Super D_3

For an apparent epidemic of
Sunshine Deficiency

Item # 74840
Available in bottles of 60 capsules

The Possible Benefits of Super D_3, a Dietary Supplement

- Promotes gut absorption of calcium and phosphorus
- Maintains normal blood levels of calcium and phosphorus
- Promotes bone mineralization
- May help to improve glucose tolerance
- May play a role in cell differentiation and proliferation

Description

Vitamin D_3 is an essential vitamin. In fact, it acts as a hormone precursor as it requires two stages of metabolism before reaching actual hormonal form. Following absorption or endogenous synthesis, it is metabolized to 25-hydroxycholecalciferol (25(OH)D) in the hepatocytes. 25(OH)D is the major circulating form of vitamin D, but not biologically active. Second, the biologically active hormone form, 1 alpha, 25-dihydroxycholecalciferol ($1,25(OH)_2D$) is produced in the kidney.

A high prevalence of vitamin D deficiency has been reported in numerous studies. This deficiency is common in much of the world, in the young and old. Why is vitamin D deficiency so prevalent? Basically, because there is limited exposure to sunlight, and dietary intake of vitamin D is inadequate.

Many researchers who documented a high prevalence of vitamin D deficiency have recommended dietary vitamin D supplementation.

The Reference Daily Intake (RDI) for vitamin D is 400 IU. This value is used on nutritional supplement and food labels. Because vitamin D can cause toxicity, the U.S. National Academy of Sciences has presented a new standard, the tolerable upper limit intake level (UL): infants (0 through 12 months) –1000 IU/day, children and adults, including pregnant and lactating women – 2000 IU/day. Some researches argue that current recommendations are inadequate and should be at least ten times higher.

Vitamin D is the principal regulator of calcium homeostasis in the body. It is essential for skeletal development and bone mineralization. Vitamin D deficiency is the cause of rickets in children and osteomalacia in adults. Furthermore, vitamin D deficiency in adults can lead to osteoporosis. A number of studies have reported significant benefits from supplemental vitamin D in the prevention and treatment of osteoporosis. Others have observed that vitamin D deficiency can also result in muscle weakness, another possible contributor to falls and fractures.

Along with the classic role of vitamin D in regulation of bone mineralization and serum calcium levels, it has been recognized to play an important role in cell differentiation and proliferation. This led to vitamin D being considered as an important factor in cancer prevention and therapy and to a substantial number of studies investigating the effect of $1,25(OH)_2D_3$ on cancer cells. The results are encouraging. Laboratory, animal and epidemiological evidence suggest that vitamin D and its analogues may be protective against breast, prostate, skin and colon cancer.

It has been proposed that vitamin D may also protect against diabetes. Vitamin D deficiency is strongly associated with glucose intolerance.

The importance of sunlight and vitamin D-rich diet for treating tuberculosis was well known in the pre-chemotherapy era. The active form of vitamin D has been found to suppress the intracellular growth of *Mycobacterium tuberculosis*. Vitamin D supplementation in high-risk population has been suggested for consideration as preventive therapy.

Current research suggests that a broad range of additional indications may eventually emerge, including multiple sclerosis, infertility, heart disease and psoriasis.

An expanded version of this article is available.

THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE FOOD AND DRUG ADMINISTRATION. THIS PRODUCT IS NOT INTENDED TO DIAGNOSE, TREAT, CURE, OR PREVENT ANY DISEASE.

August -2002

Each capsule contains:

Vitamin C (as Ascorbyl Palmitate)	2 mg
Vitamin D3	2000 IU
Vitamin E	20 IU

Other Ingredients: Rice flour, rice oil, magnesium stearate, silicon dioxide.

Suggested Use: As a dietary supplement, 1 capsule daily or as directed by a healthcare practitioner. Do not exceed recommended dose without proper blood monitoring. Administration with oils rich in omega-3 fatty acids can help with absorption.

Caution: Contraindicated in individuals with hypercalcemia and in those on cardiac glycosides. Individuals with serious chronic diseases and pregnant or nursing women should consult a healthcare practitioner before use. Do not recommend for children. Blood testing is required for long-term use.

References

Thomas MK, Lloyd-Jones DM, Thadhani RI, et al. Hypovitaminosis D in medical inpatients. N Engl J Med 1998; 338:777-83.

Nesby-O'Dell S, Scanlon KS, Cogswell ME, et al. Hypovitaminosis D prevalence and determinants among African American and white women of reproductive age: third National Health and Nutrition Examination Survey, 1988–1994. Am J Clin Nutr 2002;76:187-92.

Rucker D, Allan JA, Flick GH, Hanley DA. Vitamin D insufficiency in a population of healthy western Canadians. Can Med Ass J 2002; 166:1541-2.

Lamberg-Allardt CJ, Outila TA, Karkkainen MU, Rita HJ, Valsta LM. Vitamin D deficiency and bone health in healthy adults in Finland: could this be a concern in other parts of Europe? J Bone Miner Res 2001; 16:2066-73.

Harris SS, Soteriades E, Coolidge JA, Mudgal S, Dawson-Huges B. Vitamin D insufficiency and hyperparathyroidism in a low income, multiracial, elderly population. J Clin Endocrinol Metab 2000; 85:4125-30.

Fairfield KM, Fletcher RH. Vitamins for chronic disease prevention in adults. JAMA 2002; 287:3116-26.

Malabanan A, Veronikis IE, Holick MF. Redefining vitamin D insufficiency. Lancet 1998, 351:805-6.

Madelenat P, Bastian H, Menn S. Winter supplementation in the 3rd trimester of pregnancy by a dose of 80,000 IU of vitamin D. J Gynecol Obstet Biol Reprod (Paris) 2001; 30: 761-7

Veith R. Vitamin D supplementation, 25-hydroxyvitamin D concentrations, and safety. Am J Clin Nutr 1999; 69:842-56.

Veith R, Chan P-CR, MacFarlane GD. Efficacy and safety of vitamin D_3 intake exceeding the lowest observed adverse effect level. Am J Clin Nutr 2001; 73:288-94.

From the National Institutes of Health. Osteoporosis prevention, diagnosis, and therapy, JAMA 2001; 285:785-95.

Chapuy MC, Arlot ME, Duboeuf F, et al. Vitamin D3 and calcium to prevent hip fractures in the elderly women. N Engl J Med 1992; 327:1637-42.

Dawson-Huges B, Harris SS, Krall EA, Dallal GE. Effect of calcium and vitamin D supplementation on bone density in men and women 65 years of age or older. N Engl J Med 1997; 337:670-6.

LeBoff MS, Kohlmeier L, Hurwitz S, Franklin J, Wright J, Glowaski J. Occult vitamin D deficiency in postmenopausal US women with acute hip fracture. JAMA 1999; 281:1505-11.

Pfeifer M, Begerow B, Minne HW. Vitamin D and muscle function. Osteoporos Int 2002; 13:187-94.

Prabhala A, Garg R, Dandona P. Severe myopathy associated with vitamin D deficiency in western New York. Arch Intern Med 2000; 160:1199-203.

Friedrich MJ. Steps toward understanding, alleviating osteoarthritis will help aging population. JAMA 1999; 282:1023-5.

McAlindon TE, Felson DT, Zhang Y, et al. Relation of dietary intake and serum levels of vitamin D to progression of osteoarthritis in the knee among participants in the Framingham Study. Ann Intern Med 1996; 125:353-9.

Basha B, Rao DS, Han ZH, Parfitt AM. Osteomalacia due to vitamin D depletion: a neglected consequence of intestinal malabsorption. Am J Med 2000; 108:296-300.

Luscombe CJ, Fryer AA, French ME, Liu S, Saxby MF, Jones PW, Strange RC. Exposure to ultraviolet radiation: association with susceptibility and age at presentation with prostate cancer. Lancet 2001; 358:641-2.

Hansen CM, Binderup L, Hamberg KJ, Carlberg C. Vitamin D and cancer: effects of 1,25(OH)2D3 and its analogs on growth control and tumorigenesis. Front Biosci 2001; 6:D820-48.

Koren R, Hadari-Naor I, Zuck E, Rotem C, Liberman UA, Ravid A. Vitamin D is a prooxidant in breast cancer cells. Cancer Res 2001; 61:1439-44.

Mokady E, Schwartz B, Shany S, Lamprecht SA. A protective role of dietary vitamin D3 in rat colon carcinogenesis. Nutr Cancer 2000; 38:65-73.

Tangpricha v, Flanagan JN, Whitlach LW, et al. 25-hydroxyvitamin D-1α-hydroxylase in normal and malignant colon tissue. Lancet 2001; 357:1673-4

Boucher BJ. Inadequate vitamin D status: does it contribute to the disorders comprising syndrome 'X'? Br J Nutr 1998; 79:315-27.

Hypponen E, Laara E, Reunanen A, Jaarvelin M-R, Virtanen SM. Intake of vitamin D and risk of type 1 diabetes: a birth-cohort study. Lancet 2001; 358:1500-3.

Wilkinson RJ, Llewelyn M, Toossi Z, et al. Influence of vitamin D deficiency and vitamin D receptor polymorphisms on tuberculosis among Gujarati Asians in west London: a case-control study. Lancet 2000; 355:618-21.

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