Vitamin D and MS

Vitamin D is a fat-soluble vitamin that is found in food and can also be made in your body after exposure to ultraviolet (UV) rays from the sun.

Autoimmune diseases, like multiple sclerosis (MS) and type 1 diabetes, are diseases where the immune system mistakenly attacks the body's own tissues or harmless substances that enter the body. Some studies have suggested a link between vitamin D deficiency and autoimmune diseases such as MS. This possible link might also explain the increasing prevalence of autoimmune disease among those living far from the equator, where there are lower levels of winter sun.

Research relevant to MS

Research specific to MS shows:

• High doses of vitamin D3 (cholecalciferol, 14,000 IU/d) over a period of 6-12 months increased blood levels of vitamin D to nearly 400 nmol/l and did not lead to hypercalcaemia (excessively high levels of calcium in the blood) or other significant side effects. After 12 months, a 41% reduction in the number of relapses and a significant improvement in EDSS was reported for the 25 people receiving vitamin D3 compared to the 24 who were untreated.¹

• Higher levels of reported sun exposure, and not vitamin D status, are associated with less depressive symptoms and fatigue in multiple sclerosis.²

• PrevANZ is a world-first clinical trial that will test whether vitamin D supplementation can prevent MS in those at risk of developing the disease. The trial will focus on the possibility of using vitamin D supplementation to prevent a diagnosis of MS following a person's presentation with a first episode of symptoms. PrevANZ will also test appropriate dosage levels and safety.³

• A rare genetic variant which causes reduced levels of vitamin D appears to be directly linked to MS.

Practical tips

To allow for adequate Vitamin D synthesis without increasing your risk of developing skin cancer, The Cancer Council of Australia recommends an initial exposure to sunlight (10-15 minutes). This amount of exposure daily to the face, arms, hands or back without sunscreen is usually sufficient to provide adequate Vitamin D. This should be followed by an application of a sunscreen with an SPF of at least 15 to protect the skin.

It is important for individuals with limited sun exposure to include good sources of vitamin D in their diet. Good food sources included cod liver oil, such as cooked salmon and mackerel, tuna, sardines and fortified milk.
Frequently Asked Questions

Q: How can I find out if I need Vitamin D?
A: Ask your GP or neurologist for a blood test to measure your serum Vitamin D levels.

Q: How much Vitamin D should a person with MS take?
A: There are two types of vitamin D supplements: vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol). For a number of reasons, it is generally considered that vitamin D3 is the most effective form for supplements.8 The best approach for supplementing in people with lower levels of vitamin D has not been established and varies depending on the individual. Short courses of high doses can be used to adjust levels. Prolonged supplementation with very high doses can lead to loss of calcium from the skeleton causing problems such as weakening of bones, high blood pressure and kidney problems. For this reason, high doses of vitamin D are often combined with calcium supplements.

MSWA Services

The MSWA Nursing Team are here to help answer your questions about healthy eating and how best to make decisions around your nutrient levels and medication. They can also help with advice, information and strategies for the management of MS symptoms which interfere with getting enough fluids and/or nutrition. Phone 08 9365 4888 for more information or visit www.mswa.org.au

Resources

• Your GP can give you a referral to an Accredited Practising Dietician under the Medicare Care Plan, which will cover the cost of a limited number of consultations. See www.ihr.net.au/medicare.pdf for more details.
• Nutritional Guidelines in Multiple Sclerosis - MSWA publication.
• MS Trust (UK) www.mstrust.org.uk - comprehensive fact sheet on Vitamin D which includes a list of the latest research into how it is linked to MS and how people are assessing its role in treating MS.

References