

On vitamin D, the so-called experts have it wrong, U.K. researcher says

[Oliver Gillie, The Daily Telegraph, National Post Wire Services](#) | November 25, 2014 | Last Updated: Nov 25 12:46 PM ET



Handout/Canadian Health Food Association. New Lancet studies that call into question if vitamin D can help prevent disease use questionable statistical analysis to reach their conclusions, a U.K. researcher in the field says.

There is little chance of leading a truly simple life today because so much of it is done with the advice of experts. With food, we are bombarded with nutritional tips; and there is no shortage of instruction on how to bring up our children.

We tend to believe the advice of people with a good track record and evident qualifications. But sometimes they get it wrong, sometimes they disagree, and that is where the simple life ends.

You've likely heard that winter is a good time to take a vitamin D supplement. But that's where the simple questions end and things get kind of hairy.

Exactly how much should you take? Does it matter if it's a chew, drop or tablet? What about vitamin D2 vs. D3 — is one better than the other? Here's the latest on when and how to take supplements of the so-called "sunshine vitamin," which is important for bone health, but might also protect us against cancer, type 2 diabetes, chronic pain, multiple sclerosis and various other ailments.

Take dermatologists, who, over the years, have advised and frightened people into avoiding the sun. There is a link between excessive sun exposure and melanoma, the form of skin cancer that carries a high risk of death.

But the link is not clear cut. Melanoma occurs in the mouth, the anus and on the soles of the feet, areas that get little or no sun, as well as on the face, which may get a lot. So the relationship with the sun is not obvious.

And despite what dermatologists tell us, the evidence shows that in the U.K., at least, people are less likely to get melanoma if they spend weekends mostly outdoors, where they inevitably get more sun exposure.

People who stay inside have low sun exposure, low vitamin D (made in the skin when it is exposed to sunshine) and are at greater risk of several cancers. So it is a good idea to take vitamin D supplements, at least 2,000 international units (IU) a day, especially in winter.

However, *The Lancet*, the world's best-known medical journal, recently suggested in an editorial that most of the benefits of vitamin D advanced by scientific studies are a "myth." It says people tend to have low vitamin D when they are ill because they do not go outdoors very much.

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This was also the view presented in papers published in *The Lancet* by two teams, Philippe Autier of the International Prevention Research Institute, Lyon, and Mark Bolland of the Department of Medicine, University of Auckland.

They argue that clinical trials of vitamin D have failed to show any clear benefit. However, most of the trials have used low doses of the vitamin. Professor Michael Holick, pioneer of vitamin D research at Boston University, says 4,000 units per day is required to give an optimum level of the vitamin in the blood, enough to prevent disease. A number of clinical trials relied on by *The Lancet* editorial and its authors used a daily dose of just 400 units.

The Lancet and its authors have also, in my view, used defective scientific reasoning based on what statisticians call a "type 2 error." They have over-generalized a result that has only a narrow basis in fact. A negative result in a clinical trial of vitamin D supplementation in adults cannot be generalized because it cannot rule out damage caused by vitamin D deficiency many years earlier that is irreversible. Adult disease may be caused by deficiency of vitamin D

occurring in childhood or teenage years and such disease may not be remedied by taking in more of the vitamin later in life.

This is the case with rickets, a bone deformation in children caused by lack of both sunshine and vitamin D. Rickets may be corrected if vitamin D is given to a child. But once bones stop growing in adulthood, deformities become fixed and cannot be changed by giving vitamin D. I have explained these errors in more detail in [a peer-reviewed article in *Public Health Nutrition*](#).

There is good evidence to suggest that a shortage of vitamin D in the womb and early life may be a cause of three serious diseases: multiple sclerosis, type 1 (juvenile) diabetes, and autism. Heart disease and a number of cancers are also linked to insufficient vitamin D at various life stages.

It can be difficult to decide where the truth lies when experts disagree, but not when, as in *The Lancet's* vitamin D articles, the argument depends upon a basic statistical error.

—*Oliver Gillie is an award-winning journalist who has been studying and writing about vitamin D for over 10 years, and is founder of [The Vitamin D Company](#).*