

# Is there a connection between vitamin D deficiency and COVID-19?

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Several recent studies have looked at the impact of vitamin D on COVID-19. One study of 489 people found that those who had a vitamin D deficiency were more likely to test positive for the virus that causes COVID-19 than people who had normal levels of vitamin D.

Other research has observed high rates of [vitamin D](#) deficiency in people with COVID-19 who experienced acute respiratory failure. These people had a significantly higher risk of dying. And a small, randomized study found that of 50 people hospitalized with COVID-19 who were given a high dose of a type of vitamin D (calcifediol), only one needed treatment in the intensive care unit. In contrast, among the 26 people with COVID-19 who weren't given calcifediol, 13 needed to be treated in the intensive care unit.

Further research is needed to determine what role, if any, vitamin D and vitamin D deficiency might play in the prevention of and treatment of COVID-19.

In addition, vitamin D deficiency is common in the

United States, particularly among Hispanic and Black people. These groups have been disproportionately affected by COVID-19. Vitamin D deficiency is also more common in people who are older, people who have a body mass index of 30 or higher (obesity), and people who have high blood pressure (hypertension). These factors also increase the risk of severe COVID-19 symptoms.

However, in recent years two randomized [clinical trials](#) that studied the effects of vitamin D supplementation had less hopeful results. In both trials, high doses of vitamin D were given to people who had vitamin D deficiencies and were seriously ill—not with COVID-19. Vitamin D didn't reduce the length of their hospital stays or their mortality rates when compared with those given a placebo.

In the meantime, if you have a vitamin D deficiency, talk to your [health care provider](#) about whether a supplement might be right for you. If you're concerned about your vitamin D level, ask your health care provider about getting it checked.

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