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Tanning and its Effects on Your Health

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# IT'S YOUR HEALTH

## Tanning and its Effects on Your Health

### THE ISSUE



The most up-to-date scientific evidence shows there is no such thing as a safe or healthy tan, whether under the sun or in a

tanning bed. It is important to take steps to avoid overexposure to [ultraviolet radiation](#). Exposure to ultraviolet A and B radiation can cause [sunburn](#), [damage to your eyes](#) and other health effects, including an increased risk of [skin cancer](#).

Health Canada does not recommend the use of [tanning equipment](#) (especially for people under the age of 18). However, if you choose to sun tan or to use tanning beds or lamps, you should be aware of the health risks so you can take steps to protect yourself.

### ULTRAVIOLET RADIATION AND TANNING

[Ultraviolet \(UV\) radiation](#) is a type of invisible light given off by the sun and by certain kinds of lamps (like tanning beds and sun lamps). While there are differences between ultraviolet A (UVA) and ultraviolet B (UVB), such as the depths to which they penetrate the layers of skin, both types are emitted by the sun and sun lamps, and there are risks associated with overexposure to both.

There are many different models and brands of ultraviolet light bulbs used in tanning equipment, producing various intensities and giving off different amounts of UVA and UVB radiation. For this reason, the exposure limits for tanning lamps can vary greatly depending on the strength and type of ultraviolet emissions from the light bulbs used. A tanning lamp can emit 10 to 15 times the amount of UVA radiation produced by the sun!

All tanning beds and lamps on the market in Canada must comply with federal regulations under the [Radiation Emitting Devices Act](#). These regulations cover a wide range of safety issues, including requirements for warning labels. You should look for these labels on the equipment because they contain information warning you of the potential dangers of exposure to UV radiation. The greater your exposure to UV radiation, the higher your risk of health problems.

Exposure to UV radiation produces a tanning effect on the skin. You may think a tan looks healthy, but a tan is actually a sign that UV rays have already damaged your skin. There is also a widespread false belief that a tan acquired using a tanning bed will offer good skin protection against sunburn for a holiday in a sunny location. In reality, a tan acquired using a tanning bed offers only very limited protection against sunburn from solar UV.

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There are some beneficial uses of UV radiation, such as in killing germs and treating skin conditions (like rickets, psoriasis, eczema, jaundice, lupus vulgaris and vitiligo). However, UV treatment for these conditions should only be considered upon the advice of a physician.

## UV RADIATION AND VITAMIN D PRODUCTION

One commonly cited benefit of UV radiation is that your body produces [vitamin D](#) after your skin is exposed to it. However, this can be affected by factors such as season, age, skin pigmentation and [sunscreen](#) use. Furthermore, there have not been studies to determine whether UV-induced vitamin D synthesis can occur without increased risk of skin cancer.

Because of public health concerns about UV exposure and skin cancer, nutrition-related recommendations for vitamin D have been set using the assumption that sun exposure is minimal. This means that the recommendations are adequate for those without any sun exposure. Other sources of vitamin D include fish, eggs and fortified products (like milk and margarine) and vitamin supplements. If you are concerned about vitamin D, see your health care professional for advice.

## HEALTH RISKS RELATED TO TANNING

People who tan under the sun or use tanning beds and lamps are at risk of sunburn. This inflamed redness of the skin is caused by too much exposure to UV radiation, particularly UVB radiation. Sunburn may show up right away in severe cases, or may develop up to 24 hours later.

If you do not [protect your eyes](#) while tanning, overexposure to UV radiation can also cause temporary but painful eye conditions known as photokeratitis and photoconjunctivitis. In particular, overexposure to UVB radiation may be linked to the development of cataracts,

a clouding over of the lens of the eye, which can cause blindness, as well as pterygium (Surfer's eye), photokeratitis (snow blindness) and photoconjunctivitis.

Tanning can also cause longer-term health effects. Being exposed to UV radiation can cause your skin to age more quickly and can increase your risk of developing [skin cancer](#). Your risk of developing skin cancer increases the more you are exposed to UV radiation. There is also scientific evidence that exposure to UV radiation weakens the immune system. This could affect your body's ability to defend itself against serious illnesses, including malignant melanoma, a serious form of skin cancer. Cumulative exposure to UV radiation is known to increase the risk of developing skin cancer and other negative health risks. Studies indicate that people who have suffered severe and frequent sunburns during childhood are at greater risk of developing skin cancer.

[The International Agency for Cancer Research \(IACR\)](#) reports that the frequent use of tanning equipment (for example, once per week from 20 years of age) will result in an estimated doubling of the risk of non-melanocytic skin cancer by age 45. The World Health Organization Working Group recently [changed the classification](#) of the use of UV-emitting tanning devices from a probable carcinogen to Group 1, "carcinogenic to humans," the same group as smoking.

## REDUCE YOUR RISK

The health risks of being exposed to UV radiation, from the sun or from tanning equipment, far outweigh the benefits.

When you are exposed to the sun's UV rays, find shade, wear protective clothing and use sunscreen, especially between the hours of 11:00 a.m. to 4:00 p.m. when the sun's rays are strongest. Encourage children to practice sun safe behaviour and avoid tanning by being a role model yourself.

There are many things to consider before choosing to use tanning beds and lamps. For example, people with fair skin or a history of sunburn are at greater risk for health problems. Also, some medications and cosmetics can make your skin more sensitive to UV radiation. Talk to your health care professional about your personal risk factors before you decide whether to use tanning beds and lamps. Health Canada does not recommend the use of tanning equipment – especially under the age of 18.

If you decide to go ahead and use tanning equipment, the following steps will help reduce your risk:

- Read the warning labels on the tanning bed or lamp you are using and follow the directions carefully.
- If you go to a tanning salon, talk to the salon operator about your skin's sensitivity and how quickly your skin tans. This should help the operator recommend the amount of time for your tanning session and how often you should tan.
- Do not go over the recommended time each tanning session for your skin type.
- Allow at least 48 hours between each tanning session. This will give your skin a chance to repair damage from the UV radiation.
- Always wear the safety eyewear that is recommended for the type of lamp you are using.
- Be sure there is a physical barrier (like a clear sheet of acrylic) between you and the tanning lamp. This will help prevent heat burns from the lamp.
- Report any side effects (like sunburn or itchiness) to the salon operator. In cases of severe sunburn, see your health care professional.
- Get a copy of Health Canada's [Guidelines for Tanning Salon Owners, Operators and Users](#) and read it carefully. It contains more information to help you protect and maintain your health.



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Remember, the less ultraviolet radiation you get, the better it is for your health.

## THE GOVERNMENT OF CANADA'S ROLE

Health Canada analyzes and manages health risks related to UV radiation and promotes public awareness of the harmful effects of UV rays. As part of this work, Health Canada regulates tanning lamps and monitors equipment compliance under the *Radiation Emitting Devices Act*. In addition Health Canada publishes the *Guidelines for Tanning Salon Owners, Operators and Users*.

The Public Health Agency of Canada monitors cancer in Canada. This involves identifying trends and risk factors for cancer, developing programs to raise awareness of the ways to reduce cancer risks, and doing research to evaluate risks from the environment and human behaviours.

## FOR MORE INFORMATION

- Health Canada's [Sun Safety](#) web section: [www.hc-sc.gc.ca/fn-an/nutrition/vitamin/vita-d-eng.php](#)
- For more articles on health and safety issues, go to the *It's Your Health* web section at: [www.health.gc.ca/iyh](#)
- It's Your Health* – [Sun Safety](#) articles: [www.hc-sc.gc.ca/hl-vs/iyh-vsv/alpha-eng.php#s](#)
- Health Canada's [Tanning Products](#) web section: [www.hc-sc.gc.ca/cps-spc/cosmet-person/cons/tanning-bronzage-eng.php](#)
- Health Canada's [Ultraviolet Radiation](#) web section: [www.hc-sc.gc.ca/ewh-semt/radiation/ultraviolet/index-eng.php](#)

- Health Canada's [Dietary Intake Recommendations](#) for vitamin D : [www.hc-sc.gc.ca/fn-an/nutrition/vitamin/vita-d-eng.php](#)
- Canadian Cancer Society's [Sun and UV](#) web section : [www.cancer.ca/ccs/Canada-wide/Prevention/Sun%20and%20UV.aspx?sc\\_lang=en](#)

## FOR INDUSTRY AND PROFESSIONALS

- Health Canada, Consumer and Clinical Radiation Protection Bureau's [Lasers and Electro-Optics](#) web section: [www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hecs-dgsesc/psp-psp/ccrpb-bpcprcc\\_laser-eng.php](#)
- Public Health Agency, [Disease Surveillance On-Line](#): [www.phac-aspc.gc.ca/dsol-smed/index.php](#)

## RELATED RESOURCES

- For safety information about food, health and consumer products, visit the [Healthy Canadians](#) website at: [www.healthycanadians.gc.ca](#)
- For more articles on health and safety issues, go to the *It's Your Health* web section at: [www.health.gc.ca/iyh](#)

You can also call toll free at 1-866-225-0709 or TTY at 1-800-267-1245\*

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