



## Mineral Information

*Every single mineral in the body has an effect on every other mineral in the body. The physical body is made up of minerals which are the basis of all life.*

**Why a hair test?** Without a hair test, there is no scientific way to identify which vitamins and minerals you need for optimal physical and emotional health. Just taking a general multi vitamin/mineral complex may not be what your body needs.

**Ex:** If your hair test shows high sodium/potassium and you are tired, then you go to a vitamin store and buy a Vitamin B complex you may feel better for a short while. But vitamin B can raise sodium/potassium levels even more and calcium/magnesium levels may start dropping. ***Minerals need to be in balance for optimal health and wellness!***

**Mineral LEVELS AND mineral RATIOS:** A person may have perfect mineral ratios, but if some of their mineral levels deviate too much in either direction, they may have symptoms. The level of the *minerals* is just as important as the *ratio*.

***THIS IS A SAMPLE OF A TEST RESULT. YOUR ACTUAL RESULTS WILL CONTAIN ALL OF THE 20 MINERALS AND METALS THAT ARE TESTED.***

### **ALUMINUM**

Sources: beverages from aluminum cans (soda pop and beer), food cooked in aluminum cookware, use of aluminum-containing antacids, use of antiperspirants, drinking water (aluminum is frequently added to municipal water), baking powders, drying agents in salt and other products, processed cheese, bleached flours, fluoridated water increases leaching of aluminum from aluminum pots and pans

\* Today children are often born with elevated aluminum that is passed from mother to fetus through the placenta.

Possible Conditions linked to Aluminum:

Early symptoms: colic, flatulence, headaches, colic, dryness of skin and mucous membranes, tendency for colds, burning pain in head relieved by food, heartburn and an aversion to meat.

Later symptoms: reduced intestinal activity, paralytic muscular conditions, loss of coordination, loss of memory and mental confusion.

Other possible symptoms: amyotrophic lateral sclerosis kidney dysfunction anemia liver dysfunction hemolysis, leukocytosis, porphyria neuromuscular disorders colitis osteomalacia dental cavities Parkinson's disease dementia dialactica peptic ulcer

### **CALCIUM**

Sources: sardines, caviar, smelt, animal products, egg yolks, almonds, sesame seeds, filberts, kale, collards, mustard greens, turnip greens), cheeses, milk, molasses, kelp, brewer's yeast, torula yeast

#### **Functions Of Calcium**

***Circulatory*** - excites the heart, constricts small blood vessels

***Excretory*** - inhibits water loss

***Digestive*** - in excess, is constipating

***Nervous*** - slows nerve impulse transmission

***Reproductive*** - required for normal cell division

***Endocrine*** - inhibits release of thyroid-releasing and other pituitary hormones, slows the thyroid gland

***Blood*** - stimulates blood formation and is required for blood clotting

***Muscular*** - reduces muscular irritability and contractibility

***Skeletal*** - main component of bone

***Metabolic*** - required for phosphorus metabolism and energy production in the Krebs cycle

**Detoxification** - inhibits uptake of lead, antagonizes cadmium

**Cellular** - decreases permeability of cells to sodium and potassium ions

**Cell Membrane Regulation** – affecting cell permeability, muscle contraction and nerve impulse conduction.

**Body Fluid Regulation** – affecting blood clotting, acidity and alkalinity

**Cell Division Regulation**

Possible Symptoms of Calcium Deficiency:

alarm reaction irritability, anxiety, muscle cramps, spasms, bruising nervousness, "fast" oxidation, osteoporosis, high blood pressure, tooth decay, insomnia

Possible Symptoms of Excess Calcium

apathy, gall stones, arthritis, hardening of arteries, constipation, kidney stones, depression, mental challenges, 'slow' oxidation, fatigue, withdrawal, social problems

Nutrients necessary for healthy calcium levels

**Absorption** - vitamin A and D, stomach acidity, protein in diet

**Utilization** - magnesium, copper, vitamin

Calcium Antagonists

**Absorption** - fluoride, low stomach acidity, low protein in diet, phosphorus in excess

**Utilization** - lead, cadmium, sodium, potassium, high protein diet increases calcium loss in urine

## MERCURY

Sources of toxicity: dental amalgam (silver fillings), tuna fish and swordfish, contaminated drinking water, seeds and vegetables treated with mercurial fungicides, medications - diuretics, Mercurochrome, Merthiolate, Preparation H, contact lens solution, occupational exposure, felt, algicides, floor waxes, adhesives, fabric softeners, manufacture of paper, production of chlorine

Mercury and Health:

**Energy:** mercury compounds inhibit the enzyme ATPase, which impairs energy production in all body cells.

**Nervous System:** degeneration of nerve fibers occurs, particularly the peripheral sensory nerve fibers. In addition to sensory nerve damage, motor conduction speed was reduced in persons with high hair mercury levels. The most common sensory effects are paresthesia, pain in limbs, and visual and auditory disturbances. Motor disturbances results in changes in gait, weakness, falling, slurred speech, and tremor. Other symptoms are headaches, rashes and emotional disturbances.

**Endocrine System:** mercury has been shown to concentrate in the thyroid and pituitary glands, interfering with their function. Impairment of adrenal gland activity also occurs.

**Kidneys:** mercury can accumulate in the kidneys, where it may cause kidney damage.

Possible Symptoms of Mercury Toxicity:

adrenal gland dysfunction, alopecia (hair loss), anorexia, ataxia (uncontrollable movement of limbs), birth defects, blushing, brain damage, depression, dermatitis, discouragement, dizziness, fatigue, hearing loss, hyperactivity, immune system dysfunction, insomnia, kidney damage, loss of self control, memory loss, migraine headache, mood swings, nervousness, numbness and tingling in arms/legs, pain in limbs, skin rashes, excessive salivation, schizophrenia, thyroid dysfunction, timidity, tremors, vision loss, weak muscles.

## POTASSIUM

Sources: halibut, herring, lingcod, sardines, pecans, sesame, sunflower, walnuts, almonds, brazil nuts, cashews, chestnuts, filberts, peanuts, avocados, dates, figs, prunes, raisins, watercress, garlic, horseradish, lentils, parsley, potatoes, spinach, artichokes, lima beans, beet greens, swiss chard, collards, buckwheat, rye, wheat bran, chocolate, molasses, mushrooms, kelp, yeast, salt substitutes

Functions of Potassium:

**Circulatory** - lowers heart rate, dilates arteries, can reduce blood pressure

**Excretory** - maintains acid-base balance

**Digestive** - increases digestive tract activity

***Endocrine*** - helps raise aldosterone and other hormones, can speed up the thyroid gland

***Metabolic*** - involved in carbohydrate metabolism

Possible Symptoms of Low Potassium:

allergies, constipation, fatigue, irregular heart beat, low blood sugar (hypoglycemia) , low blood pressure, muscle weakness, skin problems, slow oxidation, water retention, indicates adrenal gland exhaustion, sweet cravings

Possible Symptoms of Excess Potassium:

depression, fast oxidation, high blood sugar (diabetes), muscle spasms, weak muscles , indicates high sugar and glucocorticoid levels. Very high potassium can be a potassium loss due to excessive breakdown of body cells.

Synergistic Nutrients: magnesium

Antagonistic Nutrients: calcium, processed food diets are low in potassium

## **RATIOS AND ENERGY : BOTH glands need to be functioning optimally to supply energy.**

**Thyroid:**

Calcium and Potassium are the two specific minerals which regulate the thyroid gland. Calcium slows it down and potassium speeds it up. .

**Adrenals:**

It is the sodium to magnesium ratio which supports normal adrenal function. When the ratio of these two minerals becomes unbalanced, even slightly, it can have a major impact on the adrenal gland.

## **OXIDATION TYPE**

Oxidation is a way of classifying the RATE at which the body is releasing ENERGY from the foods you eat. It can also refer to the metabolism. It can occur quickly or slowly.

**Slow Oxidizer:** You can compare a slow oxidizer to a wood stove that is not getting enough air. The fire is not hot enough. Combustion is not complete. Residue forms and clogs up the stove. Eventually the fire (energy) burns out.

**Fast Oxidizer:** A fast oxidizer always seem to be running on nervous energy, not calm energy. They are hyped-up in order to being able to keep going before they burn out.

***The preceding information is a sample of the Basic Hair Analysis Test and Results. The Complete Package will also contain an individualized supplement program for optimal vitamin/mineral levels and ratios.***

***Disclaimer - This material is for educational and research purposes only. This information is not intended to diagnose, treat, cure or prevent any disease.***