

New study definitively links indoor tanning to melanoma

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New research from the University of Minnesota's School of Public Health and Masonic Cancer Center definitively links the use of indoor tanning devices to increased risk of melanoma, the most serious form of skin cancer.

This research study involving 2,268 Minnesotans is the largest of its kind. It found:

- People who use any type of tanning bed for any amount of time are 74 percent more likely to develop melanoma, and;
- Frequent users of [indoor tanning](#) beds are 2.5 to 3 times more likely to develop melanoma than those who never use tanning devices. The study defines frequent uses as people who used indoor tanning for 50 plus hours, more than 100 sessions, or for 10-plus years. This increased risk applies similarly to all ages and genders.

DeAnn Lazovich, Ph.D., led the research team on this study. Lazovich is an associate professor of epidemiology with the School of Public Health and co-leader of the Masonic Cancer Center's Prevention and Etiology Research Program. The study findings are published online on May 27 in *Cancer Epidemiology, Biomarkers and Prevention*, a journal of the American Association for Cancer Research.

"We found that it didn't matter the type of tanning device used; there was no safe tanning device," Lazovich said. "We also found - and this is new data - that the risk of getting melanoma is associated more with how much a person tans and not the age at which a person starts using tanning devices. Risk rises with frequency of use, regardless of age, gender, or device."

Melanoma is one of the fastest increasing cancers across the United States and in Minnesota. About 69,000 people in the United States will be diagnosed with melanoma this year; nearly 1,000 of those people will be Minnesotans. Although melanoma accounts for only about 4 percent of all [skin cancer](#), it causes about 79 percent of all deaths from skin cancer. In a more advanced state, melanoma is especially difficult to successfully treat.

Before this study, indoor tanning has been only weakly associated with melanoma risk, Lazovich said.

"Most reports were not able to adjust for sun exposure, confirm a dose-response, or examine specific [tanning](#) devices," she said. "Our population-based, case-control study was conducted to address these limitations."

Lazovich and her colleagues assessed Minnesota cases of invasive cutaneous melanoma diagnosed between 2004 and 2007 at ages 25-59. The study participants and results included:

- 1,167 people diagnosed with melanoma and 1,101 people (control group) without melanoma. 62.9% of group with melanoma and 51.1% of control group had tanned indoors.
- [Melanoma](#) risk was about 3 times greater among users of UVB-enhanced devices and 4.4 times greater for UVA-emitting

devices.

- Risk increased with use, defined as 10 or more years, 50 or more hours, or more than 100 sessions.

Provided by University of Minnesota

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