Are you one of the 60% of people who are permanently Vitamin D deficient? – and does it matter?

It is estimated that round 60% of the population are permanently vitamin D deficient and this rises to 90% during the winter. The seasonal difference is because our main source of Vitamin D is the Sun and most of us do not get outside for long enough when the sunlight is strong enough to activate the production of vitamin D – and those who do cover up with clothes or sunscreen.

What are the effects of vitamin D deficiency?

The symptoms are often vague and many people think that that is just the way they should feel. This includes tiredness, and general aches and pains. Sounds familiar? It is also linked to growing pains, bone pain, weakness, depression, fatigue and Seasonal Affective Disorder (SAD).

Ricketts is on the rise in the developed World.

Vitamin D also protects you against cardiovascular disease, cancer and Type 1 diabetes – see figure 1.

How do I know whether or not I am deficient?

The above statistics suggest that it is likely that you are deficient but if want to be sure, simple vitamin D blood tests are available. Due to the cost and guideline criteria for the necessity, GPs are not keen to order a vitamin D blood test so you may need to get one privately.

Research suggests that the generally recommended adequate level of 50 nmol/l (nanomol/litre) for vitamin D sufficiency is too low. To get the full benefit you should be aiming for around 125nmol/l. That is roughly the level found in people living in very sunny climates.

How do I get more vitamin D?

Food – forget it. The vitamin D content in food is so low it has no effect.

Sunshine – in southern UK you will need to expose (no clothing or sunscreen) at least face, arms and lower legs (25% of your skin) for 20-30 minutes each day , or about half the time it takes for the sun to turn your skin pink. For the sun to be strong enough it must be at a time of day when your shadow is shorter than you are. The darker your skin the more sunlight you need. Using the same guidelines you can use a sun bed.

Supplementation – Vitamin D3 is relatively cheap and as long as you get it from a reputable source it is all pretty much the same. The controversial issue is the dose. Generally your GP will recommend no more than 800-1000 IU per day. However, research suggests that the required dose for increasing and maintaining your levels are 4000-5000 IU per day – see figure 2.

Vitamin D toxicity.

Adequate exposure to the sun generates 20,000 IU per day. It is nearly impossible to get vitamin D toxicity as you will need prolonged doses in excess of 40,000 IU per day. The result is actually not vitamin D toxicity but Hypercalcaemia (too much calcium in the blood). The symptoms include nausea, sickness, poor appetite, excessive thirst, passing urine frequently, constipation or diarrhoea, muscle weakness or pain, confusion and tiredness.

Who should not take vitamin D supplements?

Medicines – Digoxin, thiazide diuretics (hydrochlorothiazide, bendroflumethiazide etc)

Diseases – primary hyperparathyroidism, Hodgkin's or non-Hodgkin's lymphoma, kidney stones, liver disease or hormonal disease, sarcoidosis.

Conditions – high blood calcium levels.

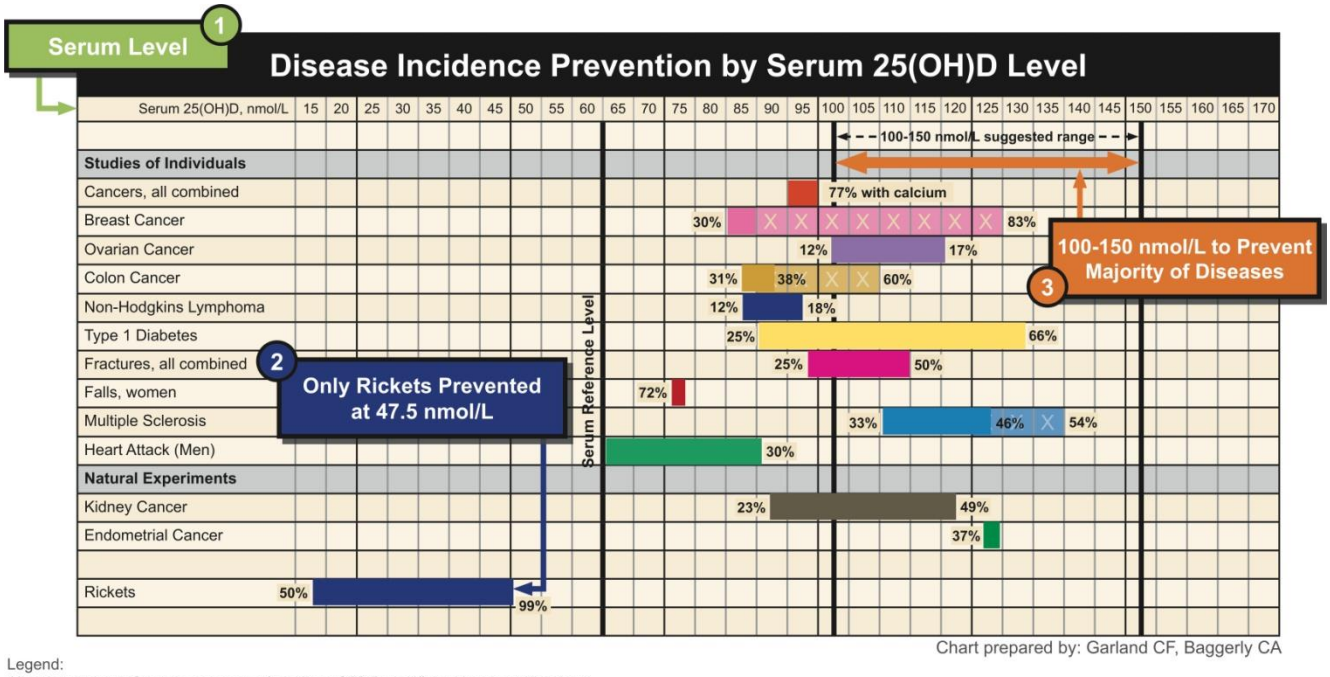
What do I do now?

Spend more time in the sunshine at the right time of the day is a good start – but for how many people is that possible? We recommend that you get tested, then supplement as required following the guidelines overleaf, and then retest in 3 to 6 months. We have a small stock of test kits available at £25 each. A mail order service is available from www.vitamindtest.org.uk for £28.

However, assuming that your levels are low and the negligible risk of it causing any harm you could just start taking a high dose Vitamin D3 supplement.

We sell a Lamberts Vitamin D3 4000 IU supplement for £10.00 for 120 soft gel capsules but as long as you get it from a reputable source all vitamin D3 is the same.

Figure 1



Legend:
All percentages reference a common baseline of 62.5 nmol/L as shown on the chart.
%'s reflect the disease prevention % at the beginning and ending of available data. Example: Breast cancer incidence is reduced by 30% when the serum level is 85 nmol/L vs the baseline of 62.5 nmol/L. There is an 83% reduction in incidence when the serum level is 125 nmol/L vs the baseline of 62.5 nmol/L.
The x's in the bars indicate 'reasonable extrapolations' from the data but are beyond existing data.

References:
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Figure 2 – Required Vitamin D intake chart