



VITAMIN D AND RESPIRATORY INFECTION

We are excited to be able to share with you the results of our first published report, focused on infections in the respiratory tract. This is a topic that has become increasingly important in recent months due to COVID-19.

Background

Infections in the respiratory tract (such as the common cold or influenza) are experienced by most people at least once per year. Rates of infection are generally highest during winter months, when circulating vitamin D is likely to be at its lowest. Vitamin D may help to support the immune system, and studies suggest that people with higher vitamin D levels may have lower frequency and severity of respiratory infections (our PhD student, Hai Pham, showed this in a manuscript published last year (Box 1)). However, people with higher vitamin D levels may be otherwise healthier than those with lower levels; that is, high vitamin D might just be a marker for good health. A trial like D-Health accounts for this, and is able to determine if taking a vitamin D supplement helps with respiratory infections.

D-Health Trial analysis and results of respiratory tract infection

Hai used information that you reported in your yearly surveys, and also the cold/flu diaries that approximately 3800 D-Health participants completed during the winter months. The title of her paper can be seen in Box 1.

We found that vitamin D supplementation does not reduce the risk of cold and flu occurrence overall.

However, compared with the placebo group, participants in the vitamin D group reported experiencing symptoms

(continued overleaf)



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for fewer days, a lower number of days with severe symptoms, and less need to take medications to manage symptoms.

Do these results suggest that everybody should take vitamin D? Our findings suggest that vitamin D might give the immune system a little boost. But on average, vitamin D reduced the duration of cold/flu by less than a day, which may not be clinically significant. There were very few people likely to be vitamin D deficient in the D-Health Trial, and it is possible that taking a vitamin D supplement would have a greater effect on respiratory infections in people who are deficient. However, in most people, the benefit for respiratory symptoms is likely to be small.

COVID-19 and vitamin D

There has been a lot of interest in the possible link between vitamin D and COVID-19. 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. Nevertheless, it is possible that vitamin D deficiency might increase your susceptibility to COVID-19. If you are concerned you should talk to your doctor.

Box 1: Respiratory manuscripts

Pham H, Neale RE et al. Acute respiratory tract infection and 25-hydroxyvitamin D Concentration: A systematic review and meta-analysis. *Int J Environ Res Public Health*. 2019.

Pham H, Neale RE 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. *Lancet Diabetes Endocrinol*. 2020.

Access these on our website:
dhealth.qimrberghofer.edu.au/page/Publications/
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WE ANSWER SOME FREQUENTLY ASKED QUESTIONS



Since the trial concluded in February 2020 many of you have made contact to ask questions. We have included some of the more frequently asked questions below.

I finished taking my tablets; when will I know the results?

As you may remember from previous newsletters we are interested in a variety of health outcomes and we will need to look at these individually. We are currently finalising results of the falls, antibiotic use, skin cancer, and erectile dysfunction analyses and we hope to have these published soon. We will continue with analysis for the next 2 years and we plan to keep you informed of these results in future newsletters.

We have also added a publications section to our website where you can find out more about our current publications. We will continue to add new publications as they become available.

Now that the trial is over I would like to continue taking a similar supplement; where can I get them?

The trial tablets were manufactured specifically for the D-Health trial and are not currently available. There are many other products available in supermarkets and pharmacies. However, you may be meeting your recommendations for vitamin D without even thinking about it. Most Australians will be able

to avoid vitamin D deficiency through small amounts of sun exposure. The current national guidelines only recommend supplementation **for people who get very little sun exposure**. In this case the recommendations are:

Age 51-70 years:	consume 400 IU per day
Age > 70 years:	consume 600 IU per day

IU = international units

This will generally be enough to support good bone health. Benefits associated with taking higher amounts of vitamin D are still a topic for debate. The D-Health trial aims to address some of these questions. In the meantime, if you have concerns about your vitamin D levels, or think you may need more than the recommended intake, we recommend you discuss this with your doctor.

When will we find out what tablet we were taking?

In April this year, we wrote to all participants to let you know which tablet type you had been assigned. Since then we have heard from a number of participants who did not receive their letters. The most common reason for this has been a change in contact details. If you did not receive your letter, **please contact us so we can check your contact information** and organise a replacement copy.