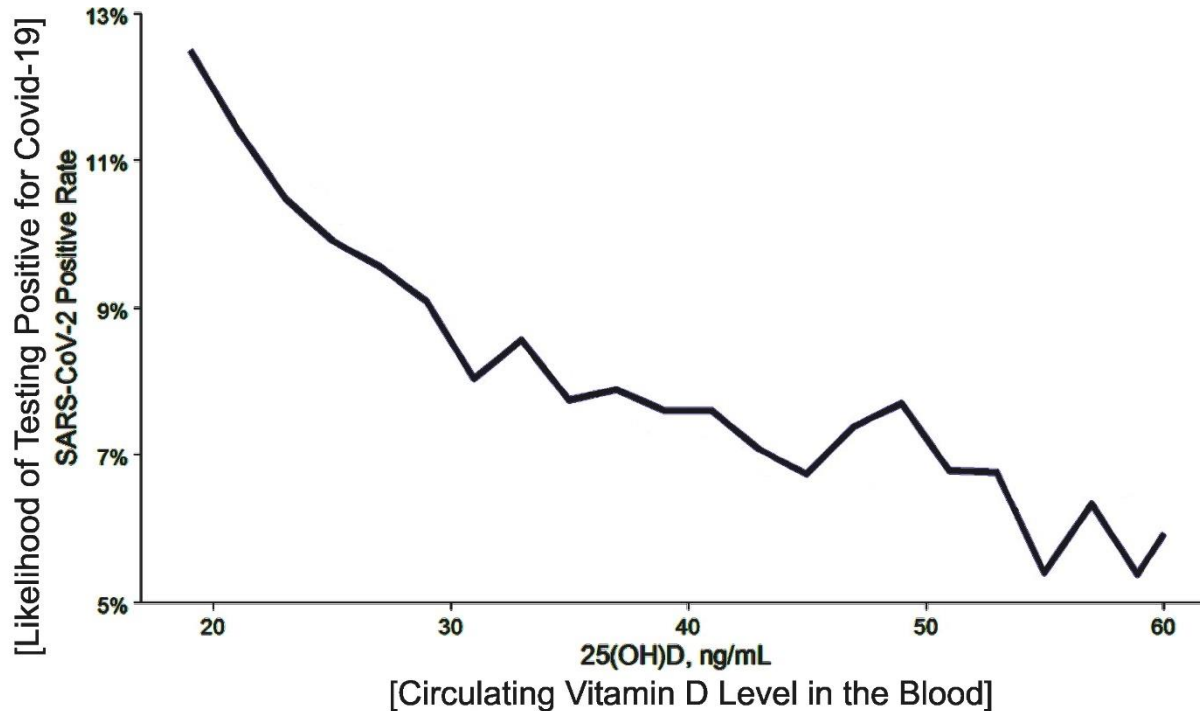


## Vulnerability to Covid-19 (Positive Tests) versus Vitamin D (Blood Levels)



**Summary:** "SARS-CoV-2 positivity is strongly and **inversely** associated with circulating 25(OH)D levels, a relationship that persists across latitudes, races/ethnicities, both sexes, and age ranges."

**Figure 1** from research published on **September 17th, 2020**, a large study (**over 190,000 patients**) confirming in detail that basically **Vitamin D deficiency doubles the chances of getting Covid-19**: Kaufman HW, Niles JK, Kroll MH, Bi C, Holick MF\* (2020) "SARS-CoV-2 positivity rates associated with circulating 25-hydroxyvitamin D levels." **PLoS ONE 15**(9): e0239252. <https://doi.org/10.1371/journal.pone.0239252>

**\*Department of Medicine, Boston University School of Medicine, Boston, Massachusetts, United States of America**

# **Studies Show Patients with Covid-19 AND Vitamin D Deficiency have a MUCH HIGHER Incidence of Worst-Case Outcomes**

**Examples:**

## **"Low Vitamin D in COVID-19 Predicts ICU Admission, Poor Survival." Medscape Medical News (September 17, 2020)**

"Having low serum vitamin D levels was an independent risk factor for having symptomatic COVID-19 with respiratory distress requiring admission to intensive care — as opposed to having mild COVID-19 — and for not surviving, in a new study from Italy. . . ."

[https://www.medscape.com/viewarticle/937567?src=mkm\\_covid\\_update\\_200917\\_mscpedit\\_&uac=66042FN&impID=2570796&faf=1](https://www.medscape.com/viewarticle/937567?src=mkm_covid_update_200917_mscpedit_&uac=66042FN&impID=2570796&faf=1)

## **"Vitamin D Insufficiency is Prevalent in Severe COVID-19." Louisiana State University Health Sciences Center (April 28, 2020)**

Examined **Vitamin D Insufficiency (VDI)** in severe COVID-19 patients and found that: "Among ICU subjects, 11 (84.6%) had VDI, vs. 4 (57.1%) of floor subjects. **Strikingly, 100% of ICU patients less than 75 years old had VDI.**"

<https://www.medrxiv.org/content/10.1101/2020.04.24.20075838v1.full.pdf>

## **"Rapid Response: COVID-19 'ICU' Risk – 20-fold Greater in the Vitamin D Deficient." *British Medical Journal* (April 24, 2020)**

<https://www.bmj.com/content/369/bmj.m1548/rr-6>

## **Do You Have a Vitamin D Deficiency?**

**\*\*\* In the United States, on average almost 1 in 2 Americans has a Vitamin D deficiency.**

**Vitamin D deficiencies increase markedly in the Fall and Winter** because the days become shorter, the UV Index drops drastically, and people usually wear heavier layers of protective clothing when they go outdoors.

[According to a 2011 study, on average **41.6% of adults in the US have a Vitamin D deficiency**. This number goes up to **69.2% in Hispanics** and **82.1% in African-Americans**. (<https://www.sciencedirect.com/science/article/pii/S0271531710002599>). Not coincidentally, **Blacks, Hispanics and Indigenous Americans have the highest death tolls from COVID-19**. (<https://www.apmresearchlab.org/covid/deaths-by-race>)]

**And even in Summer, Stay-Indoor types** who spend little or no time in the sun **have a high incidence of Vitamin D deficiency - unless they take sufficient supplemental Vitamin D.**

### **The pandemic behind the pandemic:**

**"Vitamin D deficiency: a worldwide problem with health consequences,"** *The American Journal of Clinical Nutrition*, Volume 87, Issue 4, April 2008:

"Vitamin D deficiency is now recognized as a pandemic. **The major cause of vitamin D deficiency is the lack of appreciation that sun exposure in moderation is the major source of vitamin D for most humans.** Very few foods naturally contain vitamin D, and foods that are fortified with vitamin D are often inadequate to satisfy either a child's or an adult's vitamin D requirement."

<http://ajcn.nutrition.org/content/87/4/1080S.abstract>