost all individuals in the general population.