

Does too much sun cause melanoma?

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We are continuously bombarded with messages about the dangers of too much sun and the increased risk of melanoma (the less common and deadliest form of skin cancer), but are these dangers real, or is staying out of the sun causing us more harm than good? Two experts debate the issue on BMJ.com today.

Sam Shuster, a consultant dermatologist at Norfolk and Norwich University Hospital, says that sun exposure is the major cause of the common forms of skin cancer, which are all virtually benign, but not the rarer, truly malignant melanoma.

Shuster says that the common skin cancers develop in pale, sun exposed skin and are less frequent in people who avoid the sun and use protection. In contrast, melanoma is related to ethnicity rather than pigmentation and in 75% of cases occurs on relatively unexposed sites, especially on the feet of Africans. Melanoma occurrence decreases with greater sun exposure and can be increased by sunscreens, while sun bed exposure has a small inconsistent effect. Therefore, he concludes, any causative effect of ultraviolet light on melanoma can only be minimal.

There is good evidence that the reported increase in melanoma incidence is an artefact caused by the incorrect classification of benign naevi as malignant melanomas, this, he argues, explains why melanoma mortality has changed little despite the great increase in alleged incidence.

He recognises that ultraviolet light causes the common, mainly benign skin cancers and, like smoking, wrinkles the skin. But he says, this is not

a good enough reason for a blanket ban and we have to strike a balance with the sun's many other effects on health—from psychological and immunological, to the synthesis of vitamin D essential for bones and apparent protection against many major organ cancers.

But Professor Scott Menzies, from the University of Sydney at the Sydney Melanoma Diagnostic Centre, argues that melanoma is far more common on body sites receiving more sun exposure and in people of races who tend to burn rather than tan.

According to Menzies, there is considerable evidence that intermittent sun exposure and sunburn are strong independent indicators of the risk of developing melanoma in white populations.

He argues that there is a clear association between increasing cases of melanoma and increasing environmental ultraviolet light. Genetic evidence is also supportive, he claims, with the major genes causing melanoma showing ultraviolet light "signature" mutations, while people deficient in repairing ultraviolet light genetic damage have a 1000 times greater risk of developing the disease.

He points to data from Australia which shows that cases of melanoma among young adults fell between 1983 and 1996 and this coincided with strong public health messages to use sun protection.

When you examine the geographical, sun exposure and genetic evidence together, sun exposure is clearly a major cause of melanoma, he concludes.

Source: British Medical Journal

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