

**The following is a discussion of the potential benefits of Vitamin D. The information will apply to most people, but you should talk to your physician to see if vitamin D supplementation is a good idea for you.**

## The Potential Benefits of Vitamin D to your Health

*By Nick Thornton, M.D.*

Worldwide, an estimated 1 billion people have inadequate levels of vitamin D in their blood, and deficiencies can be found in all ethnicities and age groups. I would estimate at least 70-80% of my patients are low or borderline. Why are these widespread vitamin D deficiencies of such great concern? Because research conducted over the past 2 decades suggests that vitamin D plays a much broader disease-fighting role than was once thought, I feel it is therefore essential to good health.

### Uses and Benefits

Vitamin D is a fat-soluble vitamin that is estimated to affect as many as 2,000 genes in the body. Vitamin D has several important functions. Perhaps the most vital are regulating the absorption of calcium and phosphorous and facilitating normal immune system function. Getting a sufficient amount of the vitamin is important for normal growth and development of bones and teeth, as well as improved resistance against certain diseases.

If your body doesn't get enough vitamin D, you're at risk of developing bone abnormalities such as osteomalacia (soft bones) or osteoporosis (fragile bones). In addition to its primary benefits, research suggests that vitamin D may also play a role in multiple other health benefits. Most studies of Vitamin D are limited due to the expense of doing clinical research, but here are some examples of promising findings:

- decreasing your chance of developing heart disease, according to 2008 findings published in *Circulation*
- helping to reduce your likelihood of developing the flu, according to 2010 research published in the *American Journal of Clinical Nutrition*
- helping to reduce blood pressure for people with hypertension, according to research at Boston University
- helping to possibly reduce the risk of certain cancers, according to multiple studies.
- Potentially reducing the risk of Alzheimer's dementia (studies have shown that Alzheimer's patients have a higher rate of low Vit. D level)
- reducing your risk of multiple sclerosis, according to a 2006 study published in the *Journal of the American Medical Association*

## How Do You Get It?

Your body produces vitamin D naturally through direct exposure to sunlight. A little can go a long way: just 10 minutes a day of mid-day sun exposure is plenty, especially if you're fair-skinned. Besides getting vitamin D through sunlight, you can also get it through certain foods and supplements. The National Institutes of Health (NIH) recommends that you obtain vitamin D from all three of these sources in order to ensure adequate levels of the vitamin in your blood.

## Beware of "D-ficiency"

Many lifestyle and environmental factors can affect your ability to get sufficient amounts of this vitamin through the sun alone. These factors include:

- pollution
- use of sunscreen (which is still recommended)
- spending more time indoors
- working longer hours in offices
- living in big cities where buildings block sunlight

These factors contribute to vitamin D deficiency in an increasing number of people. It is also likely that some patients do not absorb vitamin D as well as others do. That's why it's important to get some of your vitamin D from all 3 sources of vitamin D- sun exposure, food and supplements.

## Food Sources of Vitamin D

Although few foods contain vitamin D naturally, some foods are fortified with it, which means that the vitamin is added to the food. Foods that contain vitamin D include:

- salmon
- sardines
- egg yolk
- shrimp
- milk (fortified)
- cereal (fortified)
- yogurt (fortified)
- orange juice (fortified)

It can be hard to get enough vitamin D each day through sun exposure and food alone, so taking vitamin D supplements can help.

## How Much Do You Need?

There has been some controversy over the amount of vitamin D needed for healthy functioning. Recent research indicates that we need more vitamin D than was once thought. The RDA (Recommended Daily Allowance) was recently raised and it is now recommended to take between 600-1000 IU depending on age and other health factors. However, there have been a number of reports that suggest most of us would benefit from taking even more than that. Personally, I take 5,000 units a day and recommend that to my patients. It is estimated that 10-15 minutes of mid-day sun can produce over 10,000 units of Vitamin D3, so 5,000 units does not seem excessive. It is possible to get too much Vitamin D, which can be dangerous. Therefore, I would not recommend taking more than 5,000 units per day on average for extended periods of time without specific instructions to do so by your doctor. Some doctors suggest taking no more than 2,000 units a day, so you should check with your doctor to see which dose is right for you. You should also have your levels checked at least once a year while taking regular supplementation.

Vitamin D3 supplements are readily available just about anywhere that vitamins are sold. I recommend "Mega D3" to my patients because it is made by a manufacturer with over 80 years in the business and it may offer additional health benefits. I take this product myself. If your levels are low, or borderline low, I highly recommend you consider taking Vitamin D3 on a regular basis.

### Here is some more detailed info about possible benefits of Vitamin D:

- At Boston University, after people with high blood pressure were exposed to UVA and UVB rays for three months, their vitamin D levels increased by more than 100% -- and more impressively, their high blood pressure normalized. "We've followed them now for nine months, and their hypertension continues to be in remission," says Holick, professor of medicine, physiology and biophysics at Boston University. One theory about how vitamin D reduces blood pressure: It decreases the production of a hormone called renin, which is believed to play a role in hypertension.
- In a study published in the *Journal of the American Medical Association* in December 2003, of more than 3,000 veterans (ages 50 to 75) at 13 Veterans Affairs medical centers, those who consumed more than 645 IU of vitamin D a day along with more than 4 grams per day of cereal fiber had a 40% reduction in their risk of developing precancerous colon polyps.
- In a report in the *Journal of the American Geriatrics Society* in February 2004, researchers at the University of Basel in Switzerland showed that elderly women who took a vitamin D supplement plus calcium for three months reduced their risk of falling by 49% compared with consuming calcium alone. Those women who had fallen repeatedly in the past seemed to gain the most benefit from vitamin D.

- The Health Professional Follow-Up Study checked the vitamin D blood levels in nearly 50,000 men who were healthy, and then followed them for 10 years. They found that men who were deficient in vitamin D were twice as likely to have a heart attack as men who had adequate levels of vitamin D. Other studies have found that low vitamin D levels were associated with higher risk of heart failure, sudden cardiac death, stroke, overall cardiovascular disease, and cardiovascular death. How exactly might vitamin D help prevent heart disease? There's evidence that vitamin D plays a role in controlling blood pressure and preventing artery damage, and this may explain these findings. Still, more research is needed before we can be confident of these benefits.
- A promising report in the *Archives of Internal Medicine* suggests that taking vitamin D supplements may even reduce overall mortality rates: A combined analysis of multiple studies found that taking modest levels of vitamin D supplements was associated with a statistically significant 7 percent reduction in mortality from any cause. The analysis looked at the findings from 18 randomized controlled trials that enrolled a total of nearly 60,000 study participants; most of the study participants took between 400 and 800 IU of vitamin D per day for an average of five years. Keep in mind that this analysis has several limitations, chief among them the fact that the studies it included were not designed to explore mortality in general, or explore specific causes of death. More research is needed before any broad claims can be made about vitamin D and mortality.

The information in this article was compiled from multiple resources including:

<http://www.healthline.com/health/food-nutrition/benefits-vitamin-d#Overview1>

<http://www.hsph.harvard.edu/nutritionsource/vitamin-d/>