The dangers of tanning: 

spring break travel a timely reminder

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WITH THE “SPRING BREAK” SEASON APPROACHING, A GREAT NUMBER OF ONTARIANS ARE PREPARING TO HOLIDAY IN SUNNY, WARM WEATHER DESTINATIONS. FOR SOME, PRE-TRAVEL PLANS WILL INCLUDE VISITS TO ARTIFICIAL TANNING SALONS. IT IS PRUDENT THAT PATIENTS AND PHYSICIANS BE REMINDED OF THE HEALTH DANGERS OF ALL FORMS OF TANNING, AND THE NOTABLE RISKS POSED BY ARTIFICIAL TANNING PARLOURS.

For many of our patients, appearance matters, sometimes to the detriment of health. In the minds of some, tanned skin represents beauty, wealth, and, more disturbingly, health.

Sunlamps and tanning beds lure consumers with the promise of a bronzed body year round. As such, artificial tanning salons have proliferated throughout North America, and their popularity is growing.1 Thousands of Ontarians, particularly our youth, frequent these tanning parlours each year.2 Tanning salons often market the message that, in contrast to the wan, pale look of winter skin, a tan is healthy.

A tan is the skin’s physiologic response to exposure to ultraviolet (UV) radiation. However, the myriad biochemical changes that accompany exposure to UV radiation — whether from the sun or from artificial sources such as sunlamps used in tanning beds — are harmful to our skin. Ultimately, a tan is a sign of damage to the skin’s DNA, and one that can pose serious health risks.

The two types of UV radiation that penetrate the skin are UV-B and UV-A.

- UV-B rays (290-320 nm) have shorter wavelengths, higher energies and penetrate into the epidermis. They are most responsible for skin reddening, sunburns, and skin cancer.
- UV-A rays (320-400 nm) have longer wavelengths, lower energies and tend to penetrate deeper into the dermis. They are considered the dominant tanning ray and are associated with photoaging (wrinkles, leathery skin, etc.); however, they too are important contributors to the development of skin cancer.

Tanning salons use lamps that emit both UV-B and UV-A in unregulated amounts — often three to five times more than that which would be obtained from natural sunlight. UV exposure through artificial tanning has been linked to all forms of skin cancer, with the risk increasing by more than 50% for those who utilize indoor tanning beds more than 10 times per year.3,4

In 2009, the WHO’s International Agency for Research on Cancer (IARC)
concluded that tanning devices that emit UV radiation are more harmful than previously thought. They reclassified these devices from “probably carcinogenic to humans” to the highest cancer risk category “carcinogenic to humans,” alongside cigarettes, arsenic and asbestos.¹

Skin cancer is the most prevalent form of cancer and its incidence is on the rise. Melanoma is the deadliest form of skin cancer and will be diagnosed and treated some 5,300 times this year in Canada.⁵ An estimated 920 Canadians died from melanoma in 2010, up from 620 in 1952.⁵,⁶

Across all age groups, males and females who have ever used tanning beds have a 15% higher risk of developing melanoma over their lifetime.⁷ Recent studies have shown that the incidence of melanoma increases by 75% for those who tan before the age of 35, and this incidence increases in proportion to the frequency of artificial tanning sessions.¹

In addition to skin cancer, artificial tanning has other adverse effects, including premature aging, ocular melanoma, immunosuppression and photo-allergic reactions.

Visits to tanning parlours tend to peak from November to April. As patients prepare for reading week and March break vacations to sun destinations, physicians have an opportunity to counsel them on the general risks of artificial tanning and sun exposure. We can also dispel commonly held tanning myths:

1. *That a tan is healthy* — There is no such thing as a “healthy” tan.

2. *That artificial tanning is safer than natural sun exposure* — Both natural and artificial UV exposure are unsafe and contribute to the development of most forms of skin cancer.

3. *That indoor tanning promotes good health by boosting vitamin D levels* — Most individuals obtain adequate amounts of vitamin D from a balanced healthy diet rich in vitamin D or through dietary supplementation. Inadvertent sun exposure can also produce adequate amounts of vitamin D.

4. *That obtaining a baseline artificial tan is protective for subsequent intense sun exposure* — The protection obtained from a base tan is equivalent to an SPF of 4 and is inadequate. Pre-tanning before a vacation may also give one a false sense of immunity against harmful UV rays and may be associated with more time spent exposed without adequate protection. Lastly, we can reinforce the importance of general sun safety in the form of sun avoidance especially during peak hours, sun protective clothing including hats and sunglasses, and the liberal use of broad-spectrum sunscreens.

Working in collaboration with the Section of Dermatology, the OMA has recognized the health risks associated with artificial tanning and endorsed a policy that calls for a ban on the use of artificial tanning equipment by those under 18 years of age. The message to our patients is clear — indoor tanning is definitely out!

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References


