

A focus on Vitamin D – The Sunshine Vitamin



As we move through the winter months it is important to be aware of the need for adequate levels of vitamin D in order to maintain our health. Unfortunately, due to the use of sun creams, people spending more time indoors, low fat diets and a reduced intake of vitamin D rich foods, the prevalence of vitamin D deficiency is increasing. If you have not built up adequate levels through the summer you are at a high risk of deficiency in this important vitamin well before you have a chance to top up next summer.

There are two types: vitamin D2 (plant source) and vitamin D3 (animal source). Vitamin D3 is considered superior, as it is more bio-effective, compared to vitamin D2.

What are the functions of Vitamin D?

Bone health

Vitamin D is responsible for maintaining adequate serum levels of calcium and in doing so it helps to maintain bone density. Vitamin D protects bone from calcium and phosphate loss

Cardiovascular

Although the precise mechanisms for how vitamin D protects the cardiovascular system remain unclear, low serum vitamin D levels have been associated with an increased risk of hypertension, atherosclerosis, dyslipidaemia, metabolic syndrome and cardiovascular disease.

Dementia

Again, the role of vitamin D in cognitive health is not yet completely understood. A large 2014 study published in Neurology showed people with extremely low blood levels of vitamin D were more than twice as likely to develop Alzheimer's disease or other types of dementia as those with normal vitamin D levels.

Autoimmune

Evidence has shown increased prevalence of several autoimmune diseases, including inflammatory bowel disease, MS, type I diabetes and rheumatoid arthritis at Northern latitudes where sun exposure is reduced; therefore, it has been suggested that vitamin D is protective against autoimmune conditions. This is likely to be due to anti-inflammatory and immune modulating effects that vitamin D has demonstrated.

Diabetes

Additional evidence has strongly suggested that vitamin D plays an important role in modifying the risk of type 2 diabetes, an effect which is likely mediated by an effect of vitamin D on beta cell function, insulin sensitivity and systemic inflammation.

Cancer

Epidemiological evidence shows that a higher blood vitamin D level is associated with a reduced risk of cancer and cancer related mortality.

How do we get it?

- Food sources of vitamin D3 include oily fish, eggs, liver and butter. Food sources of vitamin D2 include mushrooms, soya and almond milk. Being a fat soluble vitamin, food sources are absorbed with the help of fat. However, it is not possible to obtain adequate vitamin D from diet alone.
- Skin exposure to sunlight. Vitamin D can be manufactured by the skin when exposed to adequate levels of UVB light. Ensuring your forearms are exposed to sunlight for 15 minutes per day during summer months (May-October) between 10am and 2pm can help to build vitamin D levels. Do not allow yourself to redden. (Considerations: age, gender, skin colouring, latitude, weather, time of day, time of year, clothing).
- Supplementation. The UK government recommends a minimum intake of vitamin D3 10mcg per day (400IU) for the whole population (age dependant). This means taking a daily supplement that includes vitamin D.

Toxicity

The majority of the population are not obtaining adequate levels of vitamin D; however, it is possible to have excessive and therefore toxic levels of vitamin D. The main consequence of this is too high a level of calcium within the blood. However, I would suggest that if taking more than 5000 IU per day for more than 3 months, then vitamin D levels should be checked regularly, especially during the summer months.

If you need further advice on any of the issues I have raised, please do not hesitate to book an appointment with me.

(Please note, this is for information only and is not intended to replace any health care or advice that you get from your doctor or other health care providers.)