

# There's a very simple solution to your lack of vitamin D

July 4 2013, by Thomas Faunce

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Windows do not protect us from harmful UVA rays, but they block out beneficial UVB rays. Credit: Bearfaced

Despite living in a famously sunny country, we've been getting reports of widespread vitamin D deficiency for some time now. The solution to this problem is simply the judicious use of a plentiful, if somewhat maligned, natural resource.

As an ardent Beatles fan, I became aware of the lesser-known fact that John Lennon and Paul McCartney used to sunbathe in Liverpool's Strawberry Fields cemetery. This behaviour probably seems extraordinary for people in present day Australia where we're used to being lectured about the importance of protecting ourselves from the sun.

I also knew that old family friends who grew up in England after the Second World War were forced to swallow cod liver oil. This is also unusual today; some of us dole out fish-oil tablets in the morning, but usually because of dubious advertising claims that they'll enhance our childrens' performance on school tests.

These otherwise seemingly disconnected post-war temperate zone activities (sunbathing and consuming cod liver oil) are linked by their capacity to supply people with vitamin D3 (cholecalciferol). Around 90% of our vitamin D3 is produced in the skin by ultraviolet irradiation B (UVB) of its precursor 7-dehydrocholesterol.

Between 10,000 and 20,000 international units (IU) of vitamin D3 can be made by direct exposure of large areas of [human skin](#) (such as your tummy, back or legs) to UVB in the middle of the day (when UV index is greater than three).

Vitamin D3 is also found in [oily fish](#) and [cod liver oil](#), but the capsules commonly taken as supplements contain only about 1,000 IU each. The body self-regulates production of vitamin D, some is stored in fat and you cannot produce too much.

## Low vitamin D epidemic

Australia is facing an epidemic of vitamin D deficiency, with as much as a third of the population having less than recommended levels. Even

people such as gardeners, who are outside all day but lathered in sunscreens and wearing long-sleeved shirts and broad hats have chronically low vitamin D3 levels.

Vitamin D is important for maintaining calcium and phosphate levels for bone formation, and allowing proper functioning of parathyroid hormone. Low levels of this hormone can produce fatigue, muscle pain and weakness, weight gain, poor sleep and concentration and bone diseases.

Low vitamin D levels have been implicated in forms of cancer, high-blood pressure and autoimmune disease, such as multiple sclerosis. Indeed, multiple sclerosis is an interesting example here.

It has long been known that the incidence of [multiple sclerosis](#) is much lower at the equator than in temperate zones. Many have wondered whether the difference can be explained by the higher levels of UVB and light clothing worn at the equator that combine to elevate vitamin D3 levels.

The overall health impact of even mild vitamin D deficiency is unlikely to be positive, so this is not an issue we can afford to ignore. It just so happens that Australian health professionals are already raising awareness of the problem.

## **Sun phobia and low vitamin D**

There is such a fear of skin cancer in Australia that many health professionals are reluctant to recommend any direct exposure to sunlight in the middle of the day, when vitamin D3 stimulating UVB are strongest.

We routinely seek removal of solar keratoses, and basal and squamous

cell carcinomas from our face and hands. And it is appropriate to protect those heavily exposed areas with sunscreens.

Yet, our capacity to make vitamin D is also restricted by sunscreens and our inability to open windows in our workplaces. Applying sunscreens commonly blocks 95% of vitamin D-stimulating UVB light, as does glass.

Sunbathing before a closed window that allows through damaging UVA, but not beneficial UVB, is much more risky than exposing your tummy, back or legs to direct sun.

To maintain [vitamin](#) D levels, all most of us need to do is expose one of these large areas of our body to direct midday sunshine in winter (or mid-morning or mid-afternoon sun in summer) for 10 to 15 minutes or until the skin is lightly pink.

Meanwhile, continue to protect your face and hands with sunscreens for cosmetic purposes and to limit chronic over-exposure.

Darker skinned people and those living further away from the equator (Hobart instead of Cairns, for instance) will require slightly longer exposure. It's as simple as sitting in your garden or before an open window, letting direct sunlight onto skin exposed through rolling up your sleeves, trouser legs, or the bottom of your shirt.

It's time we had a conversation about sensible sunlight exposure of our otherwise hidden bodies; particularly since this potential antidote to the epidemic of autoimmune diseases of various types raging in our community is so readily available and inexpensive.

It's not your face and hands, but your tummy and back that need to be exposed more often to direct sunlight for brief periods. It's a question of

using sunlight appropriately and getting your gear off in sensible moderation.

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Citation: There's a very simple solution to your lack of vitamin D (2013, July 4) retrieved 6 May 2024 from <https://medicalxpress.com/news/2013-07-simple-solution-lack-vitamin-d.html>

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