



# THE FAMILY PHARMACIST

A QUICK READ FOR YOUR OTC NEED!

VOLUME 1, ISSUE 10

OCTOBER 15, 2020

By Bob Jaeger, BS Pharm

## VITAMIN D: DO YOU NEED A SUPPLEMENT?

All vitamins are interesting, but vitamin D is particularly fascinating, primarily because it's a vitamin, a hormone, and a medication all at the same time. You may have noticed on pharmacy shelves that you have a choice between vitamin D<sub>2</sub> and vitamin D<sub>3</sub>. While the chemistry is complicated, basically vitamin D<sub>2</sub> is the type commonly found in fungi, particularly mushrooms, and so it may be preferred by those on a vegan diet. Vitamin D<sub>3</sub> is the form of the vitamin most often found in animals. Both forms are effective for raising vitamin D levels and both are measured in international units (IU). We humans manufacture vitamin D<sub>3</sub> in our skin naturally during exposure to the sun.

The main function of vitamin D (either form) is to maintain our body's blood calcium at a fixed level. Through a complex process that involves other naturally occurring hormones and enzymes, vitamin D promotes the formation of bone by depositing calcium into our skeletal framework. It makes sense then that too little vitamin D will cause a drop in blood calcium, causing a dissolution of bone, and eventually numerous medical disorders, such as the disease known as rickets in children, osteoporosis in adults, and a host of other bad medical conditions.

While much is known about the diseases that vitamin D deficiency can cause, research is ongoing to learn more about the preventive value of vitamin D. Some studies have claimed that optimal levels of vitamin D can maintain muscle strength, prevent falls, improve dental health, and prevent colorectal cancer. These early, optimistic observations have been questioned in the last couple of years by more thorough investigation, so the jury is still out. More recently, there is some evidence that adequate blood levels of vitamin D are *helpful* in protecting against the

SARS CoV-2 virus that causes COVID-19. That is why it's been in the media so much lately. It isn't that vitamin D is preventive against the virus (as a medicine), it's just that if you have insufficient levels it may be another contributing risk factor. People who get sick with COVID-19 often have multiple risk factors. One thing is certain. Maintaining an *adequate* blood level of vitamin D is necessary to stay healthy.

So what is the best way to get your daily vitamin D? Ideally, it would be from the *sun* and in your *diet*. But is that possible?

**From the sun.** The hormonal nature of vitamin D is responsible for our skin's ability to form it from other chemicals in our bodies. This year we've probably spent more time indoors than ever before. And as we get into the winter months our opportunities to be outside in the fresh air and sunlight will dwindle. With diminished exposure to sunlight, our bodies will produce less natural vitamin D. This is significant because sun exposure, especially between the hours of 10 am and 3 pm, produces vitamin D in the skin that may last twice as long in the blood compared with vitamin D that we get from a supplement. While it's true that only 10 minutes of sun exposure will get you all the vitamin D you need for one day, we've all been warned to avoid sun exposure by staying out of the sun and using a sun block. Fear of skin cancer (melanoma) is a factor. But limited, incremental exposure to sunlight is good for us and can meet our vitamin D needs if we spend a small amount of unprotected time in the sun every day.

**From food.** Unfortunately, few food sources, plant or animal, naturally contain vitamin D. So adequate amounts of vitamin D are difficult to get in your diet. When you examine food and beverage labels for vitamin D content, the amount you see, if any, is almost always added.

Food products are "fortified" with vitamin D. Many mushrooms, especially cremini and white button mushrooms, and some oily fish like Atlantic salmon are good sources of vitamin D. But most foods don't supply it naturally.

Magazine and media articles often cite studies that show that a large percentage of the population are "deficient" or "low" in vitamin D. What does that really mean? What is an adequate blood level of vitamin D? Medical journals quantify blood levels of vitamin D more accurately as sufficient, insufficient, or deficient. *Insufficient* levels of vitamin D mean that you need a supplement. *Deficient* levels of vitamin D mean that your levels are low enough to cause disease.

The ideal range for vitamin D in blood is controversial, but most agree it should be above **20 nanograms per milliliter (ng/ml)** to prevent disease. When you get the result of a blood test for vitamin D it will display a range of values, like the chart below.

Blood Level Vitamin D Status	
Sufficient	30-50 ng/ml
Insufficient	20-29 ng/ml
Deficient	Less than 20 ng/ml

A routine physical at your doctor's office usually won't include a vitamin D blood test. Insurance companies often will not pay for the test. If you don't have a specific complaint or symptom that makes your health care provider suspicious that you are low on vitamin D they won't check for it. The cost of a vitamin D test out-of-pocket at your doctor's office may cost \$85 or more. However, a finger-stick home test kit is available online from Everlywell for around \$50.

*(Continued on page 2)*

However, a few professional organizations, both in the US and Canada, do *not* recommend routine vitamin D screening in the general population. They reason that vitamin D insufficiency is common and vitamin D supplementation is easily available and inexpensive. A simple solution is to supplement everyone who is not able to get their daily requirement from the sun or food. The Endocrine Society, a public health organization, suggests that lab test screening should be reserved for patients who may be deficient due to certain conditions. For example, pregnant or lactating women, people with dark skin, those with chronic kidney disease, advanced age with a history of falls, and so on.

**My Recommendation:** Try to get your daily vitamin D *naturally*. If you can, spend a small amount of time in direct sunlight every day, about 10 to 15 minutes with your arms and face exposed. This minimal exposure is safe. Include mushrooms in your diet as much as possible. If you take a multivitamin, check the label to see how much vitamin D is included in the daily dose. If you are between the ages of 9 and 70 (male or female), you should ingest (from all sources) at least 600 IU of vitamin D daily. Persons over 70 years of age should take in at least 800 IU daily. If you are *not* getting this amount, then it is prudent to take a supplement of 1000 IU a day. For children under the age of nine, check with your pediatrician. If you have a chronic medical condition, unusual medical circumstances, or take certain medicines (like steroids or antifungal drugs) a blood test may be in order and you may have a need for higher doses of vitamin D than the recommended dietary allowance. Check with your physician.

References on file

- End Of Document -