

Magnesium and Osteoporosis: Current State of Knowledge and Future Research Directions

Nutrients. 2013 Aug; 5(8): 3022–3033.

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Abstract

A tight control of magnesium homeostasis seems to be crucial for bone health. On the basis of experimental and epidemiological studies, both low and high magnesium have harmful effects on the bones. Magnesium deficiency contributes to osteoporosis directly by acting on crystal formation and on bone cells and indirectly by impacting on the secretion and the activity of parathyroid hormone and by promoting low grade inflammation. Less is known about the mechanisms responsible for the mineralization defects observed when magnesium is elevated. Overall, controlling and maintaining magnesium homeostasis represents a helpful intervention to maintain bone integrity.