Are more trials of calcium supplements really needed? A response to Bolland et al.

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We agree with the assertion by Bolland et al., in their recent letter [1] commenting on our review of calcium/ vitamin D supplementation and health [2], that concerns regarding previously suggested links between these supplements and cardiovascular events will not be settled by further debate. The response to this position should, one might suppose, be to suggest what might offer a more appropriate way forward. Our proposal is that, in order to definitively understand the benefits and risks associated with calcium/ vitamin D supplementation, a suitably powered trial, with relevant validated endpoints, would be required. We of course accept that it is unlikely that such a trial will be undertaken, and we clearly recognize that there would be methodological and ethical issues which would require very careful thought: we are certainly not indiscriminately “calling for more large randomized trials of calcium supplements” as Bolland et al. seem to suggest. Notwithstanding the authors’ rather simplistic illustration of risk-benefit ratio (by comparing numbers of fractures prevented with numbers of selected adverse events, which ignores the magnitude of associated morbidity etc.), it is self-evident, from the existence of this debate, that the current literature does not answer these questions. Our interpretation of the evidence base is that the support for cardiovascular adverse effects is tenuous at best; the approach of Bolland

et al., in discounting the one route to a definitive answer, without providing an alternative solution, does little to advance the field.

Compliance with ethical standards

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References

1. Bolland MJ, Grey A, Reid IR (2017) Are more trials of calcium supplements really needed? *Osteoporos Int*. doi:[10.1007/s00198-017-3988-1](https://doi.org/10.1007/s00198-017-3988-1)
2. Harvey NC, Biver E, Kaufman JM et al (2017) The role of calcium supplementation in healthy musculoskeletal ageing: an expert consensus meeting of the European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (ESCEO) and the International Foundation for Osteoporosis (IOF). *Osteoporos Int* 28:447–462. doi:[10.1007/s00198-016-3773-6](https://doi.org/10.1007/s00198-016-3773-6)

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