

Skin Cancer Is Appearing Where the Sun Never Shines....The Hidden Dangers of Tanning Beds

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Tanning beds have long been a popular tool for achieving a year-round bronzed complexion, but mounting scientific evidence makes clear that the cosmetic appeal comes at a steep biological cost. A new study published in *Science Advances* adds to this body of concern, revealing that artificial UV radiation from indoor tanning devices damages skin cells at the molecular level in ways that go beyond what is seen with natural sun exposure.

The research, published in December 2025 in *Science Advances*, led by dermatologist Dr. Pedram Gerami, found that individuals who use tanning beds are more likely to develop multiple melanomas, often in areas of the body that receive little to no direct sunlight. This pattern points to a systemic effect on skin cells rather than localized sun damage, raising serious questions about how broadly indoor UV radiation affects the body.

At the molecular level, the findings were striking. Tanning bed users showed a significantly higher number of harmful mutations in melanocytes, the pigment-producing cells where melanoma originates. These included several mutations directly associated with cancer development. These results align with the long-standing position of the World Health Organization, which classifies tanning beds as Group 1 carcinogens, placing them in the same category as tobacco and asbestos. Despite this classification, millions of people worldwide continue to use them.

For patients and caregivers in the cancer community, the takeaway is clear: indoor tanning is not a safe alternative to sun exposure. The damage it causes is real, far-reaching, and can have lasting consequences for long-term skin health.

For more information on skin cancer prevention and UV radiation risks, explore our resources on melanoma and skin cancer.

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