

Peer Review

Review of: "Calcium-Magnesium Balance—Clinical Implications for Global Human Health"

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This is a very elaborate review on Ca and Mg. I have a general problem with defining a certain Ca/Mg relation. Ca and Mg are surely very important as the authors describe; however, it must be mentioned that any deficient intake does not lead to equal extracellular and intracellular deficits. For example, severe dietary Mg deficits in animal experiments do lead to drastic reductions in serum Mg without any intracellular deficits. The authors should keep this in mind when writing on the Mg dependence of intracellular functions. It is clear that Ca and Mg deficits are significant health problems. However, why is there a need to explain these effects by certain Ca/Mg ratios? Surely a Mg deficiency can occur with normal Ca intake and vice versa. So, I don't see a need for a certain Ca/Mg ratio – the need for both minerals must be met. The effect of Vit D on both minerals is obvious, but also here I don't see a need to explain this by certain Ca/Mg ratios.

In total, I would ask the authors to think over their argumentation for certain Ca/Mg ratios. I fully agree with their arguments for a need for both minerals for numerous physiological functions, but I disagree with a need to establish a certain Ca/Mg ratio. Simply, the need for both minerals must be fulfilled. Having a Ca intake of 300 mg and a Mg intake of 150 mg would fulfil the 2/1 ratio, but in the long term, severe deficiencies would develop.

Declarations

Potential competing interests: No potential competing interests to declare.