

Too much Calcium can cause as many problems as too little!

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Introduction

Calcium is the most abundant mineral in your body, necessary for not only bone health but also regulating your heartbeat, conducting nerve impulses, clotting blood and stimulating hormone secretions. Your body does not make Calcium, and in fact loses Calcium daily through your skin, nails, hair, sweat and elimination, which is why you must replace it by what you eat.

Due to the fact that about 99 percent of your body's Calcium is stored in your bones and teeth, if you don't get enough Calcium, your body will take Calcium from your bones to perform necessary functions. This is where the idea that supplementing could prevent Calcium loss from your bones comes from, but it is an overly simplified theory that lacks solid evidence to back it up, especially in Western, modernised cultures which consume unprecedentedly large amounts of dairy-derived, fortification-based and supplemental Calcium.

It has been estimated that your body excretes as little as 100 mg a day, making the current recommendations by the National Osteoporosis Foundation (for women over 50 to take 1200 mg a day) a bit troubling. When we compare our Calcium-rich diet to the traditional Calcium-poor Chinese peasant diet, which was free of cow's milk and Calcium supplements, their approximately 250 mg a day of plant-based Calcium was all that was needed to fulfil their bodily needs – and this from a culture with no word for "osteoporosis" in its 3,000+ year old language!

If consuming enough dairy products and greens, you should not supplement with Calcium. Other foods contain Calcium, include salmon and especially sardines, with its bones.

Too much Calcium makes bones more brittle, so they chip and break. Lambs on steep hills in New Zealand often broke leg bones, until farmers fertilised with 3 kg/ha of copper sulphate, which softens bones so they bend, rather than brake.

Excess Calcium lowers magnesium and zinc in your body - too much Calcium can cause osteoporosis! So if you choose to take a supplement, ensure that you are taking sufficient Vitamin Bs, magnesium and zinc. All three are needed by your body, even if you are not taking extra Calcium.

Synergisms

Calcium, Vitamin Bs and magnesium need each other (along with phosphorus, copper, zinc and small amounts of other elements) to form bone.

Calcium is a hard mineral that makes bones strong like cement, which comes from the similar mines to agricultural lime. Drop a concrete pipe and it will shatter. Bones with too much Calcium are more brittle so more prone to chip and break, and excess Calcium lowers your magnesium. Too much supplementary Calcium without sufficient magnesium and boron, can cause osteoporosis.

Magnesium and Calcium are antagonistic, so should not be taken together; in fact if eating a balanced diet of dairy products and greens, no Calcium supplements should be necessary. High Calcium supplements both inhibits magnesium absorption, and promotes magnesium excretion in the urine, thus actually contributing to magnesium deficiency. Some doctors prescribe Calcium for osteoporosis, when a large amount of evidence and research now shows that magnesium supplementation does more good. The optimum ratio of Calcium/magnesium is about 1:1.

Vitamin K2 is a little known essential vitamin, and directs the Calcium to where it is needed in your body. Your body can be full of Calcium but not get to the correct places - K2 does this.

Vitamin D is necessary to achieve optimum bone density, too. It helps you absorb and utilise Calcium in your body. It is best from sunshine, but to avoid skin cancer, avoid the hottest times of the day in summer. Taking vitamin D during short sunshine days in winter may be necessary, especially if indoors a lot, or fully covered if outside.

Boron is an essential element in strengthening bones, as Calcium needs boron to work. For centuries, the healing salt, boric acid, containing boron, was touted by healers for its ability to improve brain function, memory and co-ordination. You can force increased bone mineral density with Calcium supplements, however, you cannot be sure that this will result in greater bone strength.

Calcium needs boron to work. See Human Health Minerals > Boron, and Minerals in Soils, Pastures & Animals > Boron.

Boron also helps regulate oestrogen levels, by helping to convert vitamin D into its active state. Oestrogen, in turn, increases Calcium absorption, so boron is critical in strengthening bones. Boron also helps regulate levels of other essential minerals, including magnesium and phosphorus, both of which are necessary for bones as well as dental health.

You also need sources of silica (as well as magnesium), which some researchers say is actually enzymatically "transmuted" by your body into the kind of Calcium your bones can use. This theory was first put forth by French scientist Louis Kevran, a Nobel Prize nominee who spent years studying how silica, Calcium, magnesium and other minerals are related, and transmutable into one another through low-energy nuclear transformation only found within living systems.

His theory explains how cows and chickens produce far more Calcium in their milk and eggs than is found in their diet, or why workers, exposed to extremely high temperatures (130 degrees F) in the Middle East, are known to consume salt tablets which their bodies convert to potassium (as measured by their excreta), resulting in a reduction in their bodily temperature.

Good sources of bone-strengthening silica are cucumbers, bell peppers, tomatoes, and a number of herbs including horsetail, nettles, oat straw, alfalfa, and raw cacao, which is also extremely rich in highly bio-available magnesium.

Also recommended is natural unprocessed salt as a far better alternative to Calcium supplements, because it provides the trace minerals you simply cannot get from food grown in today's mineral-depleted soils. My favourite source of trace minerals is pure, unprocessed Himalayan salt, which contains 84 elements needed by your body.

There are more long thin-boned, skinny children now than in our young days. A Canadian organic supporter claimed that the hormones fed to North American beef cattle was one reason. Eating organic beef can reduce this problem. In later life, excess wheat, as eaten in USA (burghers and buns) and Italy (pasta), make these children fat. The same is now occurring in New Zealand, but not as much. As you would have read in Minerals in Soils > Calcium, if Calcium is deficient, young animals will not grow, but do grow warts, a symptom of low Calcium. Applying agricultural lime and its synergisms to pastures (and thus to the animals feed) eliminates warts and helps young animals grow.

When all the necessary minerals are available, the body replaces all its old bones with new ones every 7 to 8 years.

Calcium deficiency

There is a lot of publicity about osteoporosis and brittle bones, and we are told Calcium can prevent this, as well as muscle weakness, cramps and rickets.

Moreover, osteoporosis, as presently defined by bone scans (a DXA scan) using the T-score, inappropriately defines "normal bone density" according to the standard of a 25-year old, young adult. In other words, if you are 40, 50, or even 90, the T-score-based system says your bones are diseased if they are not as dense as they were when you were 25, so many cases of "osteoporosis," would suddenly disappear because they are inappropriately classified from the start

Many people fear a lack of Calcium for their bones, so take it in some form, but it is in dairy products, fresh greens and sardines and salmon. I'm allergic to dairy, I think from consuming much too much from as long as I can remember, so now I get phlegm and catarrh. Dairy products have high levels of lysine, an essential element which helps prevent shingles, which struck me. I now consume yoghurt and other dairy items and eat more meat, as all have lysine, and I find cheese and yoghurt doesn't affect me adversely at all now.

Some people take Dolomite for their magnesium, but this is not well digested, and is not even a very effective fertiliser. Read Human Health Minerals > Magnesium and Minerals in Soils > Magnesium.

In animals, too much Calcium lowers a cow's efficiency in using magnesium, (which the body doesn't store) then after calving, when the cow needs an increase in Calcium and magnesium to suddenly produce 20 litres of milk, they can suffer and can die. Transferring this to humans means that if taking a Calcium a supplement, and then stopping, a deficiency in magnesium could occur with severe results.

Magnesium and boron are much more important than Calcium, unless you are eating a very deficient diet low in dairy and greens.

Excess Calcium

A friend was fanatical about supplementing with Calcium and took too much for many years. She ended up in hospital, where they discovered her very high Calcium levels, and had to drain and replace her blood. When she came out of hospital, she continued her craze for Calcium, and died much sooner than she should have.

If you are consuming enough dairy products and greens, and other foods containing Calcium, you should not need supplements. Just make sure you are getting the Calcium/magnesium ratio of 1:1 correct, and supplementing the essential elements of boron, zinc, copper and phosphorus, and the B vitamins.

The Harvard Nurses' Health Study, a review tracking 78,000 nurses for 12 years found that the relative risk of hip fracture was 45% higher in those women who drank two or more glasses of milk per day versus those who drank one glass or less. Indeed, in countries where both dairy consumption and overall Calcium levels in the diet are the lowest, bone fracture rates are also the lowest; conversely, in cultures like the United States where Calcium consumption is among the highest in the world, so too are the fracture rates among the highest.

If we have excess Calcium and eat foods high in oxalic acid, this interacts with the Calcium and forms insoluble salts such as calcium oxalates which are found in kidney stones. There is a large degree of genetic variability in the ability to detoxify the chemicals that produce oxalates, so certain individuals need to be careful about their intake of oxalic acid, especially those who have existing and untreated kidney or gallbladder problems, a vulnerability to kidney disorders, gout, rheumatoid arthritis, or certain forms of chronic vulvar pain. See Human Health Minerals > Oxalates.

Calcium needs its synergisms to work. Research shows even taking Calcium with vitamin D does not appear to be enough to prevent these types of adverse effects.

So when you take a biologically foreign form of Calcium (such as limestone, oyster shell, egg shell and bone meal), or when your body's ability to direct Calcium to the right places becomes impaired (as when you are deficient in vitamin K2), Calcium may be deposited where it shouldn't be, which can lead to multiple health problems.

Often, much of the burden of removing this excess Calcium falls on the kidneys, and it has been proven that calcium carbonate rapidly calcifies arteries in those with compromised kidney function, especially hemodialysis patients. Calcium deposits are major contributors and even causative factors in many conditions, including the following:

- Cellulite and scar tissue
- Coronary artery disease and atherosclerosis
- Dental plaque and gum disease
- Hypothyroidism
- Obesity and diabetes
- Alzheimer's disease
- Breast cancer and cysts (fibrocystic breasts)
- Gallstones, colon cancer and Crohn's disease
- Kidney stones
- Ovarian cysts
- Cataracts, glaucoma, and macular degeneration
- Bone spurs, stiff joints, osteoarthritis, tendonitis and bone cancer

Calcium and heart disease

A 1978 study found a strong correlation between high dietary Calcium and low dietary magnesium, and the death rate from heart disease. At the time the USA, Finland and Holland had some of the highest Calcium/magnesium dietary ratios and also had some of the highest heart disease death rates, while Japan, with about a 1:1 Calcium/magnesium dietary ratio, had the lowest.

Heart attacks may be caused by supplemental Calcium from elemental sources, which include limestone, oyster shell, and bone meal, according to two meta-analyses of available research (a meta-

analysis is a review and summary of the results of many clinical studies on the same subject).

The first, in 2010, involved over 8,000 people and showed that taking this kind of inorganic Calcium supplement in amounts of 500 mg or more would increase your relative risk of heart attack by 27 percent. Researchers concluded:

"Calcium supplements with or without vitamin D modestly increase the risk of cardiovascular events, especially myocardial infarction ... A reassessment of the role of Calcium supplements in osteoporosis management is warranted."

The truth is that taking any Calcium in excess, or in isolation without its synergisms like magnesium, vitamin D and vitamin K2, can have adverse effects, such as Calcium building up in coronary arteries and causing heart attacks.

The "Calcium is good for your bones" mantra is yet another example of a good theory gone wrong, and represents how broadly deluded the mainstream medical community is about bone health and the nature of osteoporosis.

Because something can increase your bone density, i.e. eating what amounts to chalk or pulverised bone meal, or worse, chemicals like the drugs Fosamax and Evista, does not mean this will translate into improved health for your bones, or any of your other organ systems.

There is a solid body of research indicating that higher bone density may actually increase the risk of malignant breast cancer by 300% or more! Considering that close to 1 in 4 women will be diagnosed with cancer in their lives, with breast cancer top on the list, increasing bone density with Calcium supplements as opposed to overall bone health, is misplaced, especially when it may increase the overall risk of cancer and cardiovascular disease.

High-Calcium foods

- Raw milk.
- Cheese.
- Ice cream.
- Leafy green vegetables, especially spinach, kale.
- Carob.
- Salmon.
- Sardines (with the bones).
- Tofu.
- Yogurt.
- Orange juice and orange pith.
- Fortified soya milk.
- Blackstrap Molasses.
- Seaweed.
- Dried figs.
- Sesame seeds.
- Almonds.
- Wheatgrass.

Food can supply ample Calcium

Sarah Schmidt wrote, "Our ancestors seldom had to worry about getting enough Calcium. The plants they gathered contained much higher levels than our fruits, veggies, and grains, because they grew in Calcium-rich soil rather than on land depleted from years of farming. They also got a lot of Calcium from the small bones of the fish and birds they ate. So the only time primitive humans might have been short on the mineral was when their food was scarce."

In order for Calcium to do your body good, it must be in a bioavailable form and balanced out with vitamins D and K and other important trace minerals, as part of a total nutritional plan.

It's worth mentioning that the studies done about Calcium from dairy products are all done with pasteurised dairy, rather than raw dairy products that have more of their nutrients intact, and this muddies the results of these studies.

Calcium from dietary sources is typically better absorbed and utilised than Calcium from supplements, which is why studies involving Calcium from natural food sources have shown favourable results, including a 25 percent lower risk of dying from all causes, and a 23 percent lower

risk of dying from heart disease.

If your Calcium supplement is being turned into "little rocks" that are being deposited in your soft tissues and arteries, you can begin to understand how this could be increasing your risk for a heart attack, stroke or other health condition.

Many believe that arterial plaque is simply a buildup of cholesterol. But in reality, more than 90 percent of these fatty plaques are calcified. Cholesterol is soft and waxy and does not impair the elasticity of your arteries. But Calcium deposits are like concrete, "hardening" your arteries and impairing their ability to expand. It is calcium - not cholesterol - that induces arterial stiffness and makes the plaque less stable and more prone to chipping off and subsequently inducing a life-threatening clot.

This is particularly important for postmenopausal women because hormone balance is necessary for proper Calcium signalling -- directing your body to deposit Calcium into your bones. When hormones fall out of balance, this signalling causes Calcium to slowly exit your bones and become deposited in your arteries instead. Simply taking a Calcium supplement will not solve the problem because if your body cannot direct the Calcium to the right spot, it will cause far more harm than good.

Read Human Health Minerals > Boron, > Copper, > Magnesium and > Zinc for more on bone strength.