

Clinical trial finds vitamin D does not ward off colds and flu

January 14 2021



Credit: QIMR Berghofer Medical Research Institute

A QIMR Berghofer-led randomized controlled trial of vitamin D

supplements has found they do not protect most people from developing colds, flus and other acute respiratory infections.

The trial, which is the largest of its kind to study the relationship between vitamin D and respiratory infection to date did show, however, that the supplements may shorten the length of infection slightly and help ease the severity of those illnesses.

The study results have been published this week in the scientific journal *The Lancet Diabetes and Endocrinology*.

The researchers analyzed self-reported [health data](#) from 16,000 Australians aged between 60 and 84, who participated in the QIMR Berghofer Medical Research Institute-led D-Health Trial.

The participants were given either a capsule of 60,000 international units of vitamin D, or a placebo, every month for up to five years. They completed annual health reports, and some completed diaries for eight weeks over the winter months in which they recorded their respiratory symptoms.

Lead researcher and head of QIMR Berghofer's Cancer Aetiology and Prevention group, Professor Rachel Neale, said participants who received vitamin D supplements reported they had cold and flu symptoms for slightly less time than participants who did not take the vitamin. They also had severe symptoms for less time and needed less medication to manage their symptoms.

"Our clinical trial showed that people who took vitamin D supplements were infected with colds and flus at the same rate as those who were given placebos. Those who got the supplements did, however on average, report a small reduction in the number of days they experienced symptoms (on average about half a day)," Professor Neale said.

"The findings suggest that vitamin D might give the [immune system](#) a little boost, but supplementing the general population with vitamin D is unlikely to protect people from getting sick in the first place and won't markedly improve the speed of recovery.

"It is important to note that this trial was conducted on Australians and most of the participants were not vitamin D deficient to start with. It is possible that a greater protective effect would be seen in countries where a high proportion of the population is vitamin D deficient."

"This study suggests that taking supplements will not have significant benefits for warding off colds and flus in people who are not vitamin D deficient."

The amount of vitamin D needed in the blood is controversial, but data from the 2011-12 National Health Survey suggest that up to one in four Australian adults may have low vitamin D.

Australian data shows¹ most people experience a respiratory tract infection, such as the common cold or influenza, at least once per year. Infection rates are generally highest during winter months, when people's vitamin D levels are lowest because of reduced ultraviolet radiation and more time spent indoors.

Professor Neale said the trial results are timely as people around the globe try to understand how best to improve their immunity in the face of the COVID-19 pandemic.

"The studies that have been published do suggest that having higher vitamin D levels may reduce the risk and severity of COVID-19, but these studies have had fairly serious limitations, so the results are not reliable," she said.

"The D-Health Trial was completed before the COVID-19 pandemic began so does not provide specific answers about this. However, our findings about the reduced length and severity of respiratory tract infection suggests there could be some benefit to the immune system of taking a vitamin D [supplement](#), particularly in people who are deficient."

Professor Neale said anyone who was concerned about their vitamin D levels should speak to their doctor.

The researchers are now planning to use the data gathered during the trial to examine the effects of [vitamin D](#) on other health problems including depression, cancer and heart disease.

More information: Hai Pham et al. The effect of vitamin D supplementation on acute respiratory tract infection in older Australian adults: an analysis of data from the D-Health Trial, *The Lancet Diabetes & Endocrinology* (2021). [DOI: 10.1016/S2213-8587\(20\)30380-6](https://doi.org/10.1016/S2213-8587(20)30380-6)

Provided by QIMR Berghofer Medical Research Institute

Citation: Clinical trial finds vitamin D does not ward off colds and flu (2021, January 14) retrieved 5 July 2023 from <https://medicalxpress.com/news/2021-01-clinical-trial-vitamin-d-ward.html>

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