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LETTER

Response to letter to editor

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We agree that absorption of calcium from the gut, under the regulation of intestinal vitamin D receptor (VDR), is critically important for bone health through the prevention of osteomalacia in adults and rickets in children. We also agree that administering excessive amounts of vitamin D may have deleterious effects on bone, via the effects of VDR in bone on mineralization and/or bone resorption.

The authors suggest that calcium is necessary for vitamin D to improve bone health. However, all diets have some calcium in them, so this does not mean that calcium supplements are necessarily required. Fracture data from trials suggest that the effect of calcium plus vitamin D is comparable to that of calcium alone [1], but calcium with or without vitamin D increases cardiovascular risk to an extent which negates any bone benefit [2].

With respect to the Priemel study, those authors measured indices of bone turnover rather than mineralization (which requires in vivo labelling) and assessed vitamin D status in postmortem samples, which are likely to be misleading because of the rapid response of 25-hydroxyvitamin D to trauma or inflammation [3]. Other difficulties in generalising results from this postmortem study to living people have been raised previously [4].

The results of ongoing vitamin D trials may be of limited value, since our recent trial sequential meta-analyses suggest that new data are unlikely to change the conclusions of current meta-analyses, because of the substantial body of negative data that already exists [5, 6]. The authors' final sentence raises an interesting point: when there is a large body of evidence from randomised controlled trials with meaningful clinical endpoints that rules out important clinical effects [5–9], at what point is there enough evidence to state that an intervention is not effective?

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Conflicts of interest None.

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