

Are European kids getting enough vitamin D? Winter weather reopens the debate

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The cold snap has well and truly set in across much of Europe, and as temperatures fall, watching our health becomes increasingly more crucial. Keeping our vitamin D levels up during the winter months has long been lauded as an important part of this fight against unforgiving winter climes, particularly for vulnerable groups such as young children.

But parents and carers could be forgiven for feeling confused about the different and at times conflicting advice they hear from doctors and the media regarding what is best for their young ones, and several recently published research papers on [vitamin D](#) levels from British and French researchers have re-opened this medical can of worms.

While most people recognise the worth of getting a good dose of vitamin D when the days are sunnier, many scientists believe we are still not getting enough and that our indoor lifestyles, bad diets and liberal use of [sun protection](#) could actually be contributing to low levels of the essential vitamin in many children. As 90% of our vitamin D intake comes from exposure of the skin to sunlight, people living in northern European countries with little exposure to the sunlight are most at risk. Vitamin D deficiency is also common in women who have had several babies in close succession as their bodies' stores get used up quickly. Although breastfeeding is highly recommended as it provides babies with [essential nutrients](#), breastfed babies are at risk and must be supplemented with an additional intake of vitamin D.

Writing in the journal Archives de Pédiatrie, French researchers from

the Committee on Nutrition of the French Society of Paediatrics recommend that children under 18 months who receive milk supplemented with vitamin D should also have an additional daily dose of 600 to 800 IU and that children under 18 months receiving milk not supplemented with vitamin D need a daily dose of 1,000 to 1,200 IU. They also recommend that breastfed children need an extra 1,000 to 1,200 IU a day throughout breastfeeding.

The team recommend that for children under 18 months with an underlying risk of vitamin D deficiency (risk from obesity, or people with darker skins who need more sunlight to top up their vitamin D levels, for example), vitamin D supplementation should continue more rigorously throughout childhood: they advise supplementation of vitamin D every 3 months all year long in children aged 1 to 10.

British researchers Nicholas M.P. Clarke and Jonathan E. Page from the University Hospital Southampton in the United Kingdom share this concern about [vitamin D deficiency](#), as they explain in a recent review in *Current Opinion in Pediatrics*. They link the deficiency to cerebral palsy, bone conditions and obesity.

Conversely, some scientists disagree and believe that it is actually harmful to add extra vitamin D into the bloodstream. The problem lies in disagreement over the role vitamin D plays in improving our health: while it is widely accepted that vitamin D plays a key role in bone health, the jury is still out on what other benefits it brings. In November 2011 the Institute of Medicine (IOM) in the United States published a report stating that blood levels of vitamin D need not be as high as many scientists advocate for, warning that high doses of the vitamin could actually cause harm.

The Scientific Advisory Committee on Nutrition (SACN) in the United Kingdom states that some evidence suggests Vitamin D may also be

important in preventing other diseases including cancer, cardiovascular disease and multiple sclerosis, but that further research is needed before any definite conclusions can be made.

Knowledge about vitamins in food, and nowadays through their incarnation in supplements, has become an everyday part of our lives, but how were vitamins discovered in the first place? Vitamins B, C and D were all discovered as a result of research on several diseases that haunted populations from the 1700s through to the early 1900s: beriberi, scurvy and rickets. Over time, doctors realised that these diseases could be prevented by supplementing imbalanced diets with certain foods. As a result, these disease-preventing compounds were purified and analysed and a new class of nutrients deemed essential for human health was established.

When it comes to Vitamin D, scientists know that our bodies are capable of producing it, yet we are not entirely dependent on obtaining it from food as we can produce enough vitamin D to maintain essential processes when our skin is sufficiently exposed to ultraviolet rays in sunlight. Having too little vitamin D can result in the onset of conditions like rickets; a particularly devastating disease characterised by muscle spasms, seizures and softened bones, which leads to deformity.

Rickets was first identified as a rare disorder in the 1600s, but it became more prevalent in the late 1700s as people began to stay indoors and live in large, smog-filled cities, with reduced exposure to [sunlight](#). Although rickets has been, for the most part, widely prevented among children in Europe, today medical practitioners are warning that the condition is once again on the rise.

So, amid all this talk of rickets and plummeting temperatures that harks back to a 19th century Europe in the midst of industrial revolution, what is the advice amid scientific uncertainty? And, in the summertime, how

can we keep a balance between protecting ourselves from the Sun's cancer-causing rays and soaking up its beneficial ones?

In terms of sunshine exposure, the key is to get enough exposure to the Sun without burning. But until the Sun reappears over Europe, the message in terms of vitamin D and winter health in general is to keep informed, keep warm, and above all to consult your doctor on what kind of balanced [diet](#) or vitamin D supplements are best for you and your children.

More information: National Health Service (UK) Vitamin D advice sheet: [www.nhs.uk/Conditions/vitamins ... Pages/Vitamin-D.aspx](http://www.nhs.uk/Conditions/vitamins...Pages/Vitamin-D.aspx)

Nicholas M.P. Clarke and Jonathan E. Page (2012) 'Vitamin D deficiency: a paediatric orthopaedic perspective', *Current Opinion in Pediatrics*. [DOI:10.1097/MOP.0b013e32834ec8eb](https://doi.org/10.1097/MOP.0b013e32834ec8eb)

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