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Indoor Tanning Bad, Docs Say...

Dermatologists Battle Industry About Tanning Salon Safety

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Jan. 20, 2006 -- Visiting a tanning salon is bad for your health, dermatologists argue.

Not so, says a tanning industry trade group. They say the dermatologists have a "political agenda" -- and that indoor tanning is actually good for you.

Dermatologists have warned for years that indoor tanning can cause skin cancer and should be avoided. The doctors' latest broadside comes in a selective review of scientific evidence on the risks and benefits of indoor tanning. Researcher Jody A. Levine, MD, is a pediatrician and senior dermatology resident at SUNY Downstate Medical Center in Brooklyn, N.Y.

"We know that ultraviolet radiation is a carcinogen just like tobacco," Levine tells WebMD. "Radiation use has been declared a carcinogen by the National Institutes of Health. And the World Health Organization recognizes that no person under 18 should use a sun bed."

Levine and colleagues conclude that indoor tanning is a dangerous practice -- especially for teens. The American Academy of Dermatology and the American Medical Association have called for a ban on the sale and use of tanning equipment for nonmedical purposes. And the FDA and CDC each encourage people to avoid the use of tanning beds and sun lamps.

Industry Calls Foul

Levine and colleagues' report appears in the December 2005 issue of the *Journal of the American Academy of Dermatology*. They admit their paper is a "narrative" review -- that is, it's based on selected studies and not on a systematic review of all studies relating to the issues involved.

That's not fair, says Melissa Haynes, spokeswoman for the Indoor Tanning Association. The ITA is an industry trade group representing bed tanning salons, manufacturers, and distributors as well as makers of spray-on tanning products.

"It upsets us that the *Journal of the American Academy of Dermatology*, a well-respected journal, chose to publish an article -- based entirely on a narrative review -- that serves no purpose other than furthering the AAD's political agenda," Haynes tells WebMD. "I don't think there is any other purpose of this journal article. And that does a disservice to the AAD."

But Levine is upset, too. She says that successful lobbying by the multibillion dollar tanning industry stifles effective safety regulations.

"Despite continual evidence that indoor tanning is harmful to our health, it has been difficult to pass regulations that limit its use among both teens and adults," Levine says.



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Death From Indoor Tanning?

Levine and Haynes agree on one thing: Indoor tanning is very popular. On an average day, more than a million Americans patronize the nation's 50,000 tanning facilities.

Levine says 2.3 million teenagers are among the 28 million annual indoor tanning clients in the U.S. Haynes disputes this figure. She says fewer than 5% of users are under 18. Based on 28 million annual users, that would be some 1.4 million minors per year. Levine, a pediatrician, is particularly worried about teen users. The fast growth of cells during the teen years makes teens especially susceptible to the cancer-causing effects of radiation. And UVA and UVB radiation comes from both sunlight and indoor tanning devices.

Haynes says tanning salons tan people safely because they warn clients about getting sunburns.

"One of the things we take very seriously is to educate people never, ever, under any circumstances, to get burned," she says. "That is just dumb. And it hurts a lot."

Levine says despite these warnings, many tanning salon clients get burned. She points to a 1996 study of Swedish teens that showed nearly half -- 44% -- had "increased erythema," or reddened skin. That, Levine says, is sunburn. And a 1994 study of Minnesota teens showed skin injuries in 59% of tanning bed users.

But radiation doesn't have to cause a sunburn in order to cause cancer.

"Skin cancer comes from a mutation of DNA in the skin cells. A sunburn is not a sign you have mutated the DNA. It is very possible to damage your skin without a burn," Levine says. "It is the UVB radiation that is more likely to cause a sunburn, and UVA -- used in most sun beds -- causes deeper skin damage leading to skin cancer. And there are these new high-pressure UVA beds that give an amount of UVA far exceeding that of sunlight."

Until recently, it was thought that sun exposure caused relatively minor skin cancers but not deadly melanoma. Levine and colleagues say that this new evidence strongly implicates sun exposure -- and indoor tanning -- as a cause of melanoma.

Haynes says the weight of studies over two decades shows "no link at all between indoor tanning and the likelihood of developing melanoma."

Base Tan: Protection or Radiation Multiplier?

Levine and colleagues say the indoor tanning industry promotes one dangerous myth: That getting a "base tan" or a "pre-vacation tan" will protect you from planned sun exposure.

This "particularly dangerous practice," Levine and colleagues say, actually multiplies the amount of radiation a person gets from sun exposure.

"People think this base tan will help protect them from the sun's damaging rays, which is completely false," Levine says. "Tanning under the sun gives protection equal to only suntan lotion of SPF 3 -- and sun-bed tanning gives even less protection than natural sun tan. The risk is not just the double hit of radiation. After getting a base tan, people are more likely to go out in the sun without sunscreen under the false pretense of being protected."



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Haynes prefers to talk about the risk of sunburn. "A base tan is going to stop you from burning as quickly when you go on vacation," she says. "It is regular, moderate exposure that we always stress. A problem many people have is they don't go into the sun 11 months of the year and then run to the beach in August and wonder why they get burned."

Sunburn, Levine repeats, is not the issue.

"The danger of UV radiation is more than just a sunburn," she says. "A sunburn is the acute event. It is the long-term risks of skin cancer and, secondarily, skin damage leading to wrinkles, that is not getting blocked by this artificial tan."

What about Vitamin D?

When your skin is exposed to UV radiation -- whether from the sun or from an indoor tanning device -- it makes vitamin D. Vitamin D is good for you. And there's strong evidence that getting plenty of this vitamin -- perhaps as much as 1,000 international units (IU) a day -- prevents several deadly kinds of cancer.

Haynes stresses the value of indoor tanning for vitamin D production. This anticancer benefit, she says, shows that indoor tanning is good for you.

"It is impossible to get too much vitamin D from sunlight," Haynes says. "If you take a supplement, it is possible to take too much and make yourself ill. Sunlight is free, and vitamins at the drug store cost a lot. You'd have to drink a gallon of milk a day to get 1,000 IU of vitamin D."

Levine says indoor tanning provides radiation far in excess of what is needed to get enough vitamin D. And too much radiation exposure, she says, can actually remove vitamin D from the body.

"There is a certain point at which too much radiation causes the vitamin D production pathway to go backwards," Levine says. "With extended exposure, vitamin D is converted back to its precursors. It is doubtful that the greater risks incurred by extensive tanning will be offset by the benefits of vitamin D from this radiation."