A Message From the President

As part of the Patient Protection and Affordable Care Act passed in March, 2010, a 10 percent excise tax on indoor tanning services went into effect July 1.

According to the Congressional Joint Committee on Taxation, this tax will raise an estimated $2.7 billion in revenues by 2019. But more importantly, in the view of The Skin Cancer Foundation, it should encourage people to avoid ultraviolet (UV) tanning. Last year, the International Agency for Research on Cancer, affiliated with the World Health Organization, declared ultraviolet radiation from tanning devices among the most dangerous forms of cancer-causing radiation. Tanning bed users are at higher risk of developing all forms of skin cancer, including potentially deadly melanomas of the skin and eyes.

This is not the only sign that the serious problem of indoor tanning is at last attracting federal attention. The new tax follows the March 25 US Food and Drug Administration (FDA) meeting in which an advisory panel unanimously recommended upgrading the device classification of UV-emitting tanning beds and lamps to better reflect the serious health risks they pose. Currently, tanning devices are Class I medical devices, a category for products "that present minimal potential for harm" according to the FDA. Elastic bandages and tongue depressors are also Class I devices. It looks as though this long-overlooked misclassification will at last be addressed. A higher classification would make tanning machines subject to more stringent regulations, and this, too, could help discourage would-be indoor tanners.

Though we urge everyone to avoid indoor tanning, summer is here and that means more time spent outdoors, and more opportunity to damage your skin with a sunburn or tan. But with small changes in your lifestyle, you can stay sun-safe while enjoying all that summer has to offer. Adjust your schedule to limit outdoor activities between 10 AM and 4 PM, when the sun is strongest. Invest in a broad-brimmed hat and UV-blocking sunglasses. Seek the shade whenever you're outdoors. Finally, apply a full ounce (two tablespoons) of SPF 15+ sunscreen to your entire body, including a teaspoon to the face, or upgrade your sunscreen to an SPF 30+ if you suspect you're not applying enough. Use all these simple strategies, and you will go a long way to protect your skin from UV radiation throughout your life.

For more information on how to protect yourself from the sun, see www.SkinCancer.org/Guidelines.

Publisher and President: Perry Robins, MD
Executive Director: Mary Stine
Medical Editors: Ritu Saini, MD, Steven Q. Wang, MD
Executive Editor: Mark Teich *(mteich@skincancer.org)*
Managing Editor: Paul Melia
Associate Editor: Elizabeth Michaelson
Graphics Coordinator: Elena Gaillard

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Ask the Expert

Pierre George, MD

Q. I'll be outdoors a lot this summer, and I want to protect myself from insects as well as the sun. Would it be better to use a product that combines insect repellent and sunscreen, or two different products? What would be the best way to apply and reapply these products?

A. Although a combination sunscreen/insect repellent sounds appealing, it is better to use two different products rather than a single combination formulation.

A single product may sound like a great idea. It's convenient, since the product protects from both sun damage and insect bites. Anyone with small children knows how unpleasant it is to get kids ready for the outdoors. A combination product would simplify that task.

…sunscreens enhance absorption of DEET into the skin, potentially increasing toxicity, especially in children.

However, in practice, combination products are problematic. While both sunscreens and insect repellents are effective and safe when used separately, if combined, the sunscreen's ability to screen out ultraviolet (UV) radiation can be decreased by the repellent, while the toxicity of the repellent is increased by the sunscreen.

Some sunscreen preparations lose efficacy when used with DEET (N,N-diethyl-meta-toluamide, the most effective and most common bug repellent). In some studies, the combination has led to a reduction of more than 30 percent in SPF. (SPF, or sun protection factor, measures a sunscreen's ability to screen out ultraviolet B, or UVB, rays.) What's more, sunscreens enhance absorption of DEET into the skin, potentially increasing toxicity, especially in children.

The problem is compounded by the application directions. Sunscreens should be applied generously and frequently: a full ounce (two tablespoons) of sunscreen should be applied directly to the entire body, including a nickel-sized dollop to the face, at least every two hours. Insect repellents (DEET), on the contrary, should be applied no more frequently than every two to six hours, depending on the concentration, and you should avoid applying it to the face. It is difficult to reconcile the opposing requirements of combination formulations.

In summary, I advise you to use two separate products. First, liberally apply to all exposed areas a broad spectrum sunscreen that protects against both UVA and UVB radiation with an SPF of 15-30 or higher, and reapply every two hours. Then an insect repellent (I like a DEET spray) should be applied and reapplied following the manufacturer's instructions.

Our guest expert for this issue is Pierre George, MD, who practices general dermatology and Mohs surgery at Dermatology Consultants in St. Paul, MN. He is the author of numerous articles and is a fellow of the American Academy of Dermatology, the American Society for Mohs Surgery, and the American Society for Dermatologic Surgery.

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Perry Robins, MD, President | Mary Stine, Executive Director

NONMELANOMA SKIN CANCER INCIDENCE INCREASES DRAMATICALLY

Recently released data show an alarming increase in skin cancer incidence: A study in the *Archives of Dermatology* reveals that more than two million people in the US develop over 3.5 million nonmelanoma skin cancers every year. This constitutes a more than 300 percent increase in skin cancer incidence since 1994, when rates were last estimated.

Nonmelanoma skin cancers, such as basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), are the most common forms of skin cancer, and squamous cell carcinoma kills an estimated 2,500 people in the US annually. Nonmelanoma skin cancers can be disfiguring when not diagnosed and treated in a timely manner.

The study's lead author, Howard Rogers, MD, gave The Skin Cancer Foundation further insights into the data, calculating that the 3.5 million nonmelanoma skin cancers equate to approximately 2.8 million BCCs and 700,000 SCCs annually.

These new numbers are disturbing but not completely surprising, as there has been a steady rise in the rates of both nonmelanoma and melanoma skin cancers in the past several decades. In 1994, a report in the *Journal of the American Academy of Dermatology* estimated total US incidence of BCC

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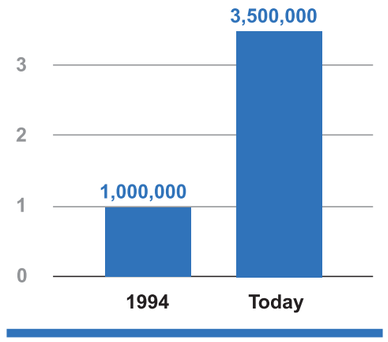
and SCC at just over one million cases per year. (Incidence must be estimated, because nonmelanoma skin cancers are not usually reported to cancer registries. To determine rates, researchers consult various government databases for information about skin cancer-related procedures and visits to doctors.) Since 1994, skin cancer procedures in several databases have jumped by 76.9 percent. "The logic is that you can't treat a skin cancer without a pathologic *diagnosis* of skin cancer, so the number of treatments is an excellent indicator of the number of cancers," said study coauthor Brett Coldiron, MD, FACP, founder of The Skin Cancer Center in Cincinnati. "The number of treatments has gone up dramatically."

Dr. Coldiron thinks the huge increase can be attributed to several factors. For example, he suspects that the number of skin cancers in 1994 was probably closer to 1.5 million. Additionally, "I think the increase is due to sun exposure, both incidental and intentional, and the growth of tanning parlors. Also, the baby boomer generation is aging, and most skin cancer patients are over 65."

"I think the increase is due to sun exposure, both incidental and intentional, and the growth of tanning parlors. Also, the baby boomer generation is aging, and most skin cancer patients are over 65."

Cases of Nonmelanoma Skin Cancer Per Year in Millions (US)



FAST FACTS

Adults over age 40, especially men, have the highest annual exposure to ultraviolet (UV) radiation.

Frequent tanners using new high-pressure sunlamps may receive up to 12 times more UVA annually from sunlamps than from the sun.

One in five Americans will develop skin cancer over the course of a lifetime.

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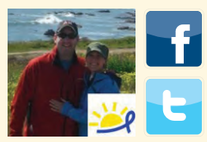

Driving is Linked to More Skin Cancers On the Left Side of the Body

Nearly 53 percent of skin cancers in the US occur on the left, or drivers', side of the body, according to a new study in the *Journal of the American Academy of Dermatology*. The distribution pattern supports the theory that automobile drivers in the US are exposed to more ultraviolet (UV) radiation on the left, through the driver's side window, and that ultraviolet A (UVA) radiation causes more damage than formerly believed.

This study reinforces previous research showing that UVA does indeed play a role in skin cancer.

About 90 percent of all skin cancers are associated with the sun's UV radiation, which reaches the earth in the form of long-wave ultraviolet A (UVA) and shortwave ultraviolet B (UVB) radiation. Until recently, many scientists believed the primary cause of skin cancers was UVB radiation. Since glass effectively blocks UVB while cars' side windows allow 63 percent of UVA to penetrate, "These [new] results may suggest that perhaps UVA plays a more important role in skin cancer development than previously thought," said Susan T. Butler, MD, coauthor of the study. This study reinforces previous research showing that UVA does indeed play a role in skin cancer.

When researchers at the St. Louis University School of Medicine reviewed the medical charts of almost 900 skin cancer patients, both men and women had a greater propensity for left-sided skin cancers. However, the results were statistically significant only in men: 54 percent of all skin cancers and nearly 56 percent of head and neck skin cancers (areas that are "most directly exposed to UV rays while driving") were located on the left in men. Why aren't these numbers reflected in women? "The increase in left-sided skin cancers may be from the UV exposure we get when driving a car. It is likely that the older women in our study were primarily passengers rather than drivers, and therefore did not show a [significant] left-sided predominance," explained Dr. Butler, now of the California Skin Institute in San Mateo.

In one particular kind of skin cancer, the distribution pattern was even more lopsided: 74 percent of all melanomas in situ (early, non-invasive melanomas that have not spread from their original tumor sites) were on the left. Invasive melanomas are the deadliest skin cancers, killing an estimated 8,650 people in the US every year. These findings were "perhaps the most striking," said Dr. Butler. "This may suggest that chronic exposure to UVA over the years may play a role in melanoma in situ development."

Indoor Tanners May Have More Than Four Times the Risk of Melanoma

On average, indoor ultraviolet (UV) tanners are 74 percent more likely to develop melanoma than non-tanners, according to a new study; and the more time a person has spent tanning indoors, the higher the odds of developing the disease. The researchers also discovered that the type of tanning machine used affects melanoma risk — some tanners were 4.44 times as likely as non-tanners to develop melanoma. Melanoma is the deadliest form of skin cancer, killing approximately 8,650 Americans in 2009.

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In a study of 1,167 melanoma cases and 1,101 people without melanoma (the control group) appearing in *Cancer Epidemiology, Biomarkers & Prevention*, researchers led by DeAnn Lazovich, PhD, MPH, an associate professor at the University of Minnesota, found that almost 63 percent of the melanoma patients but just over 51 percent of the control group had tanned indoors. UV radiation from tanning machines is cancer-causing to humans, according to a 2009 report released by the International Agency for Research on Cancer (IARC), affiliated with the World Health Organization. The IARC also includes solar radiation in its list of the most dangerous types of cancer-causing substances.

FREQUENCY PLAYS AN IMPORTANT ROLE

Tanning frequency directly influenced melanoma risk in the Minnesota study. People who had tanned indoors for more than 50 hours, more than 100 sessions, or 10 or more years, were between 2.5 and 3.0 times more likely to develop melanoma than non-indoor tanners.

Users of high-pressure tanning devices, which primarily emit UVA radiation, had 4.44 times the melanoma risk of those who had never tanned indoors, while users of high speed/high intensity tanning devices (which emit UVB as well as UVA radiation) had 2.8 times the risk. Nonetheless, the authors were quick to point out that "no device could be considered 'safe,'" and "All indoor tanning devices are harmful."

The study did not find that the age at which indoor tanners begin the practice is as influential as previously thought. In 2006, a meta-analysis (study of multiple studies) found that people who began tanning before age 35 had a 75 percent higher risk of developing melanoma. But, according to the authors of the Minnesota study, "our analysis indicates that early age exposure is most likely a marker for cumulative exposure," meaning that the younger a patient was when s/he started tanning, the more time s/he has had to accumulate hours of UV radiation exposure.

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