



Greater use of supplements needed to combat critical shortfall of vitamin D and lessen risk of chronic risk: new study warns

People should take vitamin D supplements and improve their diets in order to address a critical shortfall in blood levels of vitamin D, health experts are warning today.

Millions of Britons have a greater risk of developing potentially fatal health conditions, such as coronary heart disease and cancer, because of low vitamin D levels, says a new scientific review commissioned by the Health Supplements Information Service (HSIS).

Despite the proven health benefits of vitamin D, about three quarters of British adults fail to reach even their basic requirements thanks to poor dietary intakes and a lack of sun in the UK. Elderly people in particular could be cutting years off their lifespan by not getting enough vitamin D as their skin is less efficient in producing the vitamin from sunlight.

Now nutrition experts are calling for the shortfall in our diets to be made up by improved dietary intake, together with vitamin D supplementation. Supplements, such as daily multivitamins, have been proven in clinical studies to boost vitamin D status.

In addition, researchers are calling on the Government to review vitamin D recommendations and give clearer guidance to the public. At present, there are no dietary vitamin D recommendations for most people aged 4 to 50 years, resulting in confusion and potential adverse health effects. Even Government advice to give vitamin D supplements to pregnant women and elderly people has been ignored by many health professionals.

In this latest study review, called '*Health Impacts of Vitamin D: Are We Getting Enough?*', independent researchers analysed the current evidence surrounding vitamin D. The aims were to identify the main health benefits associated with the vitamin and to explore issues surrounding optimal daily intakes.

Leading dietitian Dr Carrie Ruxton and senior lecturer in Human Nutrition at Manchester Metropolitan University, Dr Emma Derbyshire, reviewed more than 140 published research papers covering data from about 170,000 people. The papers relate to the potential power of vitamin D, mechanisms to explain its benefits, vitamin D intakes and recommendations for the future. Their paper will be published in the June issue of *Nutrition Bulletin*, the journal of the British Nutrition Foundation.

Scientific research suggests that vitamin D plays an important role in helping combat a host of serious health conditions, including cancer, heart disease, multiple sclerosis and immune disorders, as well as boosting bone health. Recent research work has linked vitamin D deficiency with a significantly increased risk of poor mental and physical health.

Normally vitamin D is produced by the body following skin exposure to sunlight. However, the northern latitude of the UK means that adequate access to sunlight is only possible over 7 months of the year. During the winter months, there is simply not enough sunlight to stimulate our bodies to make vitamin D. An increased awareness of the risks of skin cancer has also limited typical skin sun exposure levels, as have cultural reasons for covering the skin.

A regular intake of vitamin D-rich foods or a multivitamin rich in vitamin D can help enhance our skin production. Good food sources include oily fish, meat, fats and spreads, breakfast cereals, dairy products and eggs. However, consumption of many of these foods has declined in recent years. For example, in 1974, the average person bought 147g a week of butter compared with just 41g a week in 2007.

Currently in the UK, there are no recommended intake levels of vitamin D for most adults. The European Union recommends a daily intake of 5µg (micrograms) for food labelling purposes, while the European Food Safety Authority suggests a maximum of 25µg a day for children and 50µg a day for 12 to 70 year olds. Dr Ruxton and Dr Derbyshire found that in the UK, 71 per cent of men and 78 per cent of women failed to reach even 5µg of vitamin D intake a day, with an average of just 3.7µg for men and 2.8µg for women.

The recommended safe upper level in America, Australia and New Zealand is 80µg a day, but studies now suggest that levels of 500 to 1,000µg a day may well be safe. One study reported that to lower the risk of osteoporotic bone fractures, adults needed to take at least 55µg of vitamin D through diet, in addition to usual sun exposure.

Commenting on the latest review commissioned by HSIS, Dr Ruxton says: "Supplementation, such as taking a daily multivitamin rich in vitamin D, could play a useful role in addressing low vitamin D intakes. Clinical studies show they help boost vitamin D levels in the blood. Not everyone gets all the nutrients they need from their diet so a multivitamin containing vitamin D can be a good insurance policy while longer-term dietary changes are made. At the same time, we need to promote consumption of foods rich in vitamin D, such as oily fish, eggs and dairy foods, which have been declining in recent years.

"There is a growing body of literature to show that vitamin D is important for maintaining health and lowering the risk of some chronic diseases. A better vitamin D status appears to be linked with a lower risk of cardiovascular disease, diabetes and inflammatory conditions, and less cognitive impairment in older people."

Dr Ruxton adds: "Taking the evidence as a whole, a rather worrying picture emerges implying that British adults and children are at increased risk of chronic disease due to vitamin D insufficiency. We need to re-examine UK dietary recommendations for vitamin D, which arose from research in the 1960s and 1970s. In particular, there should be a review of vitamin D recommendations for those unlikely to achieve sufficient sun exposure, or those with particular health needs.

For more information on vitamins and minerals visit www.HSIS.org.uk.

The Health Supplements Information Service (HSIS) (www.hsis.org.uk; Tel: 020 7052 8955) is an independent information body, set up to provide balanced information on vitamins and minerals. It is supported by a restricted educational grant from the Proprietary Association of Great Britain (PAGB).

Ends

Note to editors:

Key health benefit findings of vitamin D

Cancer - Higher intakes of vitamin D were linked in some studies with an 11 per cent lower risk of developing colo-rectal cancer and breast cancer. One study found that women with the highest vitamin D intakes had up to 69 per cent less chance of developing breast cancer, although the authors of the new report point out that further research is needed to address inconsistencies.

Cardiovascular disease – There was evidence that those with lower levels of vitamin D had an increased risk of hypertension (high blood pressure). A poor vitamin D status was also linked with increased inflammation and other coronary heart disease predictors, as well as a higher risk of heart attack.

Diabetes - Studies considered by the new report identified a role for vitamin D in lowering the risk of developing both type 1 and 2 diabetes. One study found that poor vitamin D levels were significantly linked with raised insulin levels and insulin resistance.

Multiple sclerosis (MS) - Research showed the incidence of MS and rheumatoid arthritis was greater in countries with lower levels of sunshine. Other investigations found a greater risk of MS, or worse MS symptoms, in people with low blood levels of vitamin D.

Ageing - Emerging evidence has linked higher levels of vitamin D with slower ageing. One study found that women with a better vitamin D status had slower cell ageing. The vitamin was also linked with reduced muscle wastage, a reduction in the risk of falls in the elderly and significant cognitive and mood benefits.

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