

## **VITAMIN D EFFICACY AND SAFETY IN RELATION TO BONE HEALTH: A REVIEW**

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### **ABSTRACT**

*The goal of this assessment report was to compile information on the efficacy and safety of vitamin D from food and UV radiation in terms of bone healthcare outcomes at all stages of life. The objectives were to discover knowledge gaps for the scientific community as well as areas that needed further study. We conducted a tiered selection procedure with synthesis of findings from 167 included studies after conducting a thorough literature review across various databases. We considered a wide range of outcomes in our analysis (eg, falls, bone mineral density, fractures, and adverse events). This report includes a summary of the key results as well as an explanation of the methodology. We also go through places where the data isn't conclusive, as well as methodological problems we ran across. We discovered mixed evidence of a link between serum 25-hydroxyvitamin D [25(OH)D] level and bone mass content in babies, as well as reasonable evidence of a link between bone mineral content and density in older children and adults. The evidence for a link between blood 25(OH)D level and some patient outcomes (fractures, performance measures) in menopause women and older men was mixed, while the evidence for a link with accidents was fair. We discovered strong evidence of a beneficial impact of vitamin D-fortified meals on 25(OH)D levels. The information showing vitamin D's role in preventing falls and fractures was mixed. We found reasonable evidence that people tolerated vitamin D at dosages beyond current dietary guideline consumption levels, but no information on the link between greater vitamin D dosages and long-term effects.*

**KEYWORDS:** *Adults, Bone Health, Efficacy, Serum, Vitamin D.*

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### **REFERENCES:**

1. Cranney A, Horsley T, O'Donnell S, Weiler H, Puil L, Ooi D, et al. Effectiveness and safety of vitamin D in relation to bone health. Evidence report/technology assessment. 2007.
2. Cranney A, Weiler HA, O'Donnell S, Puil L. Summary of evidence-based review on vitamin D efficacy and safety in relation to bone health. American Journal of Clinical Nutrition. 2008.
3. NCT02404870. Acute Effects of Canagliflozin, a Sodium Glucose Co-Transporter 2 (SGLT2) Inhibitor on Bone Metabolism in Healthy Volunteers. <https://clinicaltrials.gov/show/NCT02404870>. 2015;
4. A C, T H, S O, H W, L P, D O, et al. Effectiveness and Safety of Vitamin D in Relation to Bone Health. Evid Rep Technol Assess (Full Rep). 2007;
5. R. VM, C. S, J.-J. B, C. B. Reducing the burden of bone metastases: Current concepts and treatment options. Supportive Care in Cancer. 2013.
6. eudract\_number:2015-002957-37, F.A. Z, F. A, K. Z, F. B, Zeiler FA, et al. Study of RVT-101 in patients with dementia with Lewy Bodies ( DLB). Epilepsia. 2016;

7. Kim MJ, Kim SN, Lee YW, Choe YB, Ahn KJ. Vitamin D status and efficacy of vitamin D supplementation in atopic dermatitis: A systematic review and meta-analysis. *Nutrients*. 2016;
8. Vehapoglu A, Turel O, Turkmen S, Inal BB, Aksoy T, Ozgurhan G, et al. Are growing pains related to vitamin D deficiency? efficacy of vitamin D therapy for resolution of symptoms. *Med Princ Pract*. 2015;
9. Wintermeyer E, Ihle C, Ehnert S, Stöckle U, Ochs G, de Zwart P, et al. Crucial role of vitamin D in the musculoskeletal system. *Nutrients*. 2016.
10. Scheffer-Rath ME, Boot AM. The Many Facets of Vitamin D in the Pediatric Population. *Pediatric endocrinology reviews : PER*. 2020.