Vitamin D shown to reduce severe symptoms of COVID

[A new study suggests] that improving vitamin D status in the general population, and in particular in patients hospitalized with COVID-19, could help to reduce the severity of COVID-19 disease and associated deaths. The study, reported in PLOS ONE, found that hospitalized COVID-19 patients who had sufficient vitamin D—i.e., they had blood levels of 25-hydroxyvitamin D of at least 30 ng/mL—had a significantly lower risk of adverse clinical outcomes, including becoming unconscious, hypoxia, and death, than patients who were vitamin D deficient.

In addition, patients who were vitamin D sufficient had lower blood levels of the inflammatory marker C-reactive protein, and higher blood lymphocyte levels. “This study provides direct evidence that vitamin D sufficiency can reduce the complications, including the cytokine storm (release of too many proteins into the blood too quickly) and ultimately death from COVID-19,” commented Michael F. Holick, PhD, MD, professor of medicine, physiology and biophysics and molecular medicine at Boston University School of Medicine.

Vitamin D interaction with its receptor in immune cells modulates the innate and acquired immune systems in response to invasion of bacterial and viral pathogens. Vitamin D also modulates the renin-angiotensin pathway and downregulates ACE2. “Therefore, vitamin D might help in treatment of COVID-19 by preventing the cytokine storm and subsequent ARDS [acute respiratory distress syndrome] which is commonly the cause of mortality,” the authors commented.

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