

Ultraviolet

How the EU and WHO are throwing out the baby with the ultraviolet bath water



There is something seriously wrong with the reports by experts from the European Union and the World Health Organisation (WHO) on the risks of artificial ultraviolet light. These important documents exaggerate the possible risks of tanning devices, while simultaneously sweeping the positive effects under the carpet. That is the conclusion of a group of dermatologists, endocrinologists and epidemiologists in an [analysis](#) published in Anticancer Research.

In their critical article, the scientists focus on two important documents about the risks of sunbeds. One is a 2016 [final report](#) by the EU scientific commission, the other is a 2017 WHO [report](#). Both documents regularly surface when worried doctors or journalists raise concerns about an increase in the risk of dangerous skin cancers caused by sunbeds and other sources of artificial ultraviolet light.

The message both reports convey is that there is no such thing as a guaranteed safe amount of ultraviolet light. Ultraviolet light increases the risk of skin cancer, and the less skin is exposed to ultraviolet light, the better. Both documents support this claim with studies where researchers followed large groups of sunbed users over a long period of time and subsequently found that the sunbed users do indeed develop melanoma more often. Melanoma is the most dangerous form of skin cancer.

Exaggerated risks

That doesn't sound very reassuring, but anyone who takes the trouble to read the studies soon discovers that things are not as bad as they first seem. In 2012, for example, a [meta-study](#) was published in which the authors combined the results of 27 such studies and analysed them again. The conclusion was that people who used a sunbed were 20 per cent more likely to have melanoma than non-sunbed users.

Ultraviolet

How the EU and WHO are throwing out the baby with the ultraviolet bath water

First of all, a 20 per cent increase is not much. Smoking, the risks of which are very clear, increases the risk of lung cancer by several thousand per cent. And although [other meta-studies](#) found even smaller effects than the aforementioned 20%, the limited scale of the connections found is not the main criticism of the EU and WHO documents.

The main criticism is that the authors of the reports blindly ignored the lifestyle of sunbed users. We now know from [research](#) that this lifestyle is less healthy than that of non-users. Sunbed users smoke more often, drink more alcohol and also eat less healthily than people who never use a sunbed. These lifestyle factors combined may well explain the increased risk of melanoma, but the EU and WHO experts failed to take this possibility into account.

Safe dose

Moreover, several animal studies have shown that exposure to ultraviolet light does not in itself lead to skin cancer; that only happens if the skin absorbs so much ultraviolet light that cells are damaged. According to animal studies, it is only when the skin is burnt by ultraviolet light that the risk of skin cancer possibly increases. The idea that there is no such thing as a safe dose of ultraviolet light is therefore not confirmed by fundamental scientific studies.

Positive effects

Another criticism of the WHO and EU documents is that there are indeed indications that exposure to ultraviolet light is healthy, but that the reports ignore these indications. These indications are derived, for example, from studies in which researchers compared people who spend a lot of time outdoors, and who are therefore frequently exposed to ultraviolet light, to people who spend little time outdoors and whose skin consequently absorbs very little ultraviolet light. These [studies](#) show, for example, that Northern Europeans (read: people with light skin) who spend a lot of time outdoors are less likely to get cancer than people who spend little time outdoors.

There is even a Swedish [study](#), in which almost thirty thousand women participated, which revealed that exposure to ultraviolet light by being outside reduced the risk of fatal forms of cardiovascular disease and cancer. In that study, the negative effect of avoiding ultraviolet light was about as harmful as smoking. Women with practically no exposure to ultraviolet light, because they were always indoors or covered their skin, lived several years less than women who spent a lot of time outdoors.

Ultraviolet

How the EU and WHO are throwing out the baby with the ultraviolet bath water

Vitamin D

Even the authors of the analysis in Anticancer Research are not entirely clear about how ultraviolet light can positively influence health. Part of the explanation may lie in its effect on melatonin metabolism or the reduction of blood pressure. Ultraviolet light also increases the activity of the stress-reducing beta endorphins. The best documented positive effect of ultraviolet light, however, is that it increases vitamin D levels. At least a billion people on this planet have been shown to have [a vitamin D deficiency](#).

Vitamin D is essential not only for skeletal health but also for the immune system. Adequate vitamin D levels not only protect against viral infections but, in trials where subjects are given supplements, they also reduce the risk of [cancer deaths](#). Ironically, relatively high vitamin D levels even protect against various forms of skin cancer.

Good intentions

The EU and WHO reports disregard these positive effects. Despite studies [revealing](#) that people who regularly use a sunbed have twice as much vitamin D in their blood as people who do not, that positive aspect of artificial ultraviolet light plays no part in their final judgement.

The authors of the critical analysis in Anticancer Research do not doubt the good intentions of the experts who produced the disturbing reports for the EU and WHO. These experts are concerned about the increase in melanoma and other skin cancers and would like to reverse the trend. That is, of course, positive. However, this desire is apparently so strong that the experts make unilateral and over-simplified use of the scientific literature. That is not positive.

After all, is the increase in the number of reports of skin cancer really the result of tanning technology? Is it not the result of [improved detection](#) by doctors? The authors of the analysis suspect the latter. And if they are right, then measures to ban the sunbed industry will have no positive effects on public health - it will have negative ones.