Inside the Mind of a Tanner: How to Change Attitudes About UV Exposure

Experts offer convincing education strategies, assess the role of sunless tanners, and describe the dangers of extreme warnings in the fight against UV exposure.

By Ted Pigeon, Senior Associate Editor

For years, dermatologists have cautioned patients about the risks of tanning while encouraging “sun-smart” behavior when outdoors. But as rates of skin cancer rise and the influence of the indoor tanning industry continues unabated, educating the public about UV light and sun-safety often seems like an uphill battle.

Years of data have confirmed that increased UV exposure raises the likelihood of skin cancer. But the challenge before dermatologists, the medical community, and public health advocates is to not just convince patients of risks, but to change their behaviors and counter apparent advocacy for UV exposure. To reduce unnecessary exposure and ultimately change behaviors, dermatologists must channel the data into sensible advice that resounds with the general population and supersedes the rhetoric.

The Rhetoric of Tanning

When the World Health Organization (WHO) released a statement last month citing UV radiation as a direct carcinogen, many major news sources, including Yahoo! News, CNN, and The New York Times covered the announcement, which has been perceived as a victory within the dermatology community. One aspect of the report that resonated strongly was the direct comparison of UV light to tobacco (in particular smoking) in terms of its car-
cinogenic effects. Some dermatologists had argued this for years, but by drawing a direct line between smoking and tanning, the statement carries with it an authoritative sense of finality to the discussion and the controversy about UV light.

According to Robert P. Dellavalle, MD, PhD, Associate Professor of Dermatology at the University of Colorado, however, this analogy may do more to ramp up the controversy rather than calm it. Dr. Dellavalle explains that UV exposure and its effect on the skin cannot be compared on a one-to-one basis to the effects on the lungs and other organs of ingesting smoke and tobacco. “Smoking cigarettes directly affects these organs, whether or not the individual smoker eventually gets lung cancer,” he says. The same cannot be said of UV, he offers. “The risks of melanoma are not as straightforward and involve variables such as skin type, family history, the number of moles on a person’s body, etc. Therefore, while UV exposure generally increases the likelihood of skin cancer, the relationship is not the same,” he notes.

While UV light is inherently carcinogenic, Dr. Dellavalle suggests that the varying levels of exposure, mediated by geographic location, time of day, and other factors, should be accounted for in weighing the risk and making recommendations. “There are sensible means of sun exposure, which the general public and especially teens should be educated on, but the smoking connection seems excessive when considering the factors in play,” he explains. Since risks are individualized, Dr. Dellavalle suggests that the consideration of risk factors should be reframed to define each individual’s profile. “This means informing patients of their relative risk based on eye color, hair color, skin type, and various other factors,” notes Dr. Dellavalle. Once this information is compiled, dermatologists should assess individual risk and then discuss with patients how their behaviors with regards to tanning or sun exposure may increase those risks and likelihood of skin cancer.

Although Dr. Dellavalle argues against the strategy of comparing tanning with smoking in strict terms, the AAD enthusiastically embraced the WHO’s statement for doing just that. For many dermatologists, the WHO warning is vital considering the growing public interest in vitamin D and sunlight as a source of it. Many studies published in recent years document the associations between diminished levels of vitamin D and numerous diseases and health conditions. Since UV light is considered the primary natural source of vitamin D, some authors endorse sun exposure. Although few studies and commentators promote excessive sunlight exposure, the public may nonetheless perceive that sun exposure is essential to health. “Promoting sun exposure for vitamin D could undermine skin cancer prevention efforts depending on how people interpret the message about sun for vitamin D,” says Sherry Pagoto, PhD, Assistant Professor in the Division of Preventive and Behavioral Medicine at the University of Massachusetts. “The risk is that people would abandon their previous sun protection efforts because of their concern about vitamin D.” According to Dr. Pagoto, the implications for this pro-UV message are unsettling, as some individuals may actively seek vitamin D via tanning booths or increase their sun exposure without even knowing whether they have a vitamin D deficiency. “Research is needed to determine how messages regarding the sun and vitamin D actually influence sun exposure and sun protection behavior,” she observes.

Another major barrier to spreading awareness and education is the indoor tanning industry, which typically plays a role in circulating information (or sometimes misinformation) about vitamin D. According to Dr. Pagoto, the wide influence of the tanning industry may be attributable to its core demographic: young people. Says Dr. Pagoto, “Young adults in particular...
believe that being tan is more attractive.” This attitude has become more prevalent in recent years: 81 percent of young adults believed this in 2007, as compared to 58 percent in 1988. Since the success of the tanning industry relies so heavily on young people’s desire for a tan, advocates have pushed for stronger legislation and restrictions on indoor tanning.

According to Dr. Dellavalle, the battle may be starting to swing in favor of more regulation, as several states have implemented laws restricting minors from tanning. “We may eventually see the same success in regulating indoor tanning as we did with the cigarette industry,” he says. “The shift will likely be gradual, but eventually indoor tanning may have such a stigma that regulation becomes more accepted,” notes Dr. Dellavalle. In his home state of Colorado, the battle over tanning regulation is still ongoing. “Legal action on the state level has been successful with small-owned tanning businesses but is much more difficult against large indoor tanning chains,” he says. Thanks in part to advertising campaigns by the AAD and greater awareness about the dangers of UV exposure in recent years, Dr. Dellavalle indicates that a gradual shift supporting greater legislation may eventually pave the way for widespread adoption of tanning regulations.

The Sunless Tan

Changing social norms may eventually relegate indoor tanning to a specialized, stigmatized practice, but Dr. Dellavalle emphasizes that education and awareness are important if that trajectory is to take flight. Dr. Pagoto reminds that it is equally important to inform the millions who do not tan artificially about the risks of UV exposure. “Ultraviolet radiation is a carcinogen regardless of the source, therefore outdoor tanning is associated with the same risks.” One rhetorical strategy Dr. Pagoto suggests is to shift the focus of the message to UV radiation, rather than discouraging a tan. “It might be easier to change attitudes about the sun or UVR in general than it is to change attitudes about being tan,” she explains.

One element of the “anti-UV” approach is the notion of the sunless tan. Within roughly the past decade, spray-on tans have gained popularity. While these products offer consumers a tan without the UV light, there has been some concern that they promote a tan as healthy or attractive/desirable. That’s all the more reason to target UV and not just discourage tans, Dr. Pagoto says. She believes widespread adoption of sun safety habits does not necessarily mean that people will simply avoid sunlight or tanning in general. “It is not looking like we have been successful at turning people against the desire to be tan, in spite of rising skin cancer rates over the years,” she observes. According to Dr. Pagoto, this is an area of the debate that requires more inquiry. “Some studies suggest that sunless tanners are more likely to use other forms of UV tanning, while others suggest that people who use sunless tanning are more likely to use sun protection and their sunless tanning offsets their UV tanning,” Dr. Pagoto notes.

Dr. Pagoto has recently studied the effects of sunless tanning in a randomized trial of multi-component skin cancer prevention targeting female beach goers, funded by the National Cancer Institute. The multi-component intervention included instant UV imaging, skin cancer education, graphic images of skin cancer and sun damaged skin, attractive images of women with sunless tans, using protective clothing, instructions for proper use of sunless tanning products, and motivational messages to encourage women to use sunless tanning instead of UV tanning to achieve a safe tan,” she explains. “We wanted to see if sunbathers could be encouraged to use sunless tanning instead of sunbathing to get a tan,” she adds. The research team also explored the notion that encouraging sunless tanning might inadvertently reinforce both the desire to be tan and a continued tanning habit, according to Dr. Pagoto. Results are still forthcoming, but early feedback indicates that sunless tanning may have a bright future, according to Dr. Pagoto. “As products improve and become even more affordable and mainstream, I think it is very possible that people who are interested in having a tan will begin to use them as their tanning source,” Dr. Pagoto observes.

However, Dr. Pagoto points out at least one limitation that previously wasn’t considered a major factor...
in the discussion. “Sunless tanning does not provide the relaxing experience that UV tanning does, and we are finding that the relaxation and positive mood effects of UV tanning are a stronger motivator than we once thought,” she observes. Until recently, tanning research has focused very much on the desire to be tan as the primary motivator. To the extent that people experience relaxation and/or improved moods from UV light, sunless tanning will be a less helpful alternative, according to Dr. Pagoto. “We need more research to help us understand what factors besides the tan itself do tanners experience from tanning that reinforce their tanning behavior.”

Dr. Pagoto says recent research has shown elevated rates of seasonal affective disorder in heavy tanners, which may suggest people tan to alleviate negative moods. “This presents a very different challenge that we need to start considering not only from a research standpoint, but also clinical care,” she concludes. Dr. Pagoto urges practicing dermatologists to consider the possibility that some of their patients may have un- or under-treated mood disorders (seasonal affective disorder or other forms of depression) for which they are self-treating with outdoor and/or indoor tanning. “Assessing the presence of depression and making appropriate referrals could be very helpful,” Dr. Pagoto says.

While these findings require more research, Dr. Pagoto believes sunless tanners can have a positive effect on skin cancer prevention. “Since many patients will probably not admit to their dermatologists that they want to or like to be tan, recommending sunless tanners to all patients who may desire a tan instead of UVR sources could be essential,” says Dr. Pagoto. Although premature aging is less detrimental than skin cancer, the risk appears to resonate strongly with young people in particular and should not be forgotten, she says. Also, patients are often not certain of the safety of bronzers, “Therefore, if dermatologists can correct any misconceptions about their safety and recommend them, patients may be more encouraged to use sunless tanning products,” she observes. According to Dr. Pagoto, taking these measures would help to ensure that sunless tanning can be an effective tool in the promotion and practice of skin cancer prevention.

**The Public Health Initiative**

The dialogue about UV exposure and risks is ongoing. Dr. Dellavalle suggests that heightened rhetoric may be symptomatic of a larger struggle to define UV light within the overall public health initiative. “Its exact place in that discussion will continue to be debated, but we can take away from this that UV radiation deserves its place in the public health initiative that all of us should be engaged to,” he says.

According to Dr. Pagoto, dermatologists can promote dialogue by spreading awareness in practice and discussing the full range of options patients have. “Making information available via the physician-patient interaction as well as in the office itself can make an important difference,” she says. Dr. Pagoto also suggests directing patients to other resources, such as the American Cancer Society, the Skin Cancer Foundation, and the National Cancer Institute, which provide a wealth of patient-targeted information about skin cancer and how to prevent it. “By educating patients about common misconceptions regarding skin health and the sun (e.g., misconceptions about vitamin D, indoor tanning, sunless tanning, sunscreen, etc.) physicians can influence public perceptions one person at a time,” Dr. Pagoto says.