

Could Vitamin D Help Ward Off Suicide?

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

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STORY AT-A-GLANCE

- › Suicide is a serious public health risk and the 12th leading cause of death in the U.S. A 2023 study of U.S. veterans found those with vitamin D deficiency who were prescribed vitamin D had a 64% lower risk of suicide when compared to those who didn't take a supplement
- › This adds to the growing body of evidence that insufficiency or deficiency is linked to depression; other nutrients found to improve mental health include vitamin B6 and magnesium
- › Consuming refined sugar and a high carbohydrate diet may also increase your risk of depression as sugar primarily drives chronic inflammation, which is linked to depression. A 2019 study demonstrated that avoiding sugar, soft drinks, processed meat and refined carbohydrates lowered levels of depression and anger
- › Low levels of vitamin D also increase your risk of all-cause mortality by 25%, cancer mortality by 16% and lung-related illness by 96%. I firmly believe the data show that optimizing vitamin D can help prevent COVID and lower your risk of severe symptoms

Suicide is a serious public health risk and the 12th leading cause of death in the U.S.¹ Data from a 2023 study² revealed that vitamin D supplementation could lower the risk of suicide and suicide attempts in U.S. veterans with low vitamin D blood serum levels.

According to the Centers for Disease Control and Prevention, in 2015, 44,193 people committed suicide.³ The rate of suicide increased by 30% from 2000 to 2018 and by

2020, the CDC reported⁴ 45,979 people had died from suicide. This is one death every 11 minutes.

In addition, there were 12.2 million adults who seriously considered suicide, 3.2 million adults who made a plan and 1.2 million adults who attempted suicide but did not complete it. There were four times more men than women who committed suicide and people aged 85 and older had the highest rate of 20.9 per 100,000. Yet, the rate of suicide in age groups 75 to 84, 45 to 54 and 25 to 34 were all close at 18 per 100,000 or higher.

From 2020 to 2021,⁵ there was a 3.6% rate increase in suicide resulting in 48,183 Americans who died, which increased the ranking to the 11th leading cause of death.

According to data from the U.S. Department of Veterans Affairs, the number of suicides in U.S. veterans has remained relatively steady since 2001. In 2001 there were 6,001 men and women who committed suicide and 6,146 in 2020.^{6,7} According to the most recent Suicide Prevention Annual report,⁸ the Veterans Administration did not find that the COVID-19 pandemic had an impact on suicide mortality.

However, these numbers cover a more disturbing statistic⁹ – veterans have a 57% higher risk of suicide than those who have not served. This is 1.5 times the national average making suicide the second leading cause of death in veterans under the age of 45.

Low Levels of Vitamin D Linked to High Risk of Suicide

The researchers sought to analyze the association between vitamin D serum levels, vitamin D supplementation and suicide attempts in a population of U.S. veterans. The researchers looked at a large group of veterans who had filled a prescription for vitamins D3 or D2 between 2010 and 2018. They were matched 1-to-1 with an untreated control group that had similar medical histories and demographics.¹⁰

The data showed in the control group the unadjusted rate of suicide was approximately 0.36% versus 0.2% in the group that had taken vitamins D3 or D2. This was nearly a 44%

difference. When the groups were analyzed further, the researchers found a 48.8% reduction in people taking vitamin D2 and a 44.8% reduction in people taking vitamin D3.

Further analysis showed an even more pronounced difference among Black veterans who took a vitamin D supplement, which correlated with a 60% decline in suicide attempts. When data were compared against veterans with vitamin D deficiencies, which they defined as levels below 20 nanograms per milliliter (ng/mL), they found the largest reduction in those prescribed vitamin D with more than 64% lower likelihood in an attempted suicide.

Dr. Christine Crawford, psychiatrist and associate medical director of the National Alliance on Mental Illness, spoke with a reporter from UPI News¹¹ and stressed that while medical evaluation and intervention are important when a nutrient deficiency is noted, the solution is often straightforward. In her experience, treating a vitamin D deficiency makes a significant difference.

Patients in her practice have noted meaningful improvements in how they're feeling physically and mentally within just a few months. Jill Lavigne and Jason Gibbons were the study researchers who found a reduced risk of suicide in veterans prescribed vitamin D.

They both stressed that the study does not prove cause and effect. However, Gibbons supports the approach of evaluating patients who have depression for low vitamin D and treating that as well. Crawford noted that the study does not indicate that vitamin D eliminates all thoughts of suicide but the data shows improving serum levels does make a meaningful difference.

Vitamins D, B6 and Magnesium Are Powerful Against Depression

The featured study adds to the growing body of evidence that vitamin D deficiency has a significant effect on mood disorders like depression. As a 2017 study¹² demonstrated, it is not just deficiency, but also insufficiency that is associated with depression.

A 2020 review of the literature evaluated 61 articles and found that serum vitamin D levels are inversely correlated with clinical depression.¹³ Another systematic review and meta-analysis published in 2018,¹⁴ demonstrated low serum levels of vitamin D were associated with depression and called for randomized trials to determine if vitamin D could prevent and/or treat depression and thus determine a causal relationship.

Finally, a 2022 systematic review and meta-analysis of randomized controlled trials¹⁵ revealed individuals taking 2,000 IU per day or more experienced a reduction in symptoms of depression. The researchers also called for further study to investigate the benefits of augmenting current treatment for clinical depression with vitamin D.

Vitamin D is not the only nutrient that, when treated for insufficient or deficient amounts, can improve mental health. In one double-blind study,¹⁶ 478 college students were broken up into three groups. One took a lactose placebo pill, the second 1,000 micrograms of vitamin B12 and the third 100 mg of vitamin B6. The students took supplements for one month.

Researchers used several measurements and found the students taking vitamin B6 experienced a reduction in anxiety and a trend toward less depression. In a press release, David Field, lead scientist from the University of Reading, explained:¹⁷

“The functioning of the brain relies on a delicate balance between the excitatory neurons that carry information around and inhibitory ones, which prevent runaway activity.

Recent theories have connected mood disorders and some other neuropsychiatric conditions with a disturbance of this balance, often in the direction of raised levels of brain activity.”

Magnesium is another nutrient that is essential for neural network functioning and helps keep the blood-brain barrier healthy.¹⁸ It is worth repeating that magnesium has such a powerful effect on depression and anxiety that Psychology Today calls it the “original chill pill.”¹⁹ Data show that it has a beneficial effect on the perception of anxiety²⁰ and is effective in the treatment of mild to moderate depression in adults.²¹

Interestingly, magnesium and vitamin B6 work even better in combination. A 2018 study²² showed when taken together, adults had a 24% greater improvement in stress scores versus taking just magnesium. Those taking magnesium and B6 in combination also experienced fewer side effects: 12.1% of those taking magnesium-vitamin B6 versus 17.4% of those taking magnesium only experienced some form of an adverse event. As noted by the authors:²³

"These findings suggest oral Mg supplementation alleviated stress in healthy adults with low magnesemia and the addition of vitamin B6 to Mg was not superior to Mg supplementation alone. With regard to subjects with severe/extremely severe stress, this study provides clinical support for a greater benefit of Mg combined with vitamin B6."

Depression and the Sugar Trap

Your mental health is also affected by environmental factors, not the least of which is the abundance of sugar found in the standard American diet. A 2014 study²⁴ linked sweetened beverages with an increased risk of depression whether they were sweetened with sugar or artificially sweetened.

People who drank more than four cans or glasses a day had a 30% higher risk as compared to those who did not drink sweetened beverages of any kind. While this statistic is impressive, people who drank the same amount of sweetened fruit drinks had a 38% higher risk of depression.

In 2004, British psychiatric researcher Malcolm Peet published a cross-cultural analysis²⁵ of the relationship between diet and mental illness. His primary finding was a strong link between high sugar consumption and the risk of both depression and schizophrenia. According to Peet:

"A higher national dietary intake of refined sugar and dairy products predicted a worse 2-year outcome of schizophrenia. A high national prevalence of depression was predicted by a low dietary intake of fish and seafood."

The dietary predictors of ... prevalence of depression are similar to those that predict illnesses such as coronary heart disease and diabetes, which are more common in people with mental health problems and in which nutritional approaches are widely recommended."

One of the key predictors of heart disease and diabetes is chronic inflammation which, as Peet mentions, is also associated with poor mental health. Sugar is a primary driver of chronic inflammation in your body, so consuming excessive amounts of sugar can truly set off an avalanche of negative health events – both mental and physical.

A 2019 study,²⁶ which was said to be the first of its kind, found dietary intervention could effectively treat depression in young adults. The dietary intervention group received specific dietary instructions, including strict avoidance of refined carbohydrates, sugar, processed meats and soft drinks. Researchers found much lower levels of depression and anger after three weeks and three months.

Low Levels of Vitamin D Also Linked to Severe COVID Symptoms

As I have written in the past, vitamin D deficiency is associated with several health conditions, many of which place you at an **increased risk of death**. Researchers^{27,28} from the Australian Center for Precision Health at the University of Australia used data from 307,601 people and found vitamin D deficiencies that were driven by genetics increased the risk of chronic diseases, such as heart disease, cancer and respiratory diseases.²⁹

The people who are genetically predisposed to a **vitamin D deficiency** had a 25% higher risk of all-cause mortality when compared to those with genetics conducive to healthy vitamin D levels.³⁰ Study author Josh Sutherland explained in a news release³¹ that clinical trials often fail to engage participants with low levels of vitamin D, so it has been challenging to establish a causal relationship.

Using a genetic model, these scientists were able to provide strong evidence for the connection between premature death and vitamin D deficiency. In addition to increasing

the risk of all-cause mortality by 25%, people genetically predisposed to vitamin D deficiency also had a:³²

- 25% greater risk of dying from a heart-related illness
- 16% greater risk of dying from cancer
- 96% greater risk of dying from a lung-related illness

The significance of the association between vitamin D deficiency and respiratory conditions cannot be overstated. In late 2020,³³ during the COVID-19 pandemic, an open letter that called for the increased use of vitamin D in the fight against COVID-19 was published and has now been signed by over 200 doctors, scientists and leading authorities.

In the letter, the scientists noted “low vitamin D levels almost certainly promote COVID-19 infections, hospitalizations, and deaths. Given its safety, we call for immediate widespread increased vitamin D intake.” The scientists published their recommended dose and the dose they personally take each day.

I firmly believe that vitamin D optimization can help prevent COVID-19 infection and reduce your risk of severe symptoms should you contract it. In fact, I launched an information campaign about vitamin D in June 2020, which included the release of a downloadable scientific report that detailed the science behind vitamin D. This report, as well as a two-minute COVID risk quiz, is available on [StopCovidCold.com](https://www.stopcovidcold.com).

It was my promotion of vitamin D during COVID based on published peer-reviewed data that triggered the censorship and free speech violations against me that have continued to this day. You can read more about the attacks, fabrications, and suppression of information in "[The Censorship of Mercola – A Timeline](#)."

It is important to note there continues to be mounting data supporting the need for sufficient levels of vitamin D to protect your overall health, both physical and mental. Peer-reviewed published studies continue to demonstrate how Vitamin D insufficiency

can negatively affect health, which gives you more ammunition to take control of your health.

Sources and References

- ¹ American Foundation for Suicide Prevention, Statistics
- ² PLOS|ONE, February 1, 2023
- ³ American Foundation for Suicide Prevention, January 2, 2018
- ⁴ Centers for Disease Control and Prevention, Suicide Data and Statistics
- ⁵ Suicide Awareness Voices of Education, Suicide Statistics
- ⁶ US Department of Veterans Affairs, Suicide Prevention, State Level Veteran Suicide Data
- ^{7, 8} VA News, VA releases 2022 National Veteran Suicide Prevention Annual Report
- ⁹ Stop Soldier Suicide, Veteran Statistics
- ¹⁰ Gizmodo, February 4, 2023
- ¹¹ UPI News, February 2, 2023
- ¹² Journal of Affective Disorders, 2017;208
- ¹³ Indian Journal of Psychological Medicine, 2020;42(1)
- ¹⁴ Cambridge University Press, January 2, 2018
- ¹⁵ Critical Reviews in Food Science and Nutrition, July 11, 2022
- ¹⁶ Human Psychopharmacology, 2022; doi: 10.1002/hup.2852
- ¹⁷ EurekAlert! July 19, 2022
- ¹⁸ Molecular Neurobiology, 2018;55(9):7118
- ¹⁹ Psychology Today, June 12, 2011
- ²⁰ Nutrients, 2017;9(5)
- ²¹ PLOS|One, 2017; doi: 10.1371/journal.pone.0180067
- ^{22, 23} PLOS|ONE 2018;13(12)
- ²⁴ PLOS|ONE, 2014; doi: 10.1371/journal.pone.0094715
- ²⁵ British Journal of Psychiatry 2004;184:404
- ²⁶ PLOS|ONE, 2019; doi: 10.1371/journal.pone.0222768
- ²⁷ Drugs.com, October 25, 2022
- ²⁸ University of South Australia October 26, 2022
- ²⁹ Annals of Internal Medicine, November 2022
- ³⁰ Drugs.com, October 25, 2022 para 8
- ³¹ University of South Australia October 26, 2022 para 7, 8
- ³² Drugs.com, October 25, 2022 para 9
- ³³ VitaminD4all.com December 7, 2020