

An egg a day can help maintain vitamin D levels in winter

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Eating an egg every day in winter can help keep your vitamin D levels up, new research from Deakin University's Institute for Physical Activity and Nutrition (IPAN) has found.

As many as one in three Australian adults may have vitamin D deficiency. It can lead to fatigue, aches, [muscle weakness](#), mood changes and an increased risk of contracting respiratory infections.

The main source of vitamin D is exposure to sunlight. Many Australians don't get enough sun during winter. But dark-skinned people, people who need to stay indoors and people who cover their skin for religious or cultural reasons may also have difficulty keeping their vitamin D levels up year-round.

"Vitamin D deficiency can have a negative impact on bone health as the key function of vitamin D is to promote calcium absorption," says research lead, IPAN's Professor Robin Daly.

Calcium is crucial for healthy bones. Long-term vitamin D deficiency can lead to osteoporosis, a condition that decreases the density of your bones. People with osteoporosis are more likely to suffer bone breaks or fractures. Older Australians are particularly at risk.

Pregnant people are also at risk, as low vitamin D could interfere with their baby's [bone](#) development.

"Vitamin D deficiency may also increase the risk of other non-skeletal diseases such as type 2 diabetes, hypertension, depression and Alzheimer's disease," Prof. Daly says.

Vitamin D is difficult to source from foods. People with low vitamin D levels are often prescribed supplements. Eggs are one of the few foods that are a naturally rich source of vitamin D.

"Weekly consumption of seven eggs was an effective dietary approach to optimize vitamin D levels during the winter months when sunlight hours decline," says Prof. Daly of the IPAN study's findings.

Published in *The Journal of Nutrition*, the study is the first to investigate the dose-response relationship between eating commercially available free-range eggs and blood vitamin D levels in Australian adults.

Fifty-one adults aged 25–40 years were randomly assigned to three groups that were asked to consume either two, seven or 12 eggs per week for 12 weeks.

But won't eating an egg every day increase your blood cholesterol? As well as measuring blood vitamin D levels, the research team also looked at changes in blood lipids. Prof Daly said there were no significant adverse effects on cholesterol.

Participants found it relatively easy to eat the eggs as part of their daily diets.

"The simple strategy of eating an egg a day is in line with current Australian dietary guidelines and could help prevent [health complications](#) caused by [vitamin](#) D deficiencies."

More information: Robin M Daly et al, Dose–Response Effect of Consuming Commercially Available Eggs on Wintertime Serum 25-Hydroxyvitamin D Concentrations in Young Australian Adults: a 12-Week Randomized Controlled Trial, *The Journal of Nutrition* (2022). [DOI: 10.1093/jn/nxac044](https://doi.org/10.1093/jn/nxac044)

Provided by Deakin University

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