

No definitive causal link between sunbed use and malignant melanoma

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A careful review of medical data shows that there is no proven causal relationship between moderate solarium use and increased melanoma risk. This is the conclusion reached by an international group of researchers headed by Professor Dr. Jörg Reichrath, Deputy Director of the Department of Dermatology, Venereology and Allergology at Saarland University Hospital in Homburg/Saar.

The authors refute arguments recently presented in a number of publications, including two reports from the EU and the World Health Organization (WHO). The results of the studies conducted by Reichrath et al. have recently been published in two articles in the scientific journal *Anticancer Research* (Vol. 38).

Can artificial UV radiation cause malignant melanoma in humans? In light of the observed increase in [skin cancer](#) rates, this question is one that continues to be addressed in numerous studies. An international team of researchers, coordinated by the Homburg dermatologist Jörg Reichrath, has conducted a thorough search of the scientific databases MEDLINE and ISI Web of Science for relevant studies and subjected the results to a systematic meta-analysis. Although the team found an association of a slightly increased melanoma risk when comparing 'ever' versus 'never' sunbed users, they identified significant shortcomings in the scientific studies they included in their meta-analysis. Many of the earlier published results were based on observational studies with poor data quality that fail to support causation. "When you assess subgroups of study participants, it becomes apparent that other factors may well be

playing a role," explains Professor Reichrath. "For example, solarium use could well be a marker for "sun worshippers" who, by exposing themselves to excessive levels of natural solar radiation when sunbathing, tend to get sunburned more often and therefore have a higher melanoma risk."

In their second publication, the authors provide a critical appraisal of two reports recently published by the EU and the WHO. These reports conclude that the UV radiation in solariums is responsible for a noticeable proportion of both non-melanoma skin cancer (basal cell carcinoma, cutaneous squamous-cell carcinoma) and melanoma skin cancer. Furthermore, these reports state that a large percentage of melanomas found in patients under 30 is due to sunbed exposure.

According to these reports, there is no safe limit for exposure to UV radiation from sunbeds. Professor Jörg Reichrath and his colleagues see things quite differently: "The opinions of the two committees behind these reports are based on an assessment of the existing scientific literature that is incomplete, unbalanced and uncritical," says Reichrath. The conclusions from these reports are not sufficiently supported by the data. Professor Reichrath is very clear on this matter: "The current state of scientific knowledge in the field does not allow one to conclude that moderate solarium use results in an increased risk of malignant [melanoma](#)."

More information: (1) Burgard et al.: Solarium Use and Risk for Malignant Melanoma: Meta-analysis and Evidence-based Medicine Systematic Review. *Anticancer Research* 38: 1187-1199 (2018). [DOI: 10.21873/anticancer.12339](https://doi.org/10.21873/anticancer.12339)

(2) Reichrath et al.: A Critical Appraisal of the Recent Reports on Sunbeds from the European Commission's Scientific Committee on Health, Environmental and Emerging Risks and from the World Health

Organization. Anticancer Research 38: 1111-1120 (2018). [DOI: 10.21873/anticancerres.12330](https://doi.org/10.21873/anticancerres.12330)

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