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# **The Risks and Benefits of Calcium Supplements**

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There has been an [assumption](#) for decades that as a natural element, calcium supplements *must* intrinsically be safe. But, as I explore in my video [Are Calcium Supplements Effective?](#), calcium supplementation [is neither](#) natural nor risk-free. The same could be said, however, for all medications, yet doctors continue to write billions of drug prescriptions every year hoping the benefits outweigh the risks.

So, what about the benefits of calcium supplements versus the risks they pose for heart attacks and strokes? Having a heart attack or stroke can be devastating, but so can a hip fracture. In the months after a hip fracture, [risk](#) of dying shoots up, with about one in five women [passing away](#) within a year. The odds are even worse for men, with hip fractures having the potential to shorten lifespan by an average of four or five years. Unfortunately, these dismal [statistics](#) haven't been getting much better.

Even if calcium supplements caused a few heart attacks and strokes, it could be argued that if they prevented many more hip fractures, then the risk-benefit ratio might be favorable. But how effective are calcium supplements in preventing hip fractures? We've known that milk intake doesn't appear to [help](#), but maybe that's because any potential benefit of the calcium in milk may be overshadowed by the increased risk of fracture and death associated with the galactose sugar. Then what about the calcium in a calcium supplement alone? Calcium intake in general does not seem to be [related](#) to hip fracture risk at all. When people have been given calcium supplements, they saw no reduction in hip fracture risk but rather an [increased](#) risk was possible. In fact, the randomized controlled trials suggested a 64 percent greater risk of hip fractures with calcium supplementation, compared to a placebo sugar pill.

So where did we get the idea that taking calcium supplements might help our bones? An influential 1992 [study found that a combination of vitamin D and calcium supplements could reduce hip fracture rates](#) by 43 percent. However, the subjects in the study were institutionalized women, living in places like nursing homes, who were vitamin D deficient. They weren't getting sufficient sun exposure. So, if you're vitamin D deficient and then you take vitamin D and calcium, it's no surprise your bones get better.

In a 2012 [study](#), instead of giving nursing home residents vitamin D and calcium supplements, researchers randomized them so one group received sunlight exposure and the other took calcium supplements. Those in the calcium pill group had significantly increased mortality, [living shorter lives than those in the sunshine group](#).

Although calcium supplements don't appear to prevent hip fractures, they **may reduce overall fracture risk by approximately 10 percent**. If you're wondering whether this means it could be worth taking them, here's how the risk-benefit shakes out: If 1,000 people took calcium supplements for five years, we would expect 14 excess heart attacks—that is, 14 people having heart attacks who would *not* have had heart attacks if they hadn't started taking the calcium supplements. They were effectively going to the store and buying something that gave them a heart attack. We also would expect 10 strokes and 13 deaths that otherwise would not have happened. An expected 14 heart attacks, 10 strokes, and 13 deaths compared with preventing only 26 fractures. Of course, it's no fun falling down and breaking your wrist, but most people would probably look at the risk-benefit analysis and conclude that calcium supplements are doing more harm than good.

Dietary calcium, on the other hand, has not been associated with an elevated risk of heart attacks. Given these findings, individuals should be discouraged from taking calcium supplements and advised to obtain calcium from their diet instead. How much dietary calcium should we shoot for then?

Interestingly, unlike most other nutrients, there's not an international consensus on how much to take. For example, in the United Kingdom, the recommendation for adults is 700 mg per day. Across the pond in the United States, it's up to 1,200 mg per day. Whenever I see that kind of huge discrepancy between government panels, I immediately think scientific uncertainty, political maneuverings, or both.

Newer data based on calcium balance studies where researchers made detailed measurements of the calcium going in and out of people suggest that the calcium requirements for men and women are lower than previously estimated. They found that calcium balance was highly resistant to change across a broad range of intakes, meaning our body is not stupid. If we eat less calcium, our body absorbs more and excretes less. And if we eat more calcium, we absorb less and excrete more to stay in balance.

Therefore, current evidence suggests that dietary calcium intake is not something most people need to worry about. This may explain why in most studies, no relationship has been found between calcium intake and bone loss anywhere in the skeleton because the body just seems to take care of it.

Don't push it too far, though. Once you get down to just a few hundred mg per day, you may get significantly more bone loss. Though there may not be great

evidence to support the U.S. recommendations, the United Kingdom may have the right idea shooting for 500 to 1,000 mg per day from dietary sources. This applies unless you've had gastric bypass surgery or have another reason for needing supplementation. For most people, though, calcium supplements cannot be considered comparatively safe or effective for preventing bone fractures.