Reviewer’s report

Title: Dietary Calcium Intake and Risk of Mortality from Cardiovascular Disease and All Causes: A Meta-Analysis of Prospective Cohort Studies

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Reviewer: William B. Grant

Reviewer’s report:

Major compulsory changes

Abstract: The description of the U-shaped relation of dietary calcium in the results section does not agree with Figure 3. 800 mg/d was the minimum, with increased mortality rates for both lower and higher intakes, albeit not statistically significant for lower intakes. In addition, the calcium intake-CVD relation is a true U-shaped curve while that for all-cause mortality rate is not. Suggest that the two relations be described separately. There are, for example, beneficial effects of calcium intake on risk of some cancers such as colorectal cancer.

Minor Essential Revisions

This paper should be cited


Discretionary Revisions

Question: in the studies cited, when was calcium intake assessed? If at the time of enrollment, what guarantee is there that the same intake persisted over the duration of the study? There could be changes during the study. There should be a section on strengths and limitations of this meta-analysis and concern about constancy of calcium intake could be one of the limitations.

While some of the studies included consideration of vitamin D, vitamin D was not discussed in the text. I think it is important to do so. Serum 25-hydroxyvitamin D levels are inversely correlated with cardiovascular disease incidence rates [Anderson, 2010; Wang, 2012]. Can the studies be separated into those that considered vitamin D and those that did not?


Magnesium counters the effects of calcium on risk of cardiovascular disease. Did any of the studies consider dietary magnesium? It would be worthwhile to discuss the calcium-magnesium balance in the risk of cardiovascular disease.


What was the effect of sex and age on the risk of cardiovascular disease and mortality rates with respect to dietary calcium?

Additional papers to consider citing:


**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests.