

Immunity Balance And Women's Health*

Natural Vitamin D3 10,000 IU

Description

Vitamin D is a group of fat-soluble prohormones, which include its two major forms vitamin D2 (ergocalciferol) and Vitamin D3 (cholecalciferol). While vitamin D3 is naturally produced in the skin as a result of sun exposure, the use of sunscreens, aging, avoidance of UV rays, and living in the northern latitudes can significantly reduce Vitamin D production by the body. Small amounts of Vitamin D may be found in some animal products and is added to various fortified foods (such as milk). Vitamin D3 Vcaps® supply this key vitamin in powdered form, with a base of FOS and Stearic Acid.

Features & Benefits

- Necessary for bone and dental health*
- Promotes calcium and magnesium absorption*
- Supports immune function and immune balance*
- Important for the regulation of cell growth and differentiation*
- May support vascular health*

Suggested Usage

As a dietary supplement, take 1 Vcap® every five days with a meal or as directed by your health care practitioner.

Allergen Checklist

Contains no sugar, salt, starch, yeast, wheat, gluten, soy, milk, egg, shellfish or preservatives.

Cautions/ Interactions

Although the Upper Limit for Vitamin D is 2,000 IU per day, comprehensive research demonstrates that higher dosages are safe. However, this product should be taken under the supervision of a health care professional. Vitamin D should be used cautiously by those taking cardiac glycosides and anyone with hypercalcemia.



Technical Summary

The major biologic function of vitamin D is to maintain healthy blood levels of calcium and phosphorus. By promoting calcium absorption, Vitamin D helps to develop and maintain strong bones and healthy teeth. In combination with other vitamins, minerals, and hormones Vitamin D promotes bone mineralization. Additionally, Vitamin D plays an important role in immune function and helps to regulate cell growth and differentiation. Vitamin D presently is being researched for its effect on cardiovascular disease, diabetes, inflammation and longevity. Researchers are still investigating if vitamin D2 (ergocalciferol) is an equally potent substrate for transformation into the vitamin's active form, in comparison to D3 (cholecalciferol), the "natural" vitamin D.*

Mechanisms of Action

After absorption of ergocalciferol (D2) or cholecalciferol (D3), the body converts vitamin D into its physiologically active or "hormonal" form calcitriol ($1\alpha,25(\text{OH})_2 \text{D}_3$), which is released into the circulation. Active $1\alpha,25(\text{OH})_2 \text{D}_3$ possesses both endocrine and autocrine hormone activity. In the blood plasma a carrier protein known as the Vitamin D binding protein (VDBP) transports $1\alpha,25(\text{OH})_2 \text{D}_3$ to various target tissues and organs, where it is thought to initiate responses from at least 38 different cell types that possess the Vitamin D receptor (VDR). The VDR is a nuclear receptor, which translocates to the cell's nuclei and binds to specific DNA sites to modify the expression of target genes. After activation of the receptor, the protein changes its tridimensional conformation; this change is considered the key process in order to exert its nuclear actions. Several steps take place in order to increase or decrease the transcription rate of a target gene, thus influencing cell proliferation and differentiation, immune response, as well as regulation of calcium, magnesium and phosphorous uptake and serum levels and the deposition of minerals into bone.*

Clinical Applications

The primary applications of vitamin D supplementation the promotion of bone and dental health,^{3-5,7} and providing support for healthy immune function.^{8-9,14,15} Emerging science suggests that Vitamin D status may also be important for cardiovascular health and risk for diabetes.^{6,12} Additionally, a recent meta-analysis of 18 randomized controlled trials suggests that supplemental Vitamin D promotes longevity.^{16*}

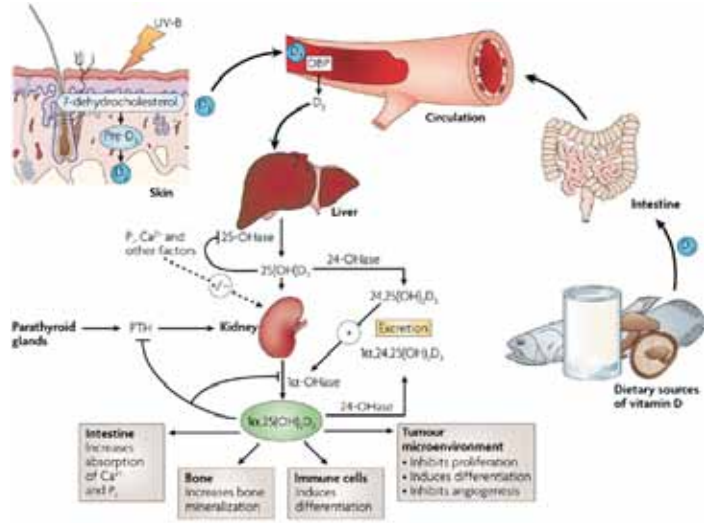


FIGURE 1 | Vitamin D metabolism

Figure 1 Vitamin D Metabolism . www.nature.com/nrc/journal/v7/n9/images/nrc2196-f1.jpg (Deeb KK, Trump DL, Johnson CS. Vitamin D signalling pathwaysNat Rev Cancer. 2007 Sep;7(9):684-700.)

Complementary Products

Omega-3 (P1657) for immune balance; **Bone Strength™ (P1228)** for bone health.*

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Supplement Facts

P0374

Serving Size: 1 VCap®

Amount Per Serving

Vitamin D3 (as Cholecalciferol) 10,000 IU

Other ingredients: NutraFlora® FOS (Fructooligosaccharides), Cellulose (capsule) and Stearic Acid (vegetable source).

Contains no: Sugar, salt, starch, yeast, wheat, gluten, soy, milk, egg, shellfish or preservatives.

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Formulated by doctors and clinical scientists exclusively for licensed healthcare practitioners. Manufactured in an A-rated Good Manufacturing (GMP) Certified facility.



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