

Vitamin D – research & clinical practice converging for mental health

Research Analysis by *Craig Wagner*



The frequency of Vitamin D deficiency is escalating across the world.

[30-50%](#) of both children and adults in the United States, Canada, Europe, and Asia have low Vitamin D levels. Some [sources](#) peg the percentage even higher.

Vitamin D, the so-called "sunshine vitamin", acts as both a vitamin and a hormone, and is synthesized in our skin when it is exposed to sunlight. Many groups are at risk for deficiency: the elderly, adolescents, obese individuals, and those with chronic illnesses.

But those with darker skin are especially impacted: one [analysis](#) found that up to 76% of African Americans have Vitamin D levels under the minimum threshold. Lighter skinned individuals using sunscreen are also at risk since using even low SPF 15 protection can cut down the skin's ability to produce Vitamin D by as much as 99%.

But, do we need to be concerned about our Vitamin D levels? Yes.

According to [Natural News](#), vitamin D is "perhaps the single most underrated nutrient." A lack of sufficient Vitamin D is increasingly blamed as a contributor for cancer, diabetes, bone issues, heart disease and an array of other maladies. Perhaps less well known, low Vitamin D levels are also associated with a variety of mental health issues.

Let's look at the evidence.

Vitamin D and Depression.

Research reported by the [Vitamin D Council](#), and other studies conducted in the [Netherlands](#) and [Norway](#), indicate a link between Vitamin D and depression. In fact, [Canadian researchers](#) reviewed 14 studies, with 31,424 participants and found a strong correlation. The lower the levels of Vitamin D, the greater the chance of depression, and this was true across all adult age groups. A [UK study](#) took it a step further and identified that the link appears to be proportional: the lower the blood-levels of Vitamin D, the more severe the symptoms.

But, the question comes down to causality. Do we get depressed because we're not getting enough Vitamin D, or does our depression wreak havoc on our Vitamin D levels?

Although things are rarely black and white in mental health, current research suggests that low Vitamin D is a causative culprit. A [study](#) of 64 patients who were deficient in vitamin D and given Vitamin D supplements, saw significant depressive symptom improvement within two months. Another [study](#) of over 400 obese individuals with depression had very similar findings. In both cases, increases in well-being were achieved with high doses of Vitamin D.

What about other forms of depression?

Research on Seasonal Affective Disorder (SAD) offers interesting insight. SAD is a depressive condition that occurs predominantly in the winter and early spring when there is less sunlight. Many studies suggest that the depressive symptoms of SAD are due to changing levels of vitamin D3, and the [National Institute of Health](#) cites a variety of studies that show sunlight markedly improves mood. These studies also point to an addition method for gaining Vitamin D: sitting in front of a light box that mimics sunlight was shown to be as effective as antidepressants in relieving SAD depression.

Vitamin D and schizophrenia.

The impact of low Vitamin D levels extends beyond depression to psychosis.

A [2016 analysis](#) of over 350 people with psychosis found that people with low vitamin D levels were significantly associated with increased negative symptoms (including apathy, social withdrawal, and blunted emotional response) as well as with depressive symptoms.

Other [research](#) examined 202 individuals with schizophrenia or schizoaffective disorder. They found that vitamin D deficiency in this population was almost 5 times more common than in the general population.

And finally, 424 Danish newborns were [studied](#) who later developed schizophrenia. The researchers found that infants born in the winter and spring (when sunlight levels and the skin's Vitamin D production are lowest) are at an increased risk of developing schizophrenia. This study suggests that low-levels of Vitamin D during pregnancy can impact childhood development that will manifest itself decades into the future.

Therapeutic response.

Researchers in many of these studies voice a common recommendation: people with mental health challenges should have their Vitamin D levels checked every few months, and if levels are low, large dose supplements should be started.

Other groups have taken it even further. In Vitamin D and Health, a massive [collaborative analysis](#) by the UK Scientific Advisory Committee on Nutrition, a startling recommendation is made: every person in the UK over one year of age should take Vitamin D supplements of 400 IU/day to help ensure overall well-being.

But is 400 IU/day appropriate for those with mental health challenges? Most integrative practitioners say, no. Usually, people with a mental health condition have lower Vitamin D levels than the overall population so need greater supplementation.

Doctors have evolved their thinking on what optimal Vitamin D blood levels should be. Historically, 25-hydroxy-vitamin D (a form of Vitamin D) levels of 20 ng/mL were considered normal. During the past decade many researchers have argued that a blood level of at least 30 ng/mL is optimal; some advise even higher goals - 40-50 ng/mL. [Dr. James Greenblatt](#), a leading integrative psychiatrist, prefers to see even higher levels - 50-75 ng/mL - and recommends supplementation of 2,000-10,000 IU for deficiencies.

As always, work with your practitioner to set dosages, and consider ramping up to larger dosages to ensure that the supplements are well-tolerated.

Final thoughts.

Research and clinical practice are converging toward a view that Vitamin D supplementation, is an important, safe, and an effective treatment option for Integrative Mental Health - the emerging paradigm that joins the best of conventional psychiatric drug therapy with complementary and alternative options.

As an added benefit, maintaining appropriate Vitamin D levels can also enhance your physical health: improving bone density, muscle strength, osteoporosis prevention, and more.

Vitamin D research is also expanding. The [American Journal of Geriatric Psychiatry](#) notes that people deficient in vitamin D performed significantly worse on standard cognitive tests. Children of mothers who took vitamin D during pregnancy had [fewer symptoms of ADHD](#) at the age of 2½ years. And further research is examining the role of Vitamin D in bipolar disorder.

With all of these good signs, it is still important to remember that Vitamin D isn't a silver bullet. To the best of our knowledge, a host of influencing factors dynamically interact to cause mental health symptoms. From that viewpoint, the more factors we understand and address, the healthier we become. Normalizing Vitamin D levels is one of many things we can address.

Although Vitamin D supplements are available over the counter, work with your doctor on testing and dosing. Proper dosing is often determined through experimentation since we each have unique body chemistry and potentially different Vitamin D requirements.

Finally, as you ponder all this science, get back to basics. Get out in the sun. Eat foods rich in Vitamin D (fish, eggs, milk). And remember to adopt other lifestyle changes that contribute to our mental well-being.