

Do Calcium Supplements Help to Prevent Bone Loss?

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In my practice, I recommend a number of supplements that help the patient to feel and function optimally. Due to the soil depletion, no crop rotation, and pesticide use, the whole foods we consume are not as rich in nutrients as they used to be before. I work with the patients who struggle with chronic disease and digestive symptoms of bloating, gas, malabsorption, so even if they eat healthy whole foods and animal proteins, they cannot break down/digest them and cannot absorb all the needed nutrients. I have seen what supplements can do not only in the improvement of the lab markers but also how my clients and myself feel!

In the conventional healthcare setting, you may find yourself hearing about calcium supplementation A LOT, especially as you are going through peri-menopause or menopause. Calcium is very popular and I hear a lot from my patients that they are diligent in taking their recommended 1,000 mg of calcium (or

higher) a day. Nevertheless, calcium supplementation is one of the supplements I do not recommend taking due to the recent research where calcium could be not only just a waste of money but also may do harm to your health! Calcium supplementation is a prime example when conventional medicine recommends FIRST and does the long-term studies later only to prove that calcium supplementation is not beneficial and, actually, may be harmful.

The Risk of Calcium Supplementation

Heart Disease

- A 139 percent greater risk of heart attack was noted in people using calcium supplementation during the 11-year study period. [\(1\)](#)
- The intake of calcium in foods did not increase the risk of heart attacks. [\(1\)](#)
- Heart attack increased by 31 percent
- Stroke by 20 percent
- Death from all causes by 9 percent [\(2\)](#)
- A 20 percent increase in the risk of death from CVD [\(3\)](#)
- The calcification of arteries by the free-floating calcium taken in a form of a supplement is one proposed mechanism that adds to the risk of heart attacks later in life. Calcium from food has much better absorption. [\(3\)](#) Freely circulating calcium also can add to atherosclerosis (hardening of arteries).
- A 40 percent higher risk of death among women with high calcium intakes (> 1,400 mg),
- Even supplementation with just 500 mg calcium a day increases the risk of death by 157 percent. [\(4\)](#)

Kidney Stones and Cancer

- 1,000 mg of supplemental calcium increases the risk of prostate cancer and kidney stones. [\(5\)](#)

3-Step Approach to Bone Strengthening Step #1:

- Keep your vitamin D level Optimal at 50-80 ng/mL. I suggest supplementing with 2000 to 5000IU D3 daily (depending on your baseline Vitamin D3 level), taken with 90-200mcg Vitamin K2 (MK-7). Vitamin K2 improves the efficacy of vitamin D and reduces complications with calcium transport and metabolism that can occur. Another option in lieu of vitamin K supplementation would be a low calcium diet while supplementing D. This means to abstain from dairy. Also, avoid calcium enriched foods such as soy and almond milk. This will help avoid a calcium level that is too high for you. If you avoid calcium or add vitamin K2, the vitamin D levels can get higher faster. Vitamin D and K2 help to get the calcium into your bones, instead of clogging your arteries and increasing cardio-vascular (heart disease) risks.
- [Vitamin K2](#) supports bone health by modifying osteocalcin, a protein involved in bone formation. This modification enables osteocalcin to bind to minerals in bones and helps prevent the loss of calcium from bones.
- The two most common forms of vitamin K2 are MK-4 and MK-7. MK-4 exists in small amounts in liver, eggs, and meat. Fermented foods like cheese, sauerkraut and a soybean product called natto contain MK-7.
- Get exposed to the sunshine for 20-30 minutes between 11

am and 2 pm during Arizona winter.

References:

1. Associations of dietary calcium intake and calcium supplementation with myocardial infarction and stroke risk and overall cardiovascular mortality in the Heidelberg cohort of the European Prospective Investigation into Cancer and Nutrition study (EPIC-Heidelberg). Retrieved on January 08, 2019 <https://heart.bmj.com/content/98/12/920.full>
2. Effect of calcium supplements on risk of myocardial infarction and cardiovascular events: meta-analysis. Retrieved on January 8, 2019 at <https://www.bmj.com/content/341/bmj.c3691>
3. Dietary and Supplemental Calcium Intake and Cardiovascular Disease Mortality. The National Institutes of Health–AARP Diet and Health Study. Retrieved on January 08, 2019 at <https://archinte.jamanetwork.com/article.aspx?articleid=1568523>
4. Long term calcium intake and rates of all-cause and cardiovascular mortality: community based prospective longitudinal cohort study Retrieved on January 08, 2019 at <https://www.bmj.com/content/346/bmj.f228>
5. The risk of kidney stone formation: the form of calcium matters. Retrieved on January 08, 2019 at <https://academic.oup.com/ajcn/article/94/1/5/4597975>

Step #2: Implement Weight-Bearing and Strengthening Exercise.

- Incorporate weight lifting, strengthening, and weight-bearing exercises 3-4 times a week for 30 minutes. Great

activities could be walking 3 miles every day or every other day, lifting 5-10-pound weights, etc. Studies showed that those who performed weight-bearing exercise had an increase in bone mineral density, bone strength and bone size, as well as reductions in markers of bone turnover and ([1](#), [2](#), [3](#), [4](#))

Step #3: Take a collagen supplement.

- Collagen supplements may help protect bone health as collagen is the main protein found in bones. Our diet is poor in sources of collagen that is mainly contained in the bones and cartilage of animals. Collagen consists of the amino acids glycine, proline, and lysine, which help build bone, muscle, ligaments and other tissues. As our diets are rich in muscle and lean cuts of beef and chicken, we are depriving ourselves of collagen sources and have to supplement our diets with the collagen. ([5](#), [6](#))
- Make bone broth (my preferred method is InstaPot – 60-80-minute method) from grass-fed knuckle bones and marrow bones. Consume regularly in soups or as a warm beverage to nourish your digestive tract and body.
- Supplement with Collagen hydrolysate or gelatin. It is used to alleviate joint pain, helps with sleep due to being rich in glycine. My favorite brand is Grass-Fed Great Lakes Collagen Hydrolysate. It can be mixed into your morning coffee or relaxation tea at night, 1 tbsp 1-2 times daily.

References:

1. Effect of impact exercise and its intensity on bone

geometry at weight-bearing tibia and femur. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/17140871>

2. Effects of exercise training with weighted vests on bone turnover and isokinetic strength in postmenopausal women. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/17724395>

3. Response of bone mineral density, inflammatory cytokines, and biochemical bone markers to a 32-week combined loading exercise programme in older men and women. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/23623588>

4. Short-term bone formation is greatest within high strain regions of the human distal radius: a prospective pilot study. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/25322335>

5. Role of collagen hydrolysate in bone and joint disease. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/11071580>

6. Postmenopausal osteoporosis. Treatment with calcitonin and a diet rich in collagen proteins. Retrieved on January 08, 2019 at <https://www.ncbi.nlm.nih.gov/pubmed/8625373>