



Could sunscreens actually be giving us skin cancer?

Some experts now believe wearing high factor sunscreens may actually be contributing to the rise in malignant melanoma, as well as causing an epidemic in vitamin D deficiency. **Siobhan McNally** reports on the conflicting advice surrounding sunscreens - and how too little sun can be as bad as too much

After a long British winter the nation is getting excited now the sun is finally starting to appear and we can enjoy its warm rays.

But at the same time we have also become rather afraid of the sun.

Thanks to years of being warned about its harmful UV rays, we either stay out of it or cover ourselves in high factor sun tan lotion and roast ourselves for hours.

But last week research by the British Association of Dermatologists revealed that 72% of people admitted to being sunburned last year - which makes them twice as likely to develop deadly melanoma.

So it seems we're not choosing the right type of sunscreens nor applying them often or generously enough.

For despite the fact that we're all applying more sun cream than ever before, malignant melanoma, the deadliest form of skin cancer, is now the fifth most common cancer in the UK.

Each year, 13,000 people are diagnosed and there are more than 2,000 deaths. And the death rate is still rising.

A breakthrough study last year into the damaging effects of ultra violet A (UVA), which causes long term skin damage, and ultra violet B (UVB) which burns our skin, found that a sun protection factor (SPF) of 50 in a sunscreen doesn't give complete protection from developing skin cancer.

Scientists at Manchester University and London's Institute of Cancer Research carried out the world's first molecular study into the way malignant melanoma is caused.

And they found that even highest grade SPF50 sun cream allows sufficient UV radiation through to damage the DNA in the skin's pigment cells raising your cancer risk.

Dr Julie Sharp, of Cancer Research UK, which funded the study, said: "People tend to think they're invincible once

they've put it on and end up spending longer out in the sun, increasing their overall exposure to UV rays. This research adds important evidence showing that sunscreen has a role, but that you shouldn't just rely on this to protect your skin."

Public health campaigns have long been a lone voice in promoting hats and shade alongside sunscreen, and while sun cream can protect you from certain types of skin cancer, this study finally seems to prove that you can't just slap on an SPF50 cream and sit out roasting in the sun all day without any health risks.

SPF and UVA/UVB

To protect ourselves there are two things to look out for: SPF which defends against UVB rays while UVA protection is signified by the Boots pioneered star rating system or the EU recommended UVA circle logo.

But many of the sunscreens we've been wearing have given the impression they offer the highest type of UVB and UVA protection available, when this isn't the case at all.

Products that boast "Advanced UVA" protection only have to comply with EU regulations, which means their UVA protection has to be only a third of the advertised SPF.

In fact, the highest UVA protection is to be found in sunscreen products with the Boots four- or five-star rating.

Sunscreens that have five star protection include Uvistat and Boots Soltan range and budget suncream products from Sainsbury's Sun Sensitive and Tesco Suncare Core ranges.

But the SPF number isn't exactly straightforward either. Choosing an SPF50 cream over an SPF15 product does not give the implied complete protection from the sun's harmful UVB rays. While SPF15



gives you 93% protection, it only rises to 97% with SPF30 and 98% with SPF50.

Consumers shouldn't rely on high factor creams to give total sun block.

Last year, consumer champion Which? tested and failed some popular sun cream brands for not offering the level of both UVB and UVA protection claimed on their bottles. They also found expensive lotions don't guarantee better protection.

So how do you know which sun lotion to buy?

With risks being so high, it seems ridiculous that we have to negotiate a minefield of misinformation.

A Boots spokesman helped us clear up the star rating confusion saying: "Boots introduced the UVA star rating system which evaluates the UVA protection against the level of UVB with five star rated products giving almost one to one protection against UVA and UVB. However, the European UVA standard pass level would be the equivalent of a three star rated product."

Tom Stansfeld, health information officer at Cancer Research UK, explained further: "If you're using at least SPF15 sunscreen with four or more stars, it's more important to make sure you apply it properly - generously and regularly - rather than worry about using a higher SPF. No

sunscreen can provide total protection, and it should never be used to stay out longer in the sun. The SPF of a sunscreen can help protect against the type of radiation which is most likely to burn your skin, called UVB radiation. Sunscreens with factors higher than SPF15 don't provide that much more additional protection against UVB radiation."

He added: "A high UVA protection star rating is important because UVA radiation makes up most of our natural sunlight, and is linked to skin cancer and ageing - and we'd like to see more sunscreens offer at least four-star UVA protection."

"It's important that everyone involved in helping protect people from too much sun, including the sunscreen industry, encourages sensible behaviour which doesn't increase the risk of skin cancer."

The vitamin D dilemma

Ironically, slathering ourselves in high factor sun creams has had serious implications for our health since the risks associated with vitamin D deficiency have turned out to be far worse than previously thought.

A huge body of evidence links a lack of vitamin D with a whole range of serious illnesses and diseases, from cancer to heart disease, diabetes and schizophrenia. Even rickets is making a comeback due to lack of sun exposure and overuse of sun lotion.

Last month Dame Sally Davies, the

chief medical officer, ordered a review into the cost effectiveness of giving children vitamin D supplements to stop an epidemic of the bone disorder.

Dr Graeme Close, a vitamin D specialist at Liverpool John Moores University, told the Mirror: "I do think we have become scared of the sun. I think the (skin cancer) advice could have contributed to this and we now need to work out what is sensible and safe sun exposure."

"In the past, it seemed that the safe option was to avoid sun and apply high factor sun cream. Now we know there is a consequence of low vitamin D, it's time dermatologists and vitamin D researchers looked into this."

"I should also emphasise that in the UK in the winter months, the angle of the sun does not allow for vitamin D synthesis. We spend less time in the sun, many people's diets are terrible and we don't take cod liver oil - this could be the perfect storm for a vitamin D epidemic."

"I think a supplement may be the safest option combined with some moderate sun exposure. It seems we evolved to live outdoors and we need to keep this in the back of our minds."

HOW TO GET ENOUGH VITAMIN D - WITH OR WITHOUT THE SUN

DO expose your head, face, neck and arms to the midday UK summer sun for 15 minutes, two to three times a week if you are light-skinned. The larger the area of skin exposed, the more vitamin D the body makes.

DO expose yourself to the sun for longer if you are naturally dark-skinned or black (not tanned).

DO use common sense to judge how long you can stay out in the sun



without burning. You don't need to let your skin redden to make enough vitamin D.

DO not stay out longer than needed. When your body has healthy levels of the vitamin, any extra is just broken down.

DO take vitamin D supplements in the winter, especially if you are in one of the "at risk" groups.

DO eat a diet rich in oily fish, such as salmon, mackerel and sardines, beef, liver, egg yolks and cod liver oil.

TOP TIPS ON THE BEST WAYS TO STAY SAFE THIS SUMMER

DO use a sun cream with at least an SPF15 and a UV rating of a minimum four stars. The actual difference in UVB protection between SPF15 and SPF50 is minimal, but anything more than a 15 blocks vitamin D synthesis.

DO apply enough sunscreen to get the product's advertised protection. A good rule of thumb is two teaspoons if you're just covering head, arms and neck, or two tablespoons for your entire body when wearing a swimsuit.

DO reapply sunscreen every two hours or after being in the water - even with Once A Day sunscreens - so you're more likely to get even coverage and avoid missing bits that can get burned.

DO NOT use a higher SPF so you can

stay out longer in the sun. No sun cream can block all UV rays - these are the ones that cause skin cancer.

DO cover up with a hat and close-weave clothes, and stay out of direct sunshine between 11am and 3pm - AFTER you have given yourself sufficient unprotected sunlight.

DO be aware that cotton T-shirts only give a protection of SPF10, and a stretched wet T-shirt gives half that.

DO check the expiry date on your sunscreen. Most have a shelf-life of two-three years, but being stored in direct sunlight can ruin their protective chemicals.



We'd like to see more sunscreens offering at least four star UVA protection.
Cancer Research

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