

## New Study: Indoor Tanning Linked To Much Greater Melanoma Risk

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Despite skin cancer and wrinkle warnings, [plenty of people](#) still use tanning beds. But new research lays out exactly how bad tanning is for your skin.

The study, which was published in the journal [Science Advances](#), links indoor tanning to a three-times greater risk of developing melanoma, the deadliest form of skin cancer. But the researchers also discovered that tanning can alter your DNA, laying the foundation for developing skin cancer down the road.

With more than 20 percent of Gen Z-ers saying in a recent American Academy of Dermatology (AAD) [survey](#) that they prioritize having a tan over skin health, this is news plenty of people can use. Here's what the study found, plus what dermatologists recommend going forward.

**Meet the experts:** [Alan Hunter Shain, PhD](#), study co-author and associate professor in the Department of Dermatology at University of California San Francisco; [Pedram Gerami, MD](#), lead study author and director of the Skin Cancer Institute of Northwestern Medicine; [Gary Goldenberg, MD](#), a board-certified dermatologist practicing in New York City

### What did the study find?

For the study, researchers compared the medical records of nearly 3,000 patients who said they had a history of using tanning beds and compared them to people of the same age who didn't do indoor tanning.

The researchers discovered that 5.1 percent of people in the indoor tanning group developed melanoma, compared to 2.1 percent in the other group. The indoor tanners also had DNA damage that can lead to melanoma across nearly every skin surface. “These differences were most prominent over body sites that experience comparatively less exposure to natural sunlight,” the researchers wrote in the study.

There was a “dose-dependent relationship” here, too. Meaning, the more people did indoor tanning, the higher their risk of melanoma.

## **Why is frequent indoor tanning linked to a higher risk of melanoma?**

The link between indoor tanning and a higher risk of skin cancer isn’t new—the [AAD](#) and [American Cancer Society](#) (ACS) specifically warn about this.

There are likely a few things behind the melanoma risk, according to [Alan Hunter Shain, PhD](#), study co-author and associate professor in the Department of Dermatology at University of California San Francisco. “[Indoor tanning] increases the mutation burden of skin cells,” he says. While most mutations are not harmful, some cause cells to grow uncontrollably, Shain says. “As the number of mutations increases, so does the chance of cancer,” he points out.

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Tanning beds also cause a large area of cells to mutate, Shain says. “On a day-to-day basis, most people expose a relatively small proportion of their body to sunlight—mainly the head and neck region and some extremities,” he says. “However, tanning bed users tend to strip down and expose their entire body to radiation. As such, we see that they have a different distribution of melanoma, including melanomas on body sites that seldom see the sun.”

This can lead to serious consequences that show up as people age, says [Pedram Gerami, MD](#), lead study author and director of the Skin Cancer Institute of Northwestern Medicine. “As adults, these patients are now contending with frequent skin exams, frequent biopsies, the anxiety of a cancer diagnosis, and frequent procedures as a result of the choices made during their youth,” he says. “Unfortunately, some of these patients may even lose their life to melanoma.”

## **How does indoor tanning damage your DNA?**

It’s due to the UV radiation that’s emitted from tanning beds, Shain explains. “The doses of UV radiation in tanning beds tend to be higher than what most people experience from sunlight,” he says. “Moreover,

the wavelengths of radiation emitted by tanning beds are somewhat different than what people experience from natural sunlight.”

Once that DNA damage is done, Gerami points out that doctors can’t reverse it.

## **What doctors want you to take away from this**

As you can imagine, doctors don’t want you to use indoor tanning beds. “Just don’t do it,” says [Gary Goldenberg, MD](#), a board-certified dermatologist practicing in New York City. “There have been [studies suggesting](#) that tanning, indoor and outdoor, is addictive. So not getting started is super important.”

If you want to get a tanned look, Goldenberg recommends using self tanner. “It’s a simple way to look tan all year round. It’s also completely safe,” he says.



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Korin Miller is a freelance writer specializing in general wellness, sexual health and relationships, and lifestyle trends, with work appearing in Men’s Health, Women’s Health, Self, Glamour, and more. She has a master’s degree from American University, lives by the beach, and hopes to own a teacup pig and taco truck one day.

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