

## NUTRITION: MY MINERAL DICTIONARY

Mineral	Why do I need it?	Where can I get it?	How much do I need daily?	What if I don't get enough?	My notes
<b>Macrominerals</b>	These are important to keep a body healthy and the cells working properly. We need to consume macrominerals (also known as major minerals) in amounts of at least 100 <b>milligrams</b> per day.				
Calcium	The most abundant mineral in your body. Vital for building strong bones and teeth, and childhood is the best time for that. Nearly all (99%) of the calcium is found in the bones and teeth, but it is also necessary for a healthy heart and strong muscles.	Dairy products such as cheese, milk, yogurt, and ice cream. Also some nuts such as almonds and certain vegetables including broccoli and dark leafy greens (mustard, turnip greens, and kale). Some orange juice is <b>fortified</b> with calcium.	AI – Children 4-8 800 milligrams  Children 9-13 1300 milligrams	Too little Calcium may lead to muscle cramps, hair loss, weak bones and teeth, dry skin and brittle fingernails.	
Phosphorus	The second most abundant mineral in your body. Works with calcium to build strong teeth and bones, helps the kidneys to filter out waste, assists with energy production, helps balance and break down other vitamins and minerals, and reduces muscle pain after vigorous exercise.	Meat, poultry, fish, eggs, dairy products, nuts, and <b>legumes</b> .	RDA – Children 4-8 500 milligrams  Children 9-13 1250 milligrams	Too little Phosphorus can lead to loss of appetite, bone pain, stiffness in the joints, tiredness, and nervousness.	
Magnesium	Needed by every organ in the body. It is especially important to the heart (helping to maintain a natural rhythm), muscles, and kidneys. It also keeps bones strong, serves to activate the body's <b>enzymes</b> , helps to make proteins, and assists with energy production.	Unprocessed foods such as legumes, whole grains, nuts, green leafy vegetables, squash (including pumpkins), fruits (such as avocados, bananas, kiwi), and baked potatoes (skin on).	RDA – Children 4-8 130 milligrams  Children 9-13 240 milligrams	Too little magnesium can cause irritability, abnormal heart rhythms, muscle spasm, and in extreme cases, seizures.	

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Sodium  Salt (sodium chloride)	Necessary to regulate fluids in the body, including blood volume. Works closely with potassium to maintain fluid balance in the cells.	Table salt. Salt is often used to prepare the foods you eat. Most packaged foods contain large amounts of sodium.	AD – Children 4-8 3.8 grams  Children 9-13 4.5 grams	Too little sodium, often caused by vigorous, long-duration exercise, can lead to <b>dehydration</b> . Too much sodium can be even more dangerous because as fluid gets out of balance, high blood pressure can result, leading to heart, blood vessel, and kidney damage.	
Potassium	Helps the kidneys work properly, helps the muscles contract, and benefits the heart, digestive and muscular systems. Works closely with sodium to maintain fluid balance.	Fresh fruits like bananas and citrus, as well as dried fruits. Green leafy vegetables, potatoes, lima beans, peas, milk, meats, and fish.	AI - Children 4-8 5 grams  Children 9-13 8 grams	Too little potassium can cause muscle cramps, an irregular heartbeat, weakness, tiredness and upset stomach.	

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<b>Microminerals</b>	<b>These minerals (also known as trace minerals) are important too, but in smaller amounts and often for particular purposes.</b>				
Fluoride	Helps prevent dental caries (cavities). There is only a trace amount of fluoride in the body and it is not considered an essential mineral.	Treated drinking water and some brands of toothpaste.	AI – Children 4-8 1 milligram  Children 9-13 2 milligrams	Too little fluoride can lead to dental caries because fluoride helps protect tooth enamel.	
Iodine	For normal growth and development. Especially important for the thyroid gland and <b>hormone</b> production.	Produced by the body, mostly in the thyroid gland. Iodized table salt, shellfish, deep-water fish, seaweed (kelp), garlic, and some green vegetables. Fortified bread products.	RDA – Children 4-8 90 micrograms  Children 9-13 120 micrograms	Too little iodine can cause extra sensitivity to heat and cold, cause weight gain, and make you feel sluggish and tired. Insufficient iodine can cause a <b>goiter</b> .	
Iron	An essential mineral because it works with the red blood cells to deliver oxygen to the tissues.	Lean red meats, poultry, fish, and shellfish like oysters. Iron from these sources is easily absorbed in the intestine. Other sources include green leafy vegetables, raisins, fortified flours and cereals.	RDA – Children 4-8 10 milligrams  Children 9-13 8 milligrams	Too little iron can cause Anemia, which makes you feel tired, weak, lightheaded, and sometimes short of breath. Too much iron can cause diabetes, damage the liver, and cause skin spots.	
Zinc  Antioxidant	Zinc is the second most abundant trace mineral in the body. It plays a very important role in the immune system by protecting you from infections and colds. It also helps regulate the appetite.	Zinc must come from the diet because the body cannot make enough. Red meat, poultry (dark meat), whole grains, beans, and enriched cereals. Zinc is best absorbed when combined with protein.	RDA – Children 4-8 5 milligrams  Children 9-13 8 milligrams	Too little zinc can result in a loss of appetite, weight loss, slow growth, infections, acne, and hair loss.	

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Special Terms	Definitions	My notes
Dehydration	Excessive loss of water from the body. Can occur when water is not adequately replenished (for instance, during illness or after exercise). Even mild dehydration can be harmful.	
Enzymes	Small chemicals (complex proteins) that are produced by living cells and act on other chemicals to speed up body processes such as digestion or growth.	
Fortified	Food to which one or more ingredients has been added to increase its nutritional content. Foods may be fortified to add a vital nutrient not usually found in that food.	
Goiter	An enlargement of the thyroid gland on the front and sides of the neck. Can be due to a lack of iodine in the diet.	
Gram (g or gm)	A gram is a metric unit of measure equal to the mass of water contained in a cube one centimeter (cm) on each side. 1 cubic centimeter (cc or cm <sup>3</sup> ) of water weighs 1 gram (0.0036 of an ounce).	
Hormones	Chemical messengers that act as regulators of physiological processes such as sexual development and growth. Hormones are secreted into the bloodstream by the many different glands in the body.	
Legumes	Vegetables from a pod, such as a pea or bean, that splits into two valves with the seeds attached to one edge of the valves. Include kidney beans, pinto beans, black beans, soybeans, garbanzo beans (chickpeas), lentils, green peas, black-eyed peas, and lima beans.	
Microgram (μg)	A metric unit of measure: one millionth (10 <sup>-6</sup> ) of a gram.	
Milligram (mg)	A metric unit of measure: one thousandth (10 <sup>-3</sup> ) of a gram.	

### References:

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