



## Vitamin D

Vitamin D is a fat soluble vitamin that regulates calcium absorption. While some of the vitamin D is obtained from your diet, (mainly fortified milk) most of it is made in the body under the influence of sun light. Being exposed to sun for 15 minutes a day helps the skin make adequate amounts of Vitamin D. The ultra violet light from the sun, however, can cause melanoma and other skin cancers and photo damaged skin develops wrinkles. As a result of decreased sun exposure due to the use of sunscreen, many people have Vitamin D deficiency. Vitamin D supplements are generally required for most individuals.

The best test of measure Vitamin D levels is a blood test that measures 25-hydroxy Vitamin D. Vitamin D deficiency leads to loss of calcium from the bone that can cause osteoporosis or osteomalacia (soft bones). Osteomalacia in children is called rickets. This leads to bone malformations. Recent studies suggest that Vitamin D deficiency may play a role in several conditions unrelated to bone including heart disease, high blood pressure, multiple sclerosis, type 1 diabetes, prostate, breast and colon cancer.

Recent clinical studies have established normal ranges of 25-hydroxy Vitamin D and new recommendations for treatment. The new normal ranges are 32-100 mg/ml. Levels between 20-32 indicate mild Vitamin D insufficiency; levels less than 20 mg/ml indicate Vitamin D deficiency. Prior recommendations for Vitamin D supplementations were 400-800 I.U. per day. New recommendations are 800 I.U. per day in addition to 1200 mg of elemental calcium (total diet plus supplement).

Vitamin D deficiency (level below 20 ng/ml) is treated with 50,000 I.U. per week for 6-8 weeks and then a maintenance dose of 1000 I.U. per day. Vitamin D insufficiency (level 20 -32 ng/ml) is treated with 1000 IU/d. This intake should bring the average adult to 30 ng/ml over a three-month period.