**Should Vitamin D be added to milk and bread to stop us getting sick? Experts reveal the 'sunshine supplement' can fortify our immune systems**

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Should vitamin D be added to our food?

That's the argument raging among health experts since the publication last week of research showing people who take vitamin D supplements are less likely to succumb to colds, flu and serious infections such as pneumonia.

The report in the British Medical Journal analysed 25 studies in 14 countries and found regular small doses of vitamin D gave a 'significant' benefit, particularly for those low in the vitamin.

The researchers say these results strengthen the case for adding vitamin D to milk, orange juice, cereal and bread — foods consumed by large numbers of people every day.

They argue this is a much more reliable way to ensure everyone gets enough of the vitamin, which is essential for healthy bones, teeth and muscle — and, it now seems, for a healthy immune system.

Vitamin D is known as the sunshine vitamin because it's made in skin in the presence of UV light.

This is our main source, which is why many people in northern climes are low in vitamin D between October and April, when the sun is low in the sky.

Though the nutrient is found naturally in oily fish, cheese and egg yolks, it's hard to get enough from these sources.

'Fortification provides a steady, low-level intake of vitamin D that's virtually eliminated profound vitamin D deficiency in several countries,' says Adrian Martineau, a clinical professor of respiratory infection and immunity at Queen Mary University of London, who led the study.

'Our work strengthens the case for introducing fortification to improve vitamin D levels in countries such as the UK where deficiency is common.'

Currently, vitamin D is added to formula milk for babies under a year old by law, because this is often the only nutrition they're receiving.

Many breakfast cereals are also fortified with the vitamin, though this isn't mandatory.

In the U.S., milk has been fortified with vitamin D since the Twenties (though it's not mandatory).

But Public Health England has rejected calls to introduce vitamin D fortification here. Instead, it suggests doctors encourage people to choose to take supplements themselves.

Professor Louis Levy, head of nutrition science at Public Health England, says he's not convinced by the case for vitamin D against colds and flu.

In a statement, the Department of Health said mandatory food fortification was 'a complex issue' and experts were keeping the evidence under review.

The latest statistics suggest 39 per cent of adults are vitamin D deficient in winter.

'No one can deny we have a major problem with widespread vitamin D deficiency in this country,' says Martin Hewison, professor of molecular endocrinology at the University of Birmingham.

'At the moment, the recommendations are that everyone considers taking vitamin D supplements throughout the winter months and those at risk take them daily throughout the seasons — this includes children under five, pregnant and breastfeeding women, people over 65, those who are darker skinned or cover their skin for cultural reasons.

'However, we know that most people don't adhere to that advice.

'Logistically, it would be much easier simply to add small amounts of vitamin D to a range of common foods so everyone got at least some.'

Dr Benjamin Jacobs, a consultant paediatrician at the Royal National Orthopaedic Hospital, also supports fortification.

'Public Health England should recognise there is a major issue that can't be addressed by simply encouraging people to take supplements.'

But one concern about adding vitamin D to different foods is that people could end up getting too much: vitamin D is fat soluble, so can be stored in our fat, unlike vitamin C, for instance, which is water soluble and easily excreted in urine if you have too much.

Excessive vitamin D can lead to high levels of calcium and heart and kidney problems.

After World War II, when milk and flour were fortified with vitamin D to reduce rickets, many suffered the effects of too much, which led to European countries banning the practice.

But manufacturers added massive doses — far more than needed, says Dr Jacobs. Much has been learned since.

Another argument against fortification is a resistance to 'mass medication' and reducing consumer choice.

Last year, the British Medical Association and Food Standards Agency called for white flour to be fortified with folic acid to prevent spina bifida in babies.

This was rejected by Health Secretary Jeremy Hunt.

A Scottish scientist who in 2015 looked into whether adding lithium to tap water could reduce suicide rates reportedly received death threats.

Around a tenth of the UK population drinks water containing added fluoride, but this remains controversial, too.

'Of course, there are lots of vitamins and nutrients that many people lack, but where do you draw the line?' says Rick Miller, a clinical dietitian and spokesman for the British Dietetic Association.

'You could end up with a long list of vitamins and nutrients that have to be added, but which can interact with medications — and with each other.'