



The Physiological Advantages of Ergocalciferol in Empowering Women's Health

Alessandro Racco*

Department of Biochemistry, Magna Graecia University of Catanzaro, Catanzaro, Italy

ARTICLE HISTORY

Received: 04-Oct-2023, Manuscript No. EJMOAMS-23-123284;
Editor assigned: 09-Oct-2023, PreQC No. EJMOAMS-23-123284 (PQ);
Reviewed: 23-Oct-2023, QC No. EJMOAMS-23-123284;
Revised: 30-Oct-2023, Manuscript No. EJMOAMS-23-123284 (R);
Published: 06-Nov-2023

Description

Ergocalciferol, commonly known as Vitamin D₂, plays a crucial role in the maintenance of overall health, with particular significance in the well-being of women. Among these, ergocalciferol, commonly known as Vitamin D₂, stands out as a vital nutrient with a range of benefits for women. Ergocalciferol is often sourced from dietary supplements and fortified foods, making it a vital component in addressing nutritional deficiencies.

Ergocalciferol is a form of Vitamin D that is derived from plant sources, particularly fungi and yeast. It serves as a potent precursor to the active form of Vitamin D, which plays a crucial role in maintaining calcium balance, bone health, and overall immune system function.

Benefits of ergocalciferol for women

Bone health: Adequate ergocalciferol is essential for maintaining strong and healthy bones. Women, especially as they age, are prone to conditions like osteoporosis, where bone density decreases, leading to an increased risk of fractures. Ergocalciferol supports the absorption of calcium and phosphorus, vital minerals for bone health, helping to prevent bone-related issues [1].

Calcium absorption: Vitamin D, including ergocalciferol, enhances the absorption of calcium from the digestive tract. This is particularly crucial for women, as they are more susceptible to calcium deficiency, which can lead to issues such as osteoporosis and increased vulnerability to fractures [2].

Menstrual and reproductive health: Ergocalciferol may have a positive impact on menstrual and reproductive health in women [3]. Some studies suggest a potential link between Vitamin D levels and menstrual irregularities, and maintaining adequate levels of

ergocalciferol may contribute to hormonal balance and reproductive well-being [4].

Immune system support: A robust immune system is essential for overall health, and ergocalciferol plays a role in supporting immune function [5]. It helps regulate the immune response, potentially reducing the risk of infections and autoimmune disorders. This is particularly significant for women, as hormonal fluctuations can sometimes affect immune system efficiency [6].

Mood and mental well-being: Emerging research suggests a connection between Vitamin D levels, including ergocalciferol, and mood regulation [7]. Adequate Vitamin D may contribute to mental well-being, and maintaining optimal levels is essential for women who are often more susceptible to mood disorders such as depression and anxiety [8].

Breast health: Chronic inflammation is associated with an increased risk of cancer. Vitamin D has anti-inflammatory properties, and this may contribute to its potential protective effects [9].

Cardiovascular health: Ergocalciferol may have a positive impact on cardiovascular health by helping to regulate blood pressure and supporting overall heart function. Given that heart disease is a leading cause of mortality in women, maintaining cardiovascular health is of paramount importance [10].

Ergocalciferol is synthesized in plants, fungi, and yeast when they are exposed to Ultraviolet (UV) irradiation. Humans can obtain vitamin D₂ through the consumption of certain foods, such as fortified dairy products, mushrooms, and supplements. From supporting bone health and calcium absorption to contributing to immune system function, reproductive health, and

mental well-being, the benefits of ergocalciferol for women are diverse. As always, it is advisable for women to consult with healthcare professionals to determine their individual nutritional needs and ensure they are receiving the right balance of nutrients for optimal health throughout their lives.

References

- [1] Lehmann U, Gjessing HR, Hirche F, Mueller-Belecke A, Gudbrandsen OA, Ueland PM, et al. Efficacy of fish intake on vitamin D status: A meta-analysis of randomized controlled trials. *Am J Clin Nutr* 2015; 102(4):837-847.
- [2] Norman AW, Myrtle JF, Miogett RJ, Nowicki HG, Williams V, Popjaák G. 1,25-dihydroxycholecalciferol: Identification of the proposed active form of vitamin D3 in the intestine. *Science* 1971; 173(3991):51-54.
- [3] Wolf G. The discovery of vitamin D: the contribution of Adolf Windaus. *J Nutr* 2004; 134(6):1299-1302.
- [4] Bolland MJ, Grey A, Gamble GD, Reid IR. The effect of vitamin D supplementation on skeletal, vascular, or cancer outcomes: A trial sequential meta-analysis. *Lancet Diabetes Endocrinol* 2014;2(4):307-320.
- [5] Bell TD, Demay MB, Burnett-Bowie SA. The biology and pathology of vitamin D control in bone. *J Cell Biochem* 2010;111(1):7-13.
- [6] Holick MF, Binkley NC, Bischoff-Ferrari HA, Gordon CM, Hanley DA, Heaney RP, et al. Evaluation, treatment, and prevention of vitamin D deficiency: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab* 2011; 96(7):1911-1930.
- [7] Eriksen EF, Glerup H. Vitamin D deficiency and aging: Implications for general health and osteoporosis. *Biogerontology* 2002; 3(1-2):73-77.
- [8] Bouillon R, van Cromphaut S, Carmeliet G. Intestinal calcium absorption: Molecular vitamin D mediated mechanisms. *J Cell Biochem* 2003; 88(2):332-339.
- [9] Watkins RR, Lemonovich TL, Salata RA. An update on the association of vitamin D deficiency with common infectious diseases. *Can J Physiol Pharmacol* 2015; 93(5):363-368.
- [10] Puchacz E, Stumpf WE, Stachowiak EK, Stachowiak MK. Vitamin D increases expression of the tyrosine hydroxylase gene in adrenal medullary cells. *Brain Res Mol Brain Res* 1996; 36(1):193-196.