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ESSENTIALS

VITAMIN D3 1000iu & 2500iu

Supports immunity, bones and muscle

Nutritional Information

Vitamin D3

Take one tablet daily with food and swallow with water.



SUMMARY

- A choice of 2 strengths for appropriate dosing
- Highly effective D3 form

DESCRIPTION

Vitamin D supplements to support bone and immune health. Available in a choice of 2 strengths either 1000iu or 2500iu which can be matched to current blood levels and level of sun exposure. Vitamin D is a fat soluble vitamin and a hormone that contributes to the normal function of the immune system and muscles. It is needed for the absorption of calcium in the body and helps to maintain normal bones and teeth. Vitamin D is naturally created by the body through exposure to sunlight and is recommended as a supplement for individuals with limited exposure to sunlight. Groups at high risk of low vitamin D levels are those of Asian and Afro Caribbean descent, pregnant and breastfeeding women, children and the elderly.

HOW DOES VITAMIN D SUPPORT THE IMMUNE SYSTEM?

Autoimmunity: Vitamin D is required for the regulation of T and B lymphocytes. These immune cells reside in the gut associated lymphoid tissue (GALT), alongside T regulatory cells, cells which help to ensure that T lymphocytes are displaying self-tolerance. A lack of self-tolerance leads to autoimmune antibodies and chronic autoimmune diseases. Vitamin D is found in large quantities in the GALT.

Increasing resistance to infections: Vitamin D exerts a beneficial effect on T and B lymphocytes, monocytes and dendritic cells, ultimately decreasing excess inflammation and supporting the effective defence against pathogens. Lower levels of vitamin D <30nmol/L blood is associated with increased rates of infections¹.

HOW DOES VITAMIN D SUPPORT BONE HEALTH?

Calcium absorption: Vitamin D is required for the absorption of calcium in the intestines and across the cell membranes.

Osteoblast stimulation: Vitamin D promotes osteoblast (bone secreting cell) differentiation and bone matrix calcification¹. Vitamin D binds to VDR receptors on the osteoblasts to stimulate calcification.

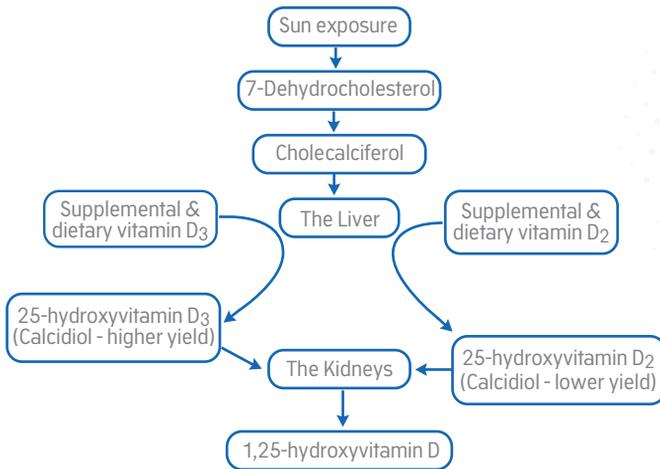
Regulating disordered bone metabolism: Vitamin D is an immune regulator and aids with self tolerance, T and B lymphocytes and immune regulatory cells. People with autoimmune conditions and autoantibodies generally have disordered bone metabolism which can result in bone mineral loss. This is partially due to the way in which inflammatory markers interact with bone cells², and the presence of osteoprotegerin antibodies which occur in a variety of autoimmune conditions³. Increasing vitamin D levels may help to regulate these antibodies and protect bone loss.

HOW DOES VITAMIN D HELP TO CONTROL PAIN?

Inflammation inhibitor: Vitamin D inhibits inflammatory cytokines which has an impact on specific and non-specific pain. Inadequate vitamin D results in a source of nociception, a response from the nervous system to harmful or potentially harmful stimuli. Low vitamin D also results in impaired neuromuscular function among patients with chronic pain.⁴ One study shows a high prevalence of inadequate vitamin D levels in patients with non-specific musculoskeletal pain, headache, or fatigue. Headaches were reported in 15% of patients with low vitamin D status and only 5% of those with adequate levels.⁵

WHAT ARE THE BENEFITS OF VITAMIN D3 OVER D2?

Vitamin D biochemistry: Vitamin D is a fat-soluble vitamin and exists in several forms, two of which are biologically important. These two forms include ergocalciferol (D2) and cholecalciferol (D3). Both forms are metabolised in the body by the liver and the kidneys to the active form calcitriol and 1,25-dihydroxyvitamin D retrospectively.



The liver yields more calcifediol from vitamin D3, than it does vitamin D2, meaning that vitamin D3 supplementation is more effective at raising serum vitamin D serum levels. Studies confirm that vitamin D3 is the preferable choice for supplementation.⁶

POPULATION GROUPS AT RISK

Those with increased risk of disease: Vitamin D deficiency is implicated in a wide variety of health problems including osteoporosis, increased risk of fractures, diabetes, cardiovascular disease, high blood pressure, weakened immunity and susceptibility to infections, depression, asthma, muscle weakness and skin conditions.

Vitamin D from diet and sun exposure: Typically 20% of vitamin D is obtained from the diet, while 80% is derived from UVB exposure. A number of factors can negatively affect the vitamin D status of individuals, requiring vitamin D supplementation. These high-risk individuals are vegans, pregnant and lactating women, individuals with darker skin pigmentation and individuals with very limited skin exposure to sunlight.

CHOOSING AN APPROPRIATE DOSE

As a fat-soluble nutrient, vitamin D should be dosed appropriately. Vitamin D3 1000iu and 2500iu are to maintain healthy vitamin D levels. Dosing should be chosen based on the customers skin tone, sun exposure and diet.

HOW SHOULD VITAMIN D3 1000iu AND 2500iu BE TAKEN?

Take one tablet daily with food and swallow with water.

ARE THERE ANY PRECAUTIONS BEFORE OR WHILE TAKING VITAMIN D 1000iu OR 2500iu?

Vitamin D3 1000iu and 2500iu are intended exclusively for adults.

Caution is required with the following health conditions:

- Renal disease
- Sarcoidosis

FEATURES

- Provides superior vitamin D3 form
- 2 strength choices for appropriate dosing

HEALTH NEEDS



BONES



EVERYDAY HEALTH
& WELLBEING



JOINTS &
MUSCLES



PREGNANCY &
FERTILITY



SENIOR'S HEALTH

SCIENTIFIC REFERENCES

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6. Scand J Prim Health Care. 2010; 28(3): 166–171.
7. Am J Clin Nutr. 2012; 95(6): 1357–1364