

The Medical Journal of Australia • MJA

MEDIA RELEASE

CALCIUM SUPPLEMENTS HAVE “VERY LITTLE PLACE” IN MODERN MEDICINE

EMBARGOED UNTIL 12:01am Monday 18 November 2019

EVIDENCE suggests that calcium supplements have “very little place” in modern medical practice, according to the authors of a narrative review published today by the *Medical Journal of Australia*.

Professor Ian Reid, Professor of Medicine and Endocrinology, and Associate Professor Mark Bolland, both from the University of Auckland, reviewed the evidence of both efficacy and safety of calcium supplements, and vitamin D supplements.

“The use of calcium supplements in individuals without specific bone pathology does not have a sound evidence base, and the safety concerns suggest that the net effect could be negative,” Reid and Bolland wrote.

Calcium supplements, they wrote, are frequently associated with gastrointestinal symptoms, particularly constipation, and they have also been reported to double the risk of hospital admissions related to abdominal symptoms.

“In the Women’s Health Initiative study, calcium and vitamin D increased the risk of renal calculi (kidney stones) by 17%. There is evidence that calcium supplements increase the risk of myocardial infarction and, possibly, stroke, although this remains subject to controversy,” they wrote.

Vitamin D supplements rarely cause symptomatic adverse effects, but there is evidence that vitamin D doses of 4000 IU/day, 60 000 IU/month, or 300 000–500 000 IU/year may increase the risk of falls and/or fractures. At lower levels -- doses of 400–1000 IU/day – bone benefits from vitamin D are met, “therefore, the use of higher doses is not appropriate”.

There are conditions for which calcium and vitamin D supplements are appropriate.

“There are some medical conditions, such as osteomalacia, for which calcium and vitamin D supplements are central to management,” Reid and Bolland wrote. “Their use as adjunctive therapy in osteoporosis has been the convention, but ... there is little evidence that this alters outcomes.

“The use of supplements of vitamin D in patients at risk of vitamin D deficiency who need potent antiresorptives is appropriate. Calcium supplements in this context are currently accepted practice, and the safety and efficacy of romosozumab have not been demonstrated without them.

“Clinically significant vitamin D deficiency (ie, nadir 25(OH)D < 30 nmol/L) is common among individuals with minimal sunlight exposure, such as frail older people and those who are veiled, as well as in people from Africa, the Middle East and South Asia living at high latitudes,” they wrote. “Supplementation of frail older people is widely advised, and also frequently provided for immigrant communities, particularly children, including those being breastfed.

“Vitamin D supplementation sufficient to raise 25(OH)D levels above 40–50 nmol/L is advisable; 400–800 units per day is usually adequate, unless there is some coexistent medical problem, such as malabsorption. Supplementation should be continued for as long as the cause of vitamin D deficiency (eg, low sunlight exposure) is present.

“Supplements have value in overtly deficient individuals, but not across the healthy older population. Based on the consistency of the data, we believe that a recommendation not to provide supplements routinely to healthy older individuals can be judged to be evidence-based ... and no longer a matter of controversy.

“In summary, small doses of vitamin D have a place in the prevention of osteomalacia in individuals with specific risk factors. Calcium supplements have very little place in contemporary medical practice.”

Please remember to credit *The MJA*.

The *Medical Journal of Australia* is a publication of the Australian Medical Association.

The statements or opinions that are expressed in the MJA reflect the views of the authors and do not represent the official policy of the AMA or the MJA unless that is so stated.

CONTACTS:

Prof Ian Reid
University of Auckland
Email: i.reid@auckland.ac.nz
Ph: 0011 44 7399 747 241

A/Prof Mark Bolland
University of Auckland
Email: m.bolland@auckland.ac.nz
Ph: 0011 64 21 197 4446