

# Vitamin D and depression links debunked

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The link between vitamin D and depression in older men has been analysed by UWA researchers

Vitamin D deficiency does not cause depression in later life but may be a marker for depression, a local study suggests.

Professor Osvaldo Almeida from the School of Psychiatry and Clinical Neurosciences at the University of Western Australia says there has, to date, been evidence suggesting vitamin D deficiency has some part in the causation of depression.

"We now know that the brain has numerous receptors for vitamin D,

which would suggest that it does play a role in modulating some aspect of brain function," Professor Almeida says.

"So, the possibility that low vitamin D could cause depression seems biologically plausible.

"However, our findings indicate that this association is most likely due to reverse causality, meaning that a low concentration of vitamin D is a consequence of depression because people with depression move less and are less exposed to sun light."

Consistent with this hypothesis, Professor Almeida and his colleagues found that a low concentration of vitamin D was associated with current depression, but not with past or future depression.

"These results suggest that the low concentration of vitamin D in older people with depression is simply a marker of depressive state, not the cause of it," Professor Almeida says,

Researchers analysed the plasma concentration of vitamin D in 3105 men aged 71 to 88 years from the Perth metropolitan area. All had a history of depression or were currently experiencing depression.

They questioned the men and used administrative health data to identify past depression. A Geriatric Depression Scale score established the presence of current depression.

The study reported retrospective, cross-sectional and prospective associations between vitamin D concentration and depressed mood in this sample.

Professor Almeida says their results suggest health practitioners should refrain from prescribing vitamin D supplementation for the treatment of

[depression.](#)

"Vitamin D is often prescribed for people with osteoporosis, those who are at risk of falls and for people who have concentrations under 50 nmol/L," Professor Almeida says.

"Health practitioners need to be cautious because there is evidence that excess vitamin D may cause more harm than good.

"For example, a large Australian trial showed that its use increases the risk of falls and fractures."

Researchers did not dismiss the possibility that vitamin D can have a very small antidepressant effect, but suggest large randomised placebo-controlled trials be conducted to dismiss or establish with certainty a causal link.

**More information:** "Vitamin D concentration and its association with past, current and future depression in older men: The Health In Men Study" DOI: [dx.doi.org/10.1016/j.maturitas.2015.01.016](https://doi.org/10.1016/j.maturitas.2015.01.016)

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