The incidence of skin cancer in the US continues to grow. According to a recent study published in the Archives of Dermatology, more than two million Americans are affected by over 3.5 million skin cancers every year. This represents more than a 300 percent increase in total skin cancers since 1994, the last time such data were released.

Skin cancer is truly an epidemic, with more new cases annually than the combined incidence of cancers of the breast, prostate, lung, and colon. While it is usually very treatable when caught early, it should not be taken lightly. Skin cancers have a high rate of recurrence, and anyone who has had one runs an increased risk of developing another skin cancer, including melanoma. Additionally, people who have had nonmelanoma skin cancers have twice the risk of developing other malignancies, such as lung, colon, and breast cancers. Melanoma, if not caught in a timely manner, may metastasize (spread) to distant tissues or organs, and can be life-threatening.

Even though skin cancers are becoming more and more common, you need not become a statistic. Skin cancer remains one of the most preventable forms of cancer. Since approximately 90 percent of all nonmelanoma skin cancers are associated with exposure to ultraviolet (UV) radiation, you can lower your risk by limiting your exposure to the sun and tanning devices, which also emit harmful UV rays. Sun protection behaviors such as seeking the shade (particularly between 10 AM and 4 PM); wearing protective clothing; and applying a sunscreen with very high SPFs may also encourage individuals to neglect other photoprotective behaviors, like seeking the shade and wearing sun-protective clothing. By preventing sunburn, sunscreens with very high SPFs can create a false sense of security, prompting consumers to stay out in the sun longer. Sun damage (for example, UVB damage) can take place without skin reddening doses of UV radiation, and even the best sunscreens should be considered just one vital part of a comprehensive sun protection regimen.

The importance of using both UVB and UVA protection cannot be emphasized enough. For patients who really wish to know “how high should I go?” I suggest products with SPFs no lower than 30 and no higher than 50. In addition to an SPF of 30+, your sunscreen should include some combination of the following UVB-blocking ingredients: zinc oxide, titanium dioxide, avobenzone, ecamsule, and oxybenzone. Sunscreens with both UVA and UVB protection may be labeled multi spectrum, broad spectrum, or UVA/UVB protection.

THE FACTS ADD UP: Melanoma is Linked to UV Tanning

In the past year, the evidence linking ultraviolet (UV) tanning to melanoma, the deadliest skin cancer, has grown considerably stronger.

In July 2009, the International Agency for Research on Cancer (IARC), affiliated with the World Health Organization (WHO), announced that UV radiation from tanning machines had been added to its infamous Group 1—substances such as plutonium deemed “carcinogenic [cancer-causing] to humans.” The IARC’s special report in The Lancet marked its official recognition that tanning devices are a comparable cause of cancer.

Although it has long been generally acknowledged that about 80 percent of nonmelanoma skin cancers (NMSC), such as basal and squamous cell
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The melanoma genome contains more than 33,000 mutations, many of which bear the imprint of... ultraviolet light.

When researchers at The Wellcome Trust Sanger Institute, in Hinxton, UK, mapped the complete genetic material (the genome) that composed a melanoma taken from a patient with the disease, they identified thousands of mutations. Mutations are changes or errors in genes caused by radiation, viruses, and other causes, and some can ultimately lead to cancer. According to the Sanger Institute, “The melanoma genome contains more than 33,000 mutations, many of which bear the imprint of the most common cause of melanoma — exposure to ultraviolet light.” The scientists compared the genomes of both normal and melanoma tissue to pinpoint where in the melanoma the mutations occurred, and saw exactly how UV exposure had affected DNA. “We can see the desperate attempts of our genome to defend itself against the damage from ultraviolet radiation,” the study’s coauthor, Mike Stratton, MD, PhD, explained. “Our cells fight back furiously to repair the damage, but frequently lose that fight.” The result can be melanoma.

It’s not clear yet to just what extent UV radiation influences the development of melanoma, but this research, published in Nature, all but confirms UV radiation as a cause of melanoma.

GOAL: LIMITING TEENs’ ACcESS TO TANNING BEDS

Because the FDA still classifies tanning machines as Class I medical devices, teens have almost unlimited access to them, making up 2.3 million of the nearly 30 million indoor tanners in the US every year. With melanoma incidence in people under age 20 rising 2.9 percent between 1973 and 2001, many experts believe this easy access to tanning beds in youth increases melanoma risk by 75 percent.

Laws regarding minors’ access to tanning beds currently vary from state to state, with some even allowing children under age 14 to tan indoors if they are accompanied by a parent or guardian. Raising the classification of tanning beds to Class II or higher would make teens’ access to tanning beds more difficult. This is a key goal for anti-tanning experts and groups such as The Skin Cancer Foundation.

THE PANEL IS UNANIMOUS: Raise Tanning Beds to Higher Medical Device Classification

The US Food and Drug Administration (FDA) classifies tanning machines as Class I medical devices, meaning they are subject to few federal regulations and little oversight. However, this could soon be changing. On March 25, the General and Plastic Surgery Devices Panel of the Food and Drug Administration (FDA’s Medical Devices Advisory Committee) unanimously recommended that the FDA upgrade its classification of tanning devices.

The recommendation followed four hours of testimony from the public, including physician members of The Skin Cancer Foundation and skin cancer survivors.

The Panel unanimously concluded that Class I was inappropriate, since it incorrectly treats tanning machines as devices that “present minimal potential for harm to the user.” Plastic bandages and tongue depressors are also Class I devices. Some Panel members favored Class II, and others Class III, the most strictly regulated category. The majority of the Panel favored an age restriction to limit minors’ access. [See “Limiting Teens’ Access to Tanning Beds” below]

The Panel also approved of more disclosure to users about tanning’s dangers, and better placement of labels warning users about these risks.

Finally, Panel members floated the possibility of creating a registry of tanning bed users, stricter educational testing, and recertification requirements for tanning salon staff, and ensuring that tanning bed customers read and accept health warnings prior to using a tanning machine.

The FDA will now consider the Panel’s recommendations. Please visit our website, www.SkinCancer.org, for the latest news on the reclassification of these dangerous machines.

FAST FACTS

Tanning salons generate an estimated annual revenue of $5 billion.

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