

The Medical Minute: A darker side of tanning

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This year, like every year, more than one-third of Americans will get at least one sunburn. According to the Skin Cancer Foundation, the risk of melanoma -- the deadliest type of skin cancer -- more than doubles with just one severe sunburn in childhood or adolescence or from five such overexposures in a lifetime.

But the sun isn't the only culprit. Evidence that indoor tanning is associated with [skin cancer](#) is mounting. The use of [tanning beds](#) accelerates ultraviolet (UV) exposure. The International Agency for Research on Cancer Working Group on artificial UV light and skin cancer published a meta-analysis that reviewed numerous published studies on this topic. The study included information on the newest tanning technologies, finding that machines emitting both types of ultraviolet light (UVA and UVB), and clearly establishing that there is a 75 percent increased risk of melanoma in indoor tanning bed use before age 35, and a 225 percent increased risk of [squamous cell carcinoma](#) associated with every use of indoor tanning.

Evidence linking artificial UV exposure to both [malignant melanoma](#) and non-melanoma skin cancer is now certain. Although knowledge of these harmful effects has become more widespread over the past decade, the use of indoor tanning facilities is more popular than ever, especially among young adults.

How can this be explained? First, the indoor tanning industry is a multibillion dollar enterprise that has specifically targeted young and

vulnerable populations publishing UV tanning advertisements in high school newspapers and websites as a safe method to tan. However, tanning is never safe. The intense UV rays in those beds can cause permanent skin damage, higher incidence of melanoma and other skin cancers, premature aging, weakened immune systems and eye damage.

The International Agency for Research on cancer, part of the [World Health Organization](#), listed UV radiation-emitting beds as "carcinogenic to humans," its highest category of cancer risks. Recently, Congress included a 10 percent tax on indoor tanning in the health reform bill to help pay for expanding medical costs and to make it harder for teens to afford indoor tanning. A tax on indoor tanning services serves as a reminder from the federal government to young people that indoor tanning is dangerous and should be avoided. The Food and Drug Administration is considering reclassifying tanning beds as a higher-class medical device subject to more stringent regulations. The indoor tanning tax is good health policy because it will discourage all individuals, especially young people, from this harmful practice.

More than 30 states have created regulations to limit teens' use of indoor tanning. However, these rules aren't always enforced, and there are no restrictions for those 18 and older. In Pennsylvania, three bills were introduced in 2010 to limit exposure. The bills would require approval from a parent or legal guardian for anyone under age 18 to use indoor tanning, with penalties for tanning facilities that allow minors to use tanning devices without consent.

Also, the bills would require the facility to provide and require the use of protective goggles and limit exposure to the manufacturer's recommendation.

A second reason indoor tanning remains popular despite mounting evidence of the dangers is that the tanning industry has argued that

cutaneous production of vitamin D outweighs the risks of UV exposure to skin. This argument is deeply flawed because oral supplements of vitamin D produce identical (and more predictable) vitamin D supplementation without carcinogenic risk. The Federal Trade Commission recently warned the Indoor Tanning Association about making false claims about the health benefits of indoor tanning.

Third, and perhaps more important, is that indoor tanning is likely to be addictive. Several studies have suggested this via a series of measurable criteria of addiction. This year, a study published at Archives of Dermatology presented compelling evidence that, for a significant subset of young adults, indoor tanning may indeed be more of an addiction than a choice.

In fact, the authors found a greater proclivity to substance abuse, depression and anxiety, suggesting that habitual tanning may be a predictor of other addictive behaviors, such as alcoholism and cigarette smoking. Armed with this new knowledge, physicians should view habitual [indoor tanning](#) for what it is: a risky, potentially addictive behavior that is reinforced by a wide range of cultural, social, and psychological factors. In this context, conquering this popular and growing addiction will require more than a few stern words of warning delivered at the end of a routine skin examination.

Provided by Pennsylvania State University

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