Supplemental Calcium is Beneficial to Overall Bone Health

By ACSH Staff — September 30, 2015

Calcium is an essential element needed by all living organisms. Since its introduction into the biological realm, there have been many studies investigating the link between calcium intake and its homeostatic role in living organisms. In animals, particularly human beings, a foundation of knowledge holds that calcium is vital for bone health, including the prevention of fractures.

To that point, a systematic review conducted at the University of Auckland [1] illustrates this conclusion of  calcium intake, and its overall correlation to the risk of fractures in adults ages 50 and up, as accepted by today's medical findings. This review, or meta-analysis, combined randomized controlled trials and observational studies and compared the efficacy of dietary and supplemental calcium in association to bone fractures. Upon review, this study consequently yielded some rather interesting results.

Twenty-six randomized controlled trials that reported supplemental calcium intake and reduction of fractures showed that there was a significant correlation in the preservation of specific bone regions.

In a large pool of 58,757 participants in 20 studies, the conclusion was that the participants had significant overall fracture risk reduction, while 48,967 in 12 studies had vertebral fracture risk reduction.

However, it's interesting to point out that even in supplemental calcium intake the report includes 13 studies, or 56,684 people who still had a risk of hip fracture, as well as eight studies of 52,775 participants that showed no reduction in forearm fracture. So in overall studies, there is a general trend of dietary calcium having a strong correlation in fracture reduction in specific bone regions.

As for dietary calcium, there were only two randomized controlled trials (262 patients) which reported fracture outcomes, and these found that there is little or no benefit in dietary calcium in

relationship to fracture prevention.

In conclusion, the study's authors said that, "[d]ietary calcium intake is not associated with risk of fracture, and there is no clinical trial evidence that increasing calcium intake from dietary sources prevents fractures. Evidence that calcium supplements prevent fractures is weak and inconsistent."

While this statement may seem true in the overall understanding of the systematic review, it must be taken into consideration that it includes the evaluation of both randomized and observational studies. In the grand scheme of scientific conclusions, it's clear that observational studies are highly unreliable.

In an analytical review of the consensus of controlled randomized studies, there is enough general support to state that supplemental calcium is beneficial to overall bone health, and does, in fact, help reduce general bone fractures.
