## Vitamin D

Both Vitamin D and calcium are essential for building strong bones. Vitamin D is very essential for Calcium absorption. Our body create this important vitamin when the skin is exposed to the sun. Vitamin D is not only important for calcium absorption, it has anti-inflammatory properties and also helps boost immunity by fortifying the white blood cells (WBC).

Vitamin D deficiency has been linked with depression, mental health problems and seasonal affective disorders, high blood pressure, diabetes, autoimmune diseases, excess fat accumulation around vital organs, different kind of cancer, artherosclerosis, osteoporosis, osteopenia. Osteoporosis is deterioration of bone mass and oosteopenia is thinning of bones. Vitamin D is required to balance sugar levels in the blood by regulating the secretion of insulin. Research suggests that low levels of vitamin D increases the risk of developing type 2 diabetes later in life.

## Requirements

1 to 70 years of age: 600 to 1000 IU per day

More than 70 years: 800 to 2000 IU per day

5000 IU per day for 9 weeks can be advised for deficiency.

## Source and test for Vitamin D

There are two types of Vitamin D. Ergocalciferol (Vitamin D2) is found in a few foods like fatty fish. Cholecalciferol (Vitamin D3) is what is produced by the body when the skin is exposed to sunlight. As per the current recommendations, daily intake of vitamin D should be 2000 IU. Although sunlight is the best natural source of vitamin D, you can also obtain it through your diet. Natural form of vitamin D3 is present in dairy products like milk (100 IU in one 8 ounce glass), yogurt (80 IU) and egg yolks (one yolk offers 20 IU of vitamin D). Fatty fish like salmon gives you 400 IU of vitamin D in just 5 ounces. For extra supplementation cereals, fresh fruit juice and some vitamin D-fortified foods are recommended. It is difficult to get enough Vitamin D through food sources. And sunshine is the best option.

15 to 20 minutes a day in direct sunlight, 3 to 5 times a week is enough. Do not wear sunscreen during this time as this will prevent your skin from absorbing the vitamin. Vitamin

D supplements can be taken and can cause hypervitaminosis. While you never get too much of Vitamin D from sun. Vitamin D is stored by the body.

In case of deficiency, supplementation is required but overdose is to be avoided. A blood test is done to check Vitamin D3 levels. 15-50 ng/ ml is the normal range. When below 15, supplements should be taken. It can be oral or by injection. Once the levels reach 30, sunlight is the best option. Vitamin D once depleted takes some time to build up.

Some supplements available in India:

In India commercially available vitamin D3 is not vegan since it is usually made from lanolin fat from sheep's wool. Vegan Vitamin D2 is made from vegan sources like yeast and mushrooms.

Oral: Calcirol (cadila Pharma) or Caldikind sachet (Mankind) for Vitamin D3. Oil based. These are taken orally.

Injection: Injection Arachitol, it contains chooecalciferol, ooil based and is made by Solvay Company.

Natural Vegan D3 by Unived. The product is 100% natural with noo synthetic ingredients.

Vitashine Vitamin D3 is available in India, marketed by Zydus Fudila under the brand name Nu D3.

Forzza rays D3 nasal spray from Fullife.

## Reference and for more information

http://sharan-india.org/vitamin-d/

http://www.unived.in/aboutus/

thttp://www.unived.in/aboutus/contact/

www.zydusnutriva.com/index

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http://www.thehealthsite.com/diseases-conditions/health-risks-of-vitamin-d-deficiency-sh214/