**News stories about vitamin D deficiency have been making the headlines recently. But is vitamin D deficiency really a problem and what impact can it have on our health?**

**Why do we need vitamin D?**

We think of vitamin D primarily for it’s role in bone health, where it plays an essential role, including in helping us to absorb calcium and prevent osteoporosis. However, vitamin D plays an important role in many other aspects of health and has become a major focus of research. Acting more like a hormone, vitamin D plays a crucial role in regulating the function on many different cells and organs.

* **Immune health:** Vitamin D supports the proper functioning of our immune system. Deficiency is associated with increased risk of autoimmune diseases like MS and Rheumatoid Arthritis and also in children’s allergies, where the immune system is overactive and attacks our own tissue. Deficiency is also associated with an impaired ability to fight disease and in many studies, people suffering from flu and other bacterial and viral illnesses are found to have low levels of vitamin D. Vitamin D also plays a role in helping our bodies to recognise and get rid of damaged cells, for instance in cancer. Evidence is particularly strong for colorectal and breast cancer and there is evidence showing that those with good vitamin D levels have better cancer survival rates.
* **Fertility:** Vitamin D has been shown to play an important role in male and female fertility. For women, low levels can affect female hormone production and are found more commonly in women with PCOS (polycystic ovary syndrome). Low levels have also been found to have a negative effect on IVF outcomes and infant health. In men, appropriate levels are associated with better sperm quality and testosterone levels.
* **Heart health:** A US study of over 50,000 men found that those with low levels of vitamin D were twice as likely to have a heart attack as those who had adequate levels. This is thought to be due to vitamin D’s role in stabilising blood pressure and preventing damage to blood vessels.

**Is it common to have low levels of vitamin D?**

Yes! More than 50% of the UK have insufficient levels and a research group in UCC working on vitamin D believe that in Ireland we have amongst the lowest levels of vitamin D in the industrial world.

One of the reasons for this is that our main source of vitamin D is sunshine. In Ireland we don’t get much sun and in the few months where the sun is strong enough to make vitamin D, most of us cover up and use sunscreen. Most of our make-up also includes sunscreen, which reduces the amount of Vitamin D we can absorb by up to 90%.

**Who is particularly at risk?**

* The elderly, particularly if they spend a lot of time indoors. The older we get, the harder it is for us make vitamin D
* Babies and children. A pregnant woman with insufficient levels of vitamin D is likely going to give birth to a baby with low levels of vitamin D. We are npw finding cases of rickets amongst children in Ireland due to vitamin D deficiency. All babies under 12 months should be given a vitamin D supplement containing 200iu vitamin D. In the UK it is recommended to supplement up to age of 5 and when pregnant
* Pregnant women
* People with darker skin, as the darker your skin, the more sunshine you need to make vitamin D
* People who avoid sun exposure or cover up when outdoors
* Overweight people. While the reason for this is not fully understood, research clearly shows low levels of Vitamin D in overweight and obese people and a requirement for a higher level of supplementation to correct deficiencies when identified

**Why it’s important to check your levels and how to do it**

Vitamin D is fat soluble, meaning we can store it in our body for later use. This also means that we can take too much of it and at very high levels vitamin D can cause liver and immune health problems. Also, people absorb vitamin D at different rates, so if you are trying to correct a vitamin D deficiency you need an amount tailored to your individual requirement.

For those reasons, it’s important to test your vitamin D levels. This is a simple blood test and your GP may be able to carry out this test for you. If not, we offer a vitamin D test in clinic for €65. For more details or to order the test, contact our clinic. We recommend testing, supplementing if needed and then retesting in 3 months to check that the deficiency has been corrected.

**How to increase your levels of vitamin D**

Take a sun holiday! Or make an effort to get more sun in the summer. Just 10 – 20 minutes per day can be enough to increase vitamin D levels and this exposure does not need to be on the face. But never let yourself burn.

Food sources include oily fish, egg yolk, although these contain small amounts. Fortified foods often contain D2 rather than D3, which is much harder for our body to absorb and convert into active form.

If you do need vitamin D and are not planning a sun holiday, try taking a liquid D3 (cholecalciferol) supplement. There are several good brands available.