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Understanding Vitamin D

2. Not getting enough sun exposure
3. Not taking adequate Vitamin D in supplements

There are other factors that can contribute to Vitamin D deficiency:

1. Taking certain medications
2. Magnesium deficiency (magnesium is required to convert Vitamin D into its active form)
3. Older age – as we age our skin is less efficient in converting sunlight into Vitamin D
4. Being overweight or obese: your needs are proportional to your percentage of body fat

Academy of Sciences. [Source: Institute of Medicine, Food and Nutrition Boards –Dietary Reference Intakes. Washington, DC: National Academy Press, 1997].

Adults under 50 years old:

200 IU per day

Adults 50 – 70 years old: 400 IU

Adults over 70 years old: 600 IU

In 2008, the American Academy of Pediatrics recommended that babies who are exclusively breastfed be supplemented with 400 IU of Vitamin D until they are drinking at least 1000 ml of Vitamin D fortified formula daily. Older children

not drinking adequate amounts of fortified milk and getting inadequate sun exposure should also be supplemented.

It is important to remember that if your Vitamin D level is low, your doctor must consider the possibility of parathyroid disease before starting on Vitamin D supplements.

Which foods are best for Vitamin D?

Fish (halibut, cod liver oil, salmon, tuna, mackerel, sardines), fortified milk and cereal, whole eggs (the Vitamin D is in the yolk), liver, cheese and butter.

Vitamin D is extremely important for your overall health and well-being. Consider getting your level tested. You and your healthcare provider can develop strategies for keeping your level in the optimal range.

Mitka M. More Evidence on Low Vitamin D Levels Fuels Push to Revise Recommended Intake. *New England Journal of Medicine*. 302:23. December 16, 2009. Editorial

Bordelon P, Ghetu M. Recognition and Management of Vitamin D Deficiency. *American Family Physician*. 80:8. October 2009.

Stechschulte S, Kirsner R. Vitamin D: Bone and Beyond, Rationale and Recommendations for Supplementation. *American Journal of Medicine* 122:8. Sept. 2009.

What is the latest on Vitamin D?

Vitamin D is a fat-soluble vitamin produced by our skin when it's exposed to sunlight. There are two important forms that our bodies use: Vitamin D2 (ergocalciferol) and Vitamin D3 (cholecalciferol). If your body does not form enough of its own Vitamin D from sun exposure you must obtain it from an outside source such as fortified foods, fish and nutritional supplements.

What does Vitamin D do?

Vitamin D is necessary for absorbing calcium and phosphorus from food as it passes through your intestines. These elements are necessary to maintain bone strength. But Vitamin D has many other important roles throughout the body – many which are still being discovered.

Why is Vitamin D important?

Low levels or deficiencies of Vitamin D have been associated with increased risk of heart attack, elevated blood pressure, stroke, osteoporosis, increased risk of falls in the elderly (from muscle wasting), various cancers (colorectal, leukemia, breast), autoimmune diseases (multiple sclerosis, rheumatoid arthritis, type 1 diabetes) as well as depression, seasonal affective disorder and dementia. Extreme deficiencies can lead to rickets in children and osteomalacia in adults both of which cause soft, painful bones. What causes Vitamin D deficiency?

The most common causes are:

1. Not getting enough Vitamin D in the diet



5. Low cholesterol levels – cholesterol is required to convert sunlight to Vitamin D in the skin
6. Eating a very low fat diet – Vitamin D is fat soluble and requires fat in your food to be absorbed
7. Having very dark skin – dark skin blocks the UV rays from reaching the cells where the Vitamin D is produced.
8. Various intestinal disorders that interfere with nutrient absorption

What is the recommended intake for Vitamin D?

The daily Adequate Intake (AI) levels for Vitamin D have been estimated by the US Institute of Medicine of the National



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