

Study finds over a quarter of adults aged 50+ are deficient in vitamin D

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Over a quarter of adults aged 50+ are deficient in vitamin D according to researchers from Trinity College Dublin who announced their findings today (Thursday, June 13th). Over half (57%) had inadequate serum

vitamin D levels, of which 26% were classed as vitamin D deficient. Vitamin D has a known role in bone health, with growing evidence for beneficial effects on muscle strength and other non-skeletal outcomes. The study was recently published in the international, peer-reviewed journal *Nutrients*.

Better understanding of factors that contribute to [vitamin D](#) deficiency is needed to identify people most at-risk. Determinants of deficiency identified in this new study were female gender, advanced age (80+ years), smoking, non-white ethnicity, obesity and poor self-reported health. Researchers therefore identified a profile of older people more likely to be at risk of vitamin D deficiency. Being of a healthy weight, retired, engaging in regular vigorous physical activity, vitamin D supplement use, sun travel in past 12 months and summer season were positive determinants, and therefore potentially protective factors against vitamin D deficiency in [older people](#).

The findings were based on 6004 midlife and [older adults](#), living at Northern latitudes (England, 50-55oN) derived from the English Longitudinal Study of Ageing (ELSA). Since UVB radiation (sunlight) is a known determinant of vitamin D status, this was investigated. Interestingly, residents in the South of England had a reduced risk of deficiency, compared with the North, even after adjustment for socioeconomic and other predictors of vitamin D status.

This new research demonstrates that vitamin D deficiency is prevalent in older adult populations living at Northern latitudes and highlights the importance of public health strategies throughout midlife and older age to achieve optimal vitamin D status.

Associate Professor in Nutrition at Trinity College, Maria O'Sullivan commented 'Our study identified factors associated with vitamin D deficiency, including being aged 80+ years, obesity and sedentary

lifestyles; all of which are increasing traits in western populations. Furthermore, this is one of the few studies to highlight the importance of non-white ethnicity in vitamin D deficiency in a large study of ageing. The findings are valuable in developing targeted strategies to eliminate vitamin D deficiency (at 30nmol/L) in older populations'.

First Author Dr. Niamh Aspell, who conducted the study as part of her Ph.D. at Trinity said: 'Those who used a vitamin D supplement, were less likely to be vitamin D deficient as may be expected, but supplement use was low (4.4%) and, therefore, food fortification and other strategies need to be considered at policy level for older populations'.

Co-Author and Trinity Research Fellow Dr. Eamon Laird, said: 'The high rates of deficiency are similar to rates seen in other high latitude countries such as Ireland. However, other more northern countries such as Finland have implemented a successful vitamin D fortification policy which has all but eliminated deficiency in the population. Such a policy could easily be implemented in the UK and Ireland '.

More information: Niamh Aspell et al, The Prevalence and Determinants of Vitamin D Status in Community-Dwelling Older Adults: Results from the English Longitudinal Study of Ageing (ELSA), *Nutrients* (2019). [DOI: 10.3390/nu11061253](https://doi.org/10.3390/nu11061253)

Provided by Trinity College Dublin

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