

# Vitamin D and COVID-19: Laying Bare the Facts

by Ted Thompson

As naturists we often hear that exposure to the sun is good for us and increases the level of vitamin D in our bodies. That is nice to know but how does it work and why does it matter?

I don't have medical credentials and can only report what I have learned through on-line research and thus cannot offer medical advice to anyone. All I can do is advise you to do the research for yourself and speak with your doctor before undertaking diet or lifestyle changes.

However, my readings have pointed out several interesting ideas related to vitamin D that may be of interest to naturists. I'll list them in bullet form:

- Several new studies released in April and May say that while there are currently no results from controlled trials to conclusively prove that vitamin D beneficially affects COVID-19 outcomes, there is strong circumstantial evidence of an association between low levels of vitamin D and the severity of COVID-19 responses, including death. (ref 1)
- Nevertheless, there is no direct evidence that taking vitamin D will protect you from the infection or developing complications. Experts stress, however, a lot more research into this is required as there is still controversy among the experts. In the meantime, they do agree that vitamin D supports good overall health.
- Health Canada estimates that up to 50% of Canadians may be deficient in vitamin D levels, even with taking supplements in winter. (ref 2)
- In Canada and the US, people between 6 and 70 are recommended to get 600 IU (15mcg) per day while those over 70 are recommended to get 800 IU (20 mcg) per day. (ref 2 and 3)
- Maximum dosage is 4,000 IU (100 mcg) per day as there may be health risks at higher dietary or supplement intake.
- Should I take lots of it? No. Although vitamin D supplements are very safe, taking more than the recommended amount every day can be dangerous in the long run. (ref 4)
- Public Health England is concerned that people could be missing out on vitamin D during the corona virus pandemic when we are being advised to stay at home more. They have now recommended that all adults take a supplement of 400 IU per day.
- These amounts can be obtained from diet, supplements or sunlight on skin (naturists note!) One egg contains 40 IU, a cup of milk 120 IU, a supplement pill between 600 and 1,000 IU or more (check the label).
- Vitamin D is synthesized in the skin by UVB from sunlight, the same UVB that is of most concern for sunburn and skin cancer issues.
- Although you cannot overdose on vitamin D through exposure to sunlight as the body self-regulates synthesis, strong sun burns skin so you need to balance making vitamin D with being safe in the sun.
- The amount generated depends on a number of factors such as: latitude, date, time of day, cloud cover, diet, skin tone, clothing cover, sunscreen, UV Index, UVA vs UVB ratio and duration of exposure and others.

So do we take supplements or go out in the sun? In the winter, supplements are likely necessary but in the summer, naturists know that sunshine is better, more efficient and more fun.

Science tells us that UVB rays are not available for vitamin D production when the sun is less than about 30 degrees above the horizon. This means that for more than 6 months every year it is not possible to get all the vitamin D you need from sunlight on the skin, no matter how much skin you might expose in February! Sunlight through window glass does not count as it filters out UVB.

If you expose 10% of your skin (just your hands and face) to the sun on a clear mid-day in May you can gain around 7 IU per minute but will burn in 45 minutes (315 IU total); not very efficient. However, if you expose your whole body you can gain up to 95 IU a minute. I can make my daily target in just 25 minutes before getting close to burning. Much more efficient than eating 50 eggs or drinking 4L of milk!

How do we take account of all of those factors to determine how long we should expose 100% of our skin to the sun to raise our vitamin D levels without burning?

There are smartphone or tablet apps available to help. One I have tried is called 'dminder' on both iOS and Android that creates a personal profile (age, weight etc,) and combines it with all those other parameters to do a running calculation of the number of IU eaten or synthesized per minute towards your daily goal as well as an audible notice of when it is time to cover up, turn over or apply the sunscreen. The paid version of the app will keep an extended history and estimate of your blood serum levels.

Remember that I am not a medical professional so talk with your doctor to get up to date on the latest thinking and recommendations to set your personal goals.

If vitamin D does turn out to be a valuable mitigation for COVID-19 damage, naturists are in a perfect position to benefit. If it does not turn out to be significant, naturists are still in a perfect position to enjoy their summer and keep their bones strong.

## References

- 1) Grant, W.B.; et al Evidence that Vitamin D Supplementation Could Reduce Risk of Influenza and COVID-19 Infections and Deaths. *Nutrients* **2020**, *12*, 988. (At: <https://www.mdpi.com/2072-6643/12/4/988>)
- 2) Vitamin D and Calcium: Updated Dietary Reference Intakes (At: <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/vitamins-minerals/vitamin-calcium-updated-dietary-reference-intakes-nutrition.html>)
- 3) Vitamin D Fact Sheet for Health Professionals (At: <https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/>)
- 4) Coronavirus: Should I start taking vitamin D? (At: <https://www.bbc.com/news/health-52371688>)