Calcium

Normal Range Is : 25.00 - 96.00

Calcium is used by weight and volume, in the human body, more than any other mineral. Calcium is the most plentiful element in the body, concentrated mostly within the bones, teeth and nerves. Calcium helps regulate cell permeability, acid-base balance, hormone secretion, cell division and osmotic balance. It stabilizes cell membranes, helps muscles relax and slows nerve transmission and heart rate. Calcium helps prevent fluid loss from cells and from the blood.

Calcium inhibits thyroid-releasing hormones and increases insulin secretion. It inhibits the sympathetic nervous system. It is required for phosphorus metabolism and energy production in the Krebs cycle.

Calcium is also important as a detoxifier, preventing the uptake of lead and cadmium; Blood clotting, and fat digestion, depend on calcium. Calcium is extremely alkaline-forming and helps maintain the pH balance of the blood.

Stability, hardness and physicality are qualities of calcium. It is vitally involved in the clotting mechanism to prevent continuous bleeding. The proper metabolism of Calcium ions depends on the normal functioning of the parathyroid hormone. Calcium ions decrease neuromuscular excitability and are necessary for normal contraction and normal transmission of nerve impulses.

Symptoms of Calcium Imbalance

Calcium deficiency may be associated with any or all of the following conditions: osteoporosis, dental disease, nervousness and irritability, insomnia, headaches, bone pain, brittle finger nails, heart palpitations, high blood pressure, slow pulse rate, fragile bones, rickets, kidney failure, and, in mature females it may also manifest menstrual problems, especially cramps.

Additional symptoms may include, rickets, non- union of fractures, posture can be poor and legs bowed. Other symptoms are muscle cramps, hyperkinesias, hyperacidity, bruising, fight- or-flight reactions, fast oxidation, lead and cadmium toxicity, tetany and cancer.

Calcium toxicity symptoms may include fatigue, depression, defensiveness, muscle weakness, pain, arteriosclerosis, arthritis, kidney stones and gallstones. Additional symptoms include bone spurs, rigidity, slow metabolism, constipation, social withdrawal and spondylitis (rigidity and inflammation of the spine).

In many instances, calcium is bio-unavailable. This means it is present, but cannot be used properly. This condition causes symptoms of deficiency and excess at the same time.

When calcium appears in the blood, it doesn't necessarily mean there is too much calcium. It probably means there is a mal-absorption of calcium, or worse, a deficiency of calcium. Your doctor is likely to say that you are getting too much calcium.

Calcium may be high because it is in transit from one part of the body to another. It is being transported because you haven't consumed enough or didn't assimilate what you did consume. In this case, the calcium has to come from our cells and the bones. The body takes calcium from wherever it can get it to put it where it is needed.

Calcium balance is critical. The average person age 60 only produces about 25% of the stomach acid that they produced as a person age twenty. These are the people who need to supplement their diet with hydrochloric acid enzymes and calcium. To compensate for the lack of hydrochloric acid in older people's stomachs, calcium precipitates out, taking other nutrients and minerals with it.

Calcium is important because it alkalinizes the body and attracts vital oxygen. Healthy cells thrive in alkaline mediums because of the oxygen carrying capacity of an alkaline medium.

When the body fluids lack calcium, they are acidic. Therefore, lack of calcium can lead to lack of oxygen, which can lead to an acid pH condition in the body.

Two other important items in the absorption and Metabolization of calcium are normal thyroid function and sufficient vitamin D.

1. It is important to spend 15-30 minutes in natural sunlight daily as we age. Most people are not getting this simple requirement for strong bones, teeth and quality pH environment for all cells.
2. It is important that you take the proper calcium that corresponds to your pH. This will help insure that you maintain a high Metabolic Efficiency (EM) and a strong reserve of Immune Energy (ER).

Dietary Sources of Calcium

Excellent calcium foods include raw, certified milk, cheese and yogurt, sardines, caviar, cod roe, gelatin, smelt and egg yolks. Soups made with bones such as a ham hock or veal joint broth are also excellent sources.

The next best sources are kelp, brewer's yeast and other sea vegetables. Other good sources are almonds, sesame seeds, beans and filberts. Dark green vegetables such as kale, collard greens, mustard greens, turnip greens, comfrey and carrots are also good sources.

Corn tortillas or corn chips, prepared in the traditional way with lime, are another good source. However, most corn chips do not contain lime and are not a good source of calcium. Neither is corn bread or corn eaten as a vegetable.

Calcium Supplements

Kelp is a great source of calcium. It combines calcium with other minerals needed for calcium utilization. Those with a hyperthyroid condition may have trouble with the iodine in kelp.

Other excellent supplements are calcium citrate, calcium chelate and calcium gluconate. Bone meal used to be popular and is a superb supplement if it is not contaminated with lead. Microcrystalline hydroxy apatite crystals (MCHC) are another excellent form of calcium. Other forms are calcium lactate, orotate and aspartate.

Calcium carbonate, phosphate, dicalcium phosphate (DCP) and tricalcium phosphate are not well absorbed as the phosphorus binds tightly to the calcium. Calcium carbonate is common chalk. It is extremely alkaline and found in Tums, other anti-acids and coral calcium. People who are too acidic may benefit from it. Unfortunately, stomach acid is important for digestion and reducing it too much interferes with digestion.

Many commercial calcium preparations in drug stores also contain lots of sugar. Some are even sold like candies. These products will be less effective because sugar upsets calcium metabolism. Usually the calcium is in the form of calcium carbonate, a poorly absorbed form. It is best to avoid calcium carbonate, coral calcium and sugared calcium supplements.

Calcium And The Fight-or-flight Response

In the fight-or-flight response, the body excretes calcium in the urine. This causes the muscles and nervous system to go into a state of alertness to respond to stress. Those who live in a fight-or-flight pattern much of the time are continuously losing calcium in their urine. These sympathetic dominant individuals overuse their sympathetic nervous system.

In the exhaustion stage of stress, calcium is lost into the tissues. Low tissue sodium and potassium levels prevent calcium from remaining in an ionized or soluble form in the blood. Instead, it precipitates and deposits in many body tissue including the joints, arteries, kidneys and elsewhere. This is a cardinal sign of aging.

Calcium Synergists

Copper is required to fix calcium in the bones and helps raise the tissue calcium level. Many people have biologically unavailable copper which causes their calcium problems. In fast oxidizers, copper deficiency contributes to a calcium deficiency.

Iodine is required for thyroid activity. Low thyroid activity is associated with bio-unavailable calcium and calcium deposition in the soft tissues. The best sources of iodine are fish and sea vegetables like kelp or dulse. Iodized salt is not as good a source. Boron apparently improves adrenal gland activity, which makes copper more available. Boron is found in nuts, beans, leafy greens and bone extracts.

Vitamins A and D are important for calcium utilization and are commonly deficient. Vitamin D is only found in enriched milk, fish oils and from sun exposure. Vitamin A is only found in fish oils and meats. Beta carotene must be converted to vitamin A. Low thyroid activity impairs the conversion. Vitamin A should be recommended before beta carotene if thyroid is impaired.

Magnesium helps keep calcium in solution. Sources of magnesium include nuts, seeds, kelp, wheat bran, wheat germ, molasses and brewer's yeast. Silica is another calcium synergist. It may be transmuted into calcium according to Dr. Louis Kervan, author of Biological Transmutations. Chlorine, hydrochloric acid in the stomach and adequate protein in the diet are also required for calcium utilization.

Adequate adrenal hormone levels are also essential for proper calcium metabolism. Infrared light is also extremely beneficial for calcium metabolism.

Calcium Antagonists

Sugar upsets the calcium/phosphorus ratio in the blood more than any other single factor, according to researcher Dr. Melvin Page. It also stresses the adrenal glands and upsets the hormone balance, which affects calcium metabolism.

Lead and cadmium antagonize and replace calcium in the bones and elsewhere. Hidden lead toxicity, for example, is an important cause of weak bones and osteoporosis. Tests for toxic metals may not reveal it when it is deeply embedded within the bones. A hair analysis may reveal it later as it comes out of the body through the hair and other routes.

Fluoride replaces calcium in the bones, causing them to become brittle and weak. Sources are fluoridated tap water, some mineral waters, foods contaminated with fluorides from the soil and foods processed with fluoridated water like reconstituted fruit juices and soda pop.

Excess phosphorus binds calcium and impairs its absorption from the intestines. Sources are soda pop and diets very high in animal protein. Phytates found in high grain diets, soy and other beans bind calcium preventing its absorption. Excessive oxalic acid found in spinach, cranberries, rhubarb and tea interfere with calcium utilization. Low stomach acid and low protein diets impair calcium utilization.

Calcium deposits may be considered a direct result of calcium deficiency, not the over-consumption of calcium. Ironically, this creates an unfounded fear of increasing calcium consumption and many doctors will recommend that patients avoid taking calcium supplements. This only further aggravates the calcium deficiency.

Adequate calciums help support the immune system. When you see epidemics of flu and colds, you can almost bet the victims will show a mal-absorption of calcium. Calcium lactate is often the best form of calcium in such cases. It is easily ionized and changes quickly to calcium bicarbonate to be easily assimilated by the body. When calcium lactate is balanced with magnesium, it gives the body strong support, especially supporting the nervous system. Calcium is a great sedative, relaxing the nerves.

How do you know which calcium is right for you? Which ones should you use and which ones should you avoid? The solution is to use the I AM to know what type of calcium will be best absorbed by your particular body chemistry. Testing the urine and saliva (BIA) using the methods taught to us by Dr. Carey Reams can give us the information we need to increase our wellness in such cases.

Dr. Carey Reams identified almost a quarter of a million different calcium compounds. Whereas an alkalizing calcium such as calcium hydroxide can push the urinary pH up, an acidifying calcium such as calcium lactate can drive the pH down. Many calciums, such as gluconate or citrate, are considered neutral, providing the needed mineral without affecting the pH.

When the UpH (urine pH) is over-balanced, calcium lactate is the best form of calcium to use. Other forms may make the UpH worse. When the both the UpH and SpH (salive pH) are under-balanced, calcium phosphate or calcium carbonate may be considered. When the UpH is high and the SpH is low, a mixture of calciums is best, but be sure to include calcium lactate for best results. When the UpH is low and the SpH is high, a mixture of calciums is best but be sure to include calcium gluconate or aspartate, if possible.

"Driving" pH values acid or alkaline is not the objective. "Driving" pH or forcing the body into one state or another does not create lasting health. Feeding the body foods that will build the highest state of health and supporting the diet with the proper supplements is the objective.

The problem is that modern foods are so mineral and calcium-deficient that the mineral (energy) reserves of the body falls so low that it cannot easily maintain homeostatis. This was a key reason Reams' was an advocate of "eating the widest variety of foods possible". His agricultural knowledge allowed him to see that a wider variety in diet would bring a more balanced array of "calciums" into us. The other part of that suggestion was that he knew a wider variety in diet would bring more of the 83 other needed minerals into our system. Although the preferred method of obtaining a sufficient mineral assay is to eat higher Brix foods, most people will need to take calcium supplements.

It is impossible to overstate the need for calciums, but it is more important to make sure the calcium being used is the right type of calcium so as not to force the body into an adverse pH situation. I AM is very helpful in understanding which supplements are right for you. Using the urine and saliva it is possible to determine the best path to wellness.

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