Vitamin D

ITEM# 109
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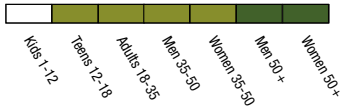

It is common knowledge that vitamin D plays an important role in helping the body to absorb calcium and in bone mineralisation. However accumulating scientific evidence is proving that vitamin D provides more health benefits than simply bone health. Evidence is emerging that there is wide spread vitamin D deficiency in the broader population.

Vitamin D is synthesised in the skin after exposure to sunlight, and is also obtained through the diet, however is only present in limited number of foods.

Vitamin D deficiencies can occur when exposure to sunlight is limited or as the body ages, the ability to produce vitamin D is impaired. Vitamin D deficiency during bone development and growth causes rickets among children. In adults, vitamin D deficiency may increase the risk of developing osteoporosis.[1]

A simple blood test is all that is required to determine your levels which you should check annually.

Vitamin D for Strong Bones

Numerous scientific studies have shown that calcium plus vitamin D supplementation promotes the growth and maintenance of strong, mineral-rich bones. Vitamin D supplementation is highly recommended as a standard preventative measure in osteoporosis management.[2] Vitamin D is essential for the maintenance of calcium homeostasis, supports efficient calcium absorption and is necessary for normal bone mineralisation. Calcium and vitamin D supplementation may reduce the risk of osteoporosis.

Vitamin D and Healthy Muscle Function

Vitamin D deficiency appears to be a risk factor for poor muscle strength and coordination, particularly in the elderly.[3,4] Several clinical trials and meta-analyses were conducted to evaluate vitamin D supplementation, with and without added calcium. Most studies demonstrated significant benefits particularly at the higher vitamin D doses. Improvement in muscle strength was one among the improvements being measured. This may involve a link between muscle calcium status and function, and a link between vitamin D and calcium and neuromuscular performance.[5]

Vitamin D for Immune Function

1,25-Dihydroxyvitamin D3 (1,25(OH)2D3), the biologically active form of vitamin D3, not only regulates bone and calcium metabolism but also exerts other biological activities, including immunomodulation.[6] By binding to its receptor, the vitamin D receptor, 1,25(OH)2D3 regulates the expression of various genes and consequently affects the behaviour of different cell types within the immune system.[7] Adequate vitamin D intake is important in maintaining the balance in immune health.

Why **Vitamin D**?

Diet is a secondary source of vitamin D in that most foods contain only small amounts of this nutrient. It is estimated that average intake of vitamin D for most Australians is less than 100 IU per day from diet alone[8], leaving a gap in vitamin D nutrition for those with insufficient sun exposure.

USANA's NEW **Vitamin D** is formulated with maximum strength to help you bridge the vitamin D deficiency gap in your dietary consumption. It is a maximum strength supplement created to combat vitamin D deficiency. It provides you with 1000 IU per tablet to support optimal intake of vitamin D.

Using **Vitamin D**

Take one (1) **Vitamin D** tablet, preferably with meals.

EACH TABLET CONTAINS:	
VITAMIN D3	
(1000 IU: CHOLECALCIFEROL	25 µg

References

1. Holick MF. Am J Clin Nutr. 2004; 80 (Suppl.):1678S-1688S.
2. Lips P. Endocrine Rev 2001; 22: 477-501.
3. Pfeifer M, Begerow B, Minne HW. Vitamin D and muscle function. Osteoporos Int 2002; 13:187-94.
4. Visser M, et al. J Clin Endocrinol Metab 2003; 88:5766-72.
5. Jackson C. et al. Q J Med 2007; 100:185–192
6. Van Etten E, Mathieu C. J Steroid Biochem Mol Biol. 2005;97:93-101.
7. Baeke F, Van Etten E, OverberghL, Mathieu C. Nutr Res Rev. 2007; 20:106-118.
8. Vitamin D and adult bone health in Australia and New Zealand: a position statement; MJA 2005; 182 (6):281-285

Vitamin supplements should not replace a balanced diet.

USE ONLY AS DIRECTED. ALWAYS READ THE LABEL.

USANA HEALTH SCIENCES

Optimizers
Micronutrition

Vitamin D

- Helps to maintain healthy bones
- Supports efficient calcium absorption
- Necessary for normal bone mineralisation
- Important for the maintenance of muscle strength
- Supports robust and healthy immune function
- Vegetarian safe