

# Sun protection and Vitamin D

Advice after a diagnosis of  
melanoma or for people at risk  
of skin cancer

Information for patients



This leaflet gives advice on sun protection after a diagnosis of melanoma. As we use sunshine to make vitamin D the leaflet also then explains the importance of making sure that you have a good level of vitamin D.

## Why is sun protection advised?

People who have had melanoma are often advised to cut down their sun exposure. This is especially important to consider when the skin is exposed to strong sunlight and sunburn might result, for example on the beach, swimming, in the park or watching summer sport.

### *This advice is given because:*

- sunburn might affect the body's natural defences against melanoma by stopping the immune system working as well as it should; and
- to reduce the risk of developing another melanoma: 1 in 10 melanoma patients have more than one melanoma.

## Why do we need Vitamin D

Vitamin D is needed to stay healthy and have strong bones. There is also some evidence that vitamin D may be important for your health after a diagnosis of melanoma. This is new information and further studies are being done to check this.

However the sun helps the body to make vitamin D. We know that melanoma patients in the UK often have low vitamin D<sub>3</sub> levels at diagnosis. This may be because melanoma patients

are more likely to have skin which burns easily, and they may have covered up in the past, to protect their skin.

There is a concern that your vitamin D levels could become even lower if you avoid all sun exposure and cover up even more after your melanoma diagnosis.

Having a low vitamin D level might be bad for general health. But having too much vitamin D may also be harmful.

## What should I do?

This information is designed to help you protect your skin while avoiding having too little or too much vitamin D.

### 1. Avoid sunburn (your skin going pink in the sun).

#### *Therefore:*

- Avoid staying out in the sun for long periods.
- Avoid the sun between 10am and 2pm in particular.
- Use sun protection such as factor 50SPF with four or five stars UV protection.
- Use appropriate clothing to protect your skin where possible.



### 2. Have your vitamin D level measured by your hospital team (not your GP).

### 3. Find out if you need to take vitamin D capsules.

## What is the right level of Vitamin D and how is this measured?

The hospital team will measure your serum 25-hydroxyvitamin D<sub>3</sub> level by doing a blood test. They will use the local laboratory's normal range data to find out whether you have low levels or not.

The figures listed below are those commonly used but there is variation between hospitals and indeed variation between countries in terms of what is thought to be low;

- very low levels of serum 25-hydroxyvitamin D<sub>3</sub> (normally regarded as equal to or less than 25 nmol/L), or
- moderately low levels (usually regarded as more than 25 nmol/L but less than 50 or 60 nmol/L),
- **ideal levels:** the University of Leeds regards levels between 60 and 85 nmol/L as the best,
- **levels that are high:** this is a much more difficult thing to define. Levels may be well over 100 nmol/L after a sunny holiday and these will then come down gradually. Where levels are higher than 90 nmol/L as a result of taking vitamin D capsules, then the University of Leeds would suggest taking less vitamin D<sub>3</sub> because of theoretical worries about high levels affecting the immune system. Aiming for a level of 60 to 85 nmol/L currently seems sensible but may be revised as more evidence becomes available.

## What is the advice if my blood levels are low?

If your levels are moderately low or very low, your hospital doctor or melanoma nurse will tell you what to do. They will suggest moderate doses over a long time rather than short courses of high doses, although this may change when new national guidelines come out. If you want to avoid capsules you can change your diet to increase how much vitamin D you take. This is however difficult, as most foods do not contain vitamin D. It is only found in reasonable amounts in fatty fish, such as wild salmon or mackerel, in mushrooms or in foods which have added vitamin D, such as some fortified breakfast cereals, margarines or yoghurts. If you want to increase your vitamin D intake by changing your diet you will have to look at the food labels very carefully to make sure you are getting enough. Most people prefer to take the small vitamin D capsules that are now available.

In Leeds we usually advise patients with low levels (less than 40 nmol/L) to buy some vitamin D<sub>3</sub> capsules (without calcium) containing 400 IU (10µg vitamin D<sub>3</sub>). You should take two capsules (800 IU or 20µg) per day for six months then one capsule per day after that. If you were to stop taking the capsules then the levels in your blood would slowly start to fall once again.

The team will normally check at six months that the blood levels are normal around the time you cut down to one capsule a day.

Some patients, especially those who are overweight, may need to continue with two capsules every day, long term but the team will advise you what to do.

If your levels are a little low (between 40 and 60 nmol/L) then you will probably be advised to take one capsule (400 IU or 10µg) everyday.

If you do go on a sunny holiday and don't cover your skin, then you should stop taking the capsules for a month or so then restart. Your skin will manufacture enough vitamin D on a sunny holiday.

You should probably look at your diet from time to time. If you start eating foods regularly which are fortified with vitamin D<sub>3</sub> then you may be able to reduce or stop your vitamin D capsules.

### **What is the advice if my blood levels are normal?**

If your blood test shows that you have normal levels, then vitamin D capsules are not needed. But if the blood test was done soon after a sunny holiday your blood should be checked again after six months to make sure the level hasn't fallen.

A fall in vitamin D levels may also happen if you decide to really cut down your sun exposure.

### **What is the advice if my blood levels are high?**

If your blood levels are high, you should not take any vitamin D capsules. A high level may be normal if you have recently been on a sunny holiday and the levels will slowly come down.

If you have high levels, have not been on a sunny holiday and you take vitamin D capsules, stop taking them. Get advice about when you need to start taking them again, and how much to take.

If you have a high level, you have not been on sunny holidays and are not taking vitamin D capsules then this might be because you are getting vitamin D from other things such as multivitamins, cod liver oil, fish oil, supplemented cereals or yoghurts or fatty fish etc. You need to look at what you are taking and reduce the total amount if you can. It can be difficult to work out why levels are high but you can discuss with your healthcare team. High levels may simply be normal for some people.

For more detailed information about vitamin D visit [www.genomel.org](http://www.genomel.org)

## **What is the advice for families**

Melanoma is more likely to occur in people with skin which burns easily in the sun, and in those with lots of moles and both these tend to run in families. So we also advise your family to avoid sunburn and cut down the time they spend in the sun. Most families only ever have one person with a melanoma and so the risk is not very high for other family members, but protecting their skin seems to be a sensible thing to do. If members of your family do reduce their sun exposure, they should probably take some vitamin D<sub>3</sub> capsules too.

National advice for people who don't get much sun exposure is to take vitamin D<sub>3</sub> capsules at a dosage of 400 IU (10µg) per day of vitamin D<sub>3</sub> which can be bought at the chemist or health food store.

<http://www.nhs.uk/Conditions/vitamins-minerals/Pages/Vitamin-D.aspx>

## What if I want further information?

If you have any queries, or you simply wish to know more please contact a member of the melanoma team.

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