

Could Most COVID-19 Deaths Have Been Prevented?

Analysis by [Dr. Joseph Mercola](#) ✓ Fact Checked

STORY AT-A-GLANCE

- › More than 100 doctors, scientists and leading authorities have signed an open letter calling for increased use of vitamin D in the fight against COVID-19
- › The letter recommends taking enough vitamin D to achieve a blood level of at least 30 ng/mL (75 nmol/L). They also urge testing of all hospitalized COVID-19 patients and adding vitamin D to the treatment protocol for any patient whose level is below 30 ng/mL
- › The Irish Covit-D Consortium is also calling for greater use of vitamin D against COVID-19, citing evidence showing it can lower the risk of death from COVID-19 in the elderly by as much as 700%
- › Research shows giving critically ill COVID-19 patients high doses of vitamin D significantly reduced the number of days they had to spend in the ICU. They were also less likely to need ventilation
- › Another recent study found high-dose vitamin D supplementation sped up viral clearance; 62.5% of participants in the intervention group became SARS-CoV-2 RNA negative within 21 days, compared to just 20.8% of controls who did not receive vitamin D

In recent weeks and months, there's been an upshot of studies¹ demonstrating the benefits of vitamin D against COVID-19. The evidence is so compelling, more than 100 doctors, scientists and leading authorities have signed an open letter² calling for increased use of vitamin D in the fight against COVID-19.

"Research shows low vitamin D levels almost certainly promote COVID-19 infections, hospitalizations, and deaths. Given its safety, we call for immediate widespread increased vitamin D intakes," the letter states, adding:³ "Vitamin D modulates thousands of genes and many aspects of immune function, both innate and adaptive. The scientific evidence shows that:

- ***Higher vitamin D blood levels are associated with lower rates of SARS-CoV-2 infection. Higher D levels are associated with lower risk of a severe case (hospitalization, ICU, or death).***
- ***Intervention studies (including RCTs) indicate that vitamin D can be a very effective treatment. Many papers reveal several biological mechanisms by which vitamin D influences COVID-19.***
- ***Causal inference modelling, Hill's criteria, the intervention studies & the biological mechanisms indicate that vitamin D's influence on COVID-19 is very likely causal, not just correlation."***

The letter recommends taking enough vitamin D to achieve a blood level of at least 30 ng/mL (75 nmol/L). They also urge testing of all hospitalized COVID-19 patients and adding vitamin D to the treatment protocol for any patient whose level is below 30 ng/mL. Many other doctors are also urging government health agencies to get onboard with vitamin D recommendations. As reported by NL Times:⁴

"There is a growing consensus in the scientific world about the important role of vitamin D," says Manfred Eggersdorfer, professor of Healthy Aging at the University Medical Center Groningen. He argues that 'it can reduce the chance that you will get corona and the infection can last shorter.'

The wait-and-see attitude adopted by governments does not sit well in the scientific community. Professor of immunology at Wageningen University, Huub Savelkoul, called the attitude 'frustrating.'

He states that 'there are more and more studies showing the benefit of vitamin D. I think it is a kind of arrogance that the government wants to wait for a meta-

study first. It seems as if we don't care that people come to the hospital and die in the meantime. You have to be careful with that comment, but that's where my frustration lies."

Vitamin D Optimization Is Powerful Prevention

In a December 23, 2020, Fox News interview^{5,6} (above), Dr. Peter Osborne with the Origins Nutrition Center stated that the most recent studies suggest 9 out of 10 COVID-19 deaths could have been prevented had people had adequate vitamin D levels.

While I suspect this might be an overestimation, there's no doubt in my mind that optimizing vitamin D levels among the general population would significantly lower COVID-19 incidence and death.

"At the East Virginia School of Medicine there's a COVID protocol that includes Vitamin D," Osborne said. "So, if you're hospitalized for COVID, they're automatically putting you on between 20,000 and 60,000 units of vitamin D. This is part of their standard of care protocol in that hospital system."

Osborne also recommends using vitamin C and zinc, as well as [quercetin](#), which allows for greater zinc absorption. Quercetin also boosts type 1 interferon, which signals infected cells to produce proteins that stop the virus from replicating, and [works synergistically with vitamin C](#). This is all good advice. As noted in a December 2020 *Frontiers in Nutrition* review:⁷

"... Zinc and vitamins C and D stand out for having immunomodulatory functions and for playing roles in preserving physical tissue barriers. During the COVID-19 pandemic, the adequate intake of zinc and vitamins C and D may represent a promising pharmacological tool due to the high demand for these nutrients in the case of contact with the virus and onset of the inflammatory process."

However, vitamin D is not my first choice for acute illness that requires immediate treatment. While high-dose vitamin D loading may be helpful in some respects, my No. 1 choice for treating acute respiratory illness is nebulized hydrogen peroxide, which I'll

discuss at the end of this article. It goes to work immediately, while vitamin D requires time, at bare minimum, days, to make a difference.

With respect to preventing COVID-19 deaths, I strongly believe that nebulized hydrogen peroxide could easily prevent at least 90% of the deaths if administered properly. It deeply saddens me to see so many die needlessly because they don't use this incredibly inexpensive and safe therapy.

Vitamin D Improves COVID-19 Outcomes

Now, bear in mind that prevention and treatment are not the same. I firmly believe that [vitamin D optimization](#) will 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 back 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](#).

There's also evidence to show high-dose vitamin D loading can improve COVID-19 outcomes even in acute and severe cases. According to a December 2020 randomized, double-blind study⁸ in the European Journal of Integrative Medicine, giving critically ill COVID-19 patients high doses of vitamin D significantly reduced the number of days they had to spend in the ICU. They were also less likely to need ventilation. According to the authors:⁹

"Thirty patients completed the study. The results show that injection of vitamin D leads to a significant increase in the mean changes of vitamin D level on the seventh day of the study and TAC [total antioxidant capacity] levels.

ICU length of stay was 18.3±8.4 and 25.4±6.6 days in the intervention and placebo arms of the study. Twelve patients in the placebo group and 5 in the vitamin D group died within the 28-day study period. The duration of

mechanical ventilation was 15.7± 9.3 vs. 22.6± 9.1 days in vitamin D and placebo arms, respectively."

Similarly, a mathematical reanalysis¹⁰ of a calcifediol trial concluded there's a "strong role for vitamin D in reducing ICU admissions of hospitalized COVID-19 patients." The analysis looked at data from an earlier trial¹¹ done on hospitalized COVID-19 patients in Córdoba, Spain. As explained by the authors of the analysis:¹²

"... the treatment was associated with reduced ICU admissions with very large effect size and high statistical significance, but the study has had limited impact because it had only 76 patients and imperfect blinding, and did not measure vitamin D levels pre- and post-treatment or adjust for several comorbidities."

In an effort to account for these shortcomings, they reanalyzed the data using statistical techniques, concluding that "the randomization, large effect size, and high statistical significance address many of these concerns."

For starters, they found that "random assignment of patients to treatment and control groups is highly unlikely to distribute comorbidities or other prognostic indicators sufficiently unevenly to account for the large effect size."

They also demonstrated that the imperfect blinding did not have a negative impact, as it would have had to have "an implausibly large effect to account for the reported results."

To double-check their findings, they also compared the data with two other randomized clinical trials of vitamin D supplementation for COVID-19, one from India and another from Brazil. In conclusion, the authors stated that:

"... the Córdoba study provides sufficient evidence to warrant immediate, well-designed pivotal clinical trials of early calcifediol administration in a broader cohort of inpatients and outpatients with COVID-19."

Irish Experts Call for Increased Recognition of Vitamin D

In addition to the open letter mentioned earlier, the Irish Covid-D Consortium is also calling for greater use of vitamin D against COVID-19, citing evidence showing it can lower the risk of death from COVID-19 in the elderly by as much as 700%.¹³

“ Studies ... show an increased risk of infection in those with low vitamin D levels and a 25 to 30-fold reduced risk of ICU admission and a substantial reduction risk of death in older COVID-19 patients supplemented with vitamin D. ~ Dr. Dan McCartney ”

In a position statement¹⁴ published in the Irish Journal of Medical Science, the team urges health professionals and policy-makers "to recognize the importance of enhanced vitamin D in ... the optimization of immune response" and to "Develop explicit population guidance and clinical protocols for vitamin D supplementation at ... effective doses." As reported by the Herald:¹⁵

"Dr. Dan McCartney, programme director of Human Nutrition and Dietetics at TU Dublin and Trinity College Dublin, said 'the accumulation of evidence linking low vitamin D levels and COVID-19 is now considerable.

This evidence includes studies which show an increased risk of infection in those with low vitamin D levels and a 25 to 30-fold reduced risk of ICU admission and a substantial reduction risk of death in older COVID-19 patients supplemented with vitamin D."

Vitamin D Speeds Viral Clearance

Another recent study,¹⁶ published in November 2020 in the Postgraduate Medical Journal, looked at oral vitamin D supplementation on SARS-CoV-2 viral clearance. This study included only asymptomatic or mildly symptomatic SARS-CoV-2-positive individuals who also had vitamin D deficiency (a vitamin D blood level below 20 ng/mL).

Participants were randomly assigned to receive either 60,000 IUs of oral cholecalciferol (nano-liquid droplets) or a placebo for seven days. The target blood level was 50 ng/mL. Anyone who had not achieved a blood level of 50 ng/mL after the first seven days continued to receive the supplement until they reached the target level.

Periodically, all participants were tested for SARS-CoV-2 as well as fibrinogen, D-dimer, procalcitonin and CRP, all of which are inflammatory markers. The primary outcome measure of the study was the proportion of patients testing negative for COVID-19 before day 21 of the study, as well as changes in inflammatory markers. As reported by the authors:¹⁷

"Forty SARS-CoV-2 RNA positive individuals were randomized to intervention (n=16) or control (n=24) group. Baseline serum 25(OH)D was 8.6 and 9.54 ng/mL, in the intervention and control group, respectively.

10 out of 16 patients could achieve 25(OH)D>50 ng/ml by day-7 and another two by day-14 ... 10 (62.5%) participants in the intervention group and 5 (20.8%) participants in the control arm became SARS-CoV-2 RNA negative. Fibrinogen levels significantly decreased with cholecalciferol supplementation unlike other inflammatory biomarkers.

[A] greater proportion of vitamin D-deficient individuals with SARS-CoV-2 infection turned SARS-CoV-2 RNA negative with a significant decrease in fibrinogen on high-dose cholecalciferol supplementation."

Vitamin D Slows COVID-19 Spread

As reported by KRGV 5 News (above), a Texas news station, doctors in the Rio Grande Valley are also urging people to check their vitamin D levels and supplement if they're deficient. The reason?

Research^{18,19} published in the Journal of Endocrinology and Metabolism suggests people who have low vitamin D levels are more prone to contracting SARS-CoV-2

infection, and that also makes them more likely to spread the infection to others. As noted in that paper:

"Vitamin D deficiency was found in 82.2% of COVID-19 cases and 47.2% of population-based controls ... Vitamin D-deficient COVID-19 patients had ... a longer length of hospital stay than those with serum 25OHD levels ≥ 20 ng/mL ...

According to our results, vitamin D treatment should be recommended in COVID-19 patients with serum 25OHD deficiency, since this approach might have beneficial effects in both the musculoskeletal and the immune system."

How Vitamin D Impacts COVID-19

October 31, 2020, my own vitamin D review,²⁰ co-written with William Grant, Ph.D., and Dr. Carol Wagner, both of whom are part of the GrassrootsHealth expert vitamin D panel, was published in the peer-reviewed journal *Nutrients*. You can [read the paper for free on the journal's website](#).

As noted in that paper, dark skin color, increased age, pre-existing chronic conditions and vitamin D deficiency are all features of severe COVID disease, and of these, vitamin D deficiency is the only factor that is readily and easily modifiable.

You may be able to reverse chronic disease, but that typically takes time. Optimizing your vitamin D, on the other hand, can be achieved in just a few weeks, thereby significantly lowering your risk of severe COVID-19.

In our paper, we review several of the mechanisms by which vitamin D can reduce your risk of COVID-19 and other respiratory infections, including but not limited to the following:²¹

- Reducing the survival and replication of viruses²² and inflammatory cytokine production
- Maintaining endothelial integrity – Endothelial dysfunction contributes to vascular inflammation and impaired blood clotting, two hallmarks of severe COVID-19

- Increasing angiotensin-converting enzyme 2 (ACE2) concentrations, which prevents the virus from entering cells via the ACE2 receptor – ACE2 is downregulated by SARS-CoV-2 infection, and by increasing ACE2, you also avoid excessive accumulation of angiotensin II, a peptide hormone known to increase the severity of COVID-19

Vitamin D is also an important component of COVID-19 prevention and treatment for the fact that it:

- Boosts your overall immune function by modulating your innate and adaptive immune responses and reduces respiratory distress²³ and improves overall lung function
- Helps produce surfactants in your lungs that aid in fluid clearance²⁴ and lowers your risk of comorbidities associated with poor COVID-19 prognosis, including obesity,²⁵ Type 2 diabetes,²⁶ high blood pressure²⁷ and heart disease²⁸

Data from 14 observational studies – summarized in Table 1 of our paper²⁹ – suggest that vitamin D blood levels are inversely correlated with the incidence and/or severity of COVID-19, and the evidence currently available generally satisfies Hill's criteria for causality in a biological system.³⁰

COVID-19 Features Related to Vitamin D Status

Our paper³¹ also details several features of COVID-19 that suggest vitamin D deficiency is at play in this illness. For starters, SARS-CoV-2 emerged in the winter in the northern hemisphere, and as we moved into summer, positive tests, hospitalizations and death rates fell. So, generally, COVID-19 prevalence has been inversely correlated with solar UVB doses and vitamin D production, just like seasonal influenza.

Secondly, people with darker skin have higher COVID-19 case and death rates than Caucasians. Vitamin D is produced in your skin in response to sun exposure, but the darker your skin, the more sun exposure you need in order to maintain an optimal vitamin D level. As a result, vitamin D deficiency tends to be far higher among Blacks

and dark-skinned Hispanics. Blacks and Hispanics are also high-risk groups for COVID-19.

Thirdly, one of the lethal hallmarks of COVID-19 is the cytokine storm that can develop in severe cases, which manifests as hyperinflammation and tissue damage. Vitamin D is known to regulate inflammatory cytokine production, thereby lowering this risk. Lastly, vitamin D is an important regulator of your immune system, and dysregulation of the immune system is a hallmark of severe COVID-19.

Nebulized Peroxide – My Favorite Treatment Choice

As mentioned earlier, while vitamin D is certainly important, if you develop symptoms of COVID-19, or any other respiratory infection for that matter, downing vitamin D may be too little, too late. I believe your best option at this point is to use nebulized peroxide. This is a home remedy I recommend everyone familiarize themselves with, as in many cases it can improve symptoms in mere hours.

Nebulizing hydrogen peroxide into your sinuses, throat and lungs is a simple, straightforward way to augment your body's natural expression of hydrogen peroxide to combat infections and can be used both prophylactically after known exposure to COVID-19 and as a treatment for mild, moderate and even severe illness.

Dr. David Brownstein, who has successfully treated over 100 COVID-19 patients with nebulized peroxide, published a case paper³² about this treatment in the July 2020 issue of Science, Public Health Policy and The Law. He also reviews its benefits in "[How Nebulized Peroxide Helps Against Respiratory Infections.](#)"

Nebulized hydrogen peroxide is extremely safe, and all you need is a desktop nebulizer and food-grade hydrogen peroxide, which you'll need to dilute with saline to 0.1% strength. I recommend buying these items beforehand so that you have everything you need and can begin treatment at home at the first signs of a respiratory infection. In the video above, I go over the basics of this treatment.