



SUPPLEMENT SPOTLIGHT: Vitamin D3: The Sunshine Vitamin

by Patrick Bufi, ND

Vitamin D, often called the sunshine vitamin (more about that in a minute), plays a vital role in human health. We need it to...

- **Absorb and utilize calcium and phosphorus**, and to a lesser degree, magnesium and fluoride
- **Grow**, especially growth and development of children's bones and teeth
- **Prevent rickets, osteoporosis, and osteomalacia** (softening of bones, an adult form of rickets)
- **Strengthen the immune system**, which may in turn help prevent certain cancers

The science behind the sunshine vitamin

Vitamin D is a steroid hormone precursor; a hormone being a substance that is produced in one part of the body for use in another part. A precursor molecule is one that is inactive until activated prior to use. In the case of Vitamin D, the precursor is stored primarily in the skin and it is activated by sunshine, mainly ultraviolet B rays. That's why it's often called the sunshine vitamin.

Vitamin D deficiency

If your sun exposure is limited, your vitamin D levels may be significantly lower than needed to maintain good health. Some of the things that limit sun exposure are...

- Having dark skin
- Frequent use of sun block
- Wearing protective clothing
- Living and working primarily indoors
- Living in a northern latitude, like the Pacific Northwest, where winter daylight hours are few and the sun often hides behind clouds

Catch these statistics. On a cloudy day, you can expect at least a 50% reduction of the UV rays needed to form Vitamin D. And the Seattle area gets an average of just 58 - 75 cloud-free days per year.

So what's the result of vitamin D deficiency? A severe deficiency will impair mineralization of bone (osteoporosis, osteomalacia) and growth plates (rickets). Other clinical manifestations may include childhood seizures, fractures, lower-limb deformities, abnormal teeth formation and delayed developmental landmarks. Vitamin D deficiency may

also contribute to Seasonal Affective Disorder (SAD), a form of depression that typically occurs during winter months because of lack of sunlight. (See related article: [Don't Get S.A.D., Be Glad.](#))

On the other hand, too much vitamin D can cause toxicity and may also increase absorption and retention of toxic metals like lead, cadmium, aluminum, and strontium. Excess vitamin D results from overdosing on vitamin D supplements, not from excessive sun exposure.

Vitamin D in your diet

When adequate sun exposure is not an option, you can maintain a healthy Vitamin D level through diet and nutritional supplements – Vitamin D3 (the active form). Here's a list of food sources for Vitamin D, from the National Institutes of Health (NIH)...

- Cod Liver Oil (1 Tbsp contains 1360 IU)
- Salmon, cooked (3 1/2 oz contains 360 IU)
- Mackerel, cooked (3 1/2 oz contains 345 IU)
- Sardines, canned in oil (1 3/4 oz contains 250 IU)
- Tuna fish, canned in oil (3 oz contains 200 IU)
- Milk, nonfat, Vitamin D fortified (1 cup contains 98 IU)
- Margarine, fortified, (1 Tbsp contains 60 IU)
- Fortified cereals (3/4-1 cup contains 40 IU)
- Egg – Vitamin D is in the yolk (1 whole egg contains 20 IU)
- Liver, beef, cooked (3 1/2 oz contains 15 IU)
- Swiss cheese (1 oz contains 12 IU)

But note the IU (international units) levels. We need 1,000 to 2,000 IUs of vitamin D a day, and that's hard to get even from these vitamin-D-rich foods, or from your typical multiple vitamin (with only 400 IUs). At Northwest Natural Health, we recommend you also take Vitamin D3 supplements – the active form. In the end, sunshine is the best way to get the vitamin D your body needs for a good mood and good health. Maybe that's why so many wonderful songs croon about it... You are My Sunshine, Sunshine Superman, Here comes the Sun, Walking on Sunshine, Sunny, and Waiting for the Sun (which is what we often do in Seattle). ❖