



Vitamin D supplementation and COVID-19 disease: safety but unproven efficacy—reply to Dr Helga Rhein

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To the editor:

We read with interest the letter from Dr Helga Rhein, responding to our rapid evidence review around vitamin D and COVID-19 disease [1]. Dr Rhein suggests that the “evidence for the benefits of avoiding vitamin D deficiency during the pandemic far outweighs the theoretical risk of overdose” [2]. Thus, “on the balance of probabilities”, should we routinely supplement the population with higher dose vitamin D than the 400 IU/day suggested in the UK as the (dietary) RNI [3]? We completely agree with Dr Rhein that 400 IU/day will not effectively ameliorate overt vitamin D deficiency. If an individual presents with symptoms and signs consistent with the metabolic consequences of vitamin D deficiency, then clearly they should be treated appropriately with more rapid replenishment [4, 5]. This is a fundamentally different scenario to that of population health. The UK Scientific Advisory Committee on Nutrition (SACN) recommendation is aimed at ensuring that 97.5% of the population have 25(OH)D > 25 nmol/l [3]. Whilst one can argue that the therapeutic window for vitamin D supplementation is wide and risks of overdose low, we are not convinced (see our response to the letter of Dr William Grant [6, 7] that this is sufficient reason to introduce population-level higher dose

supplementation for prevention of COVID-19 disease when the observational evidence provides very limited support and the best conducted intervention study to date suggests no benefit [8]). Whether such an approach might be warranted for other outcomes, or to prevent metabolic bone disease in high risk demographics, are separate questions.

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Declarations

Conflict of Interest NCH reports personal fees, consultancy, lecture fees and honoraria from Alliance for Better Bone Health, AMGEN, MSD, Eli Lilly, Servier, Shire, UCB, Consilient Healthcare, Kyowa Kirin and Internis Pharma, outside the submitted work. CC reports personal fees, consultancy, lecture fees and honoraria from Alliance for Better Bone Health, Amgen, Eli Lilly, GSK, Medtronic, Merck, Novartis, Pfizer, Roche, Servier, Takeda and UCB. ZRE reports no conflicts of interest.

Ethical approval There was no direct involvement of patients or participants in this letter.

Informed consent Ethics review and informed consent are not applicable.

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