

Sunbeds, solaria and sunlamps



Increasing the risk of melanoma

Many people think that using a sunbed (sometimes called solaria or solariums) is a 'safe' way to tan, but there is no evidence that this is safe. On the contrary, the use of solaria increases the risk of melanoma, the most serious form of skin cancer.

All forms of UV radiation (UVR) can contribute to skin cancer and a solarium tan is caused by UV radiation. In fact, solaria tend to emit much higher concentrations of UV radiation than the sun, often around three times as strong as the midday summer sun.

The International Agency for Research on Cancer (IARC), the cancer division of the World Health Organization, have classified tanning beds as "carcinogenic to humans"—and in the agency's highest cancer risk category, which also includes tobacco, asbestos, and arsenic.¹

In an analysis of over 20 epidemiological studies, IARC concluded that the risk of melanoma is increased by 75 percent when the use of tanning devices starts before age 30. Overall, the use of sunbeds boosts the risk of melanoma, the deadliest form of skin cancer, by 20 percent. Use of cosmetic tanning devices is also associated with increased risk of melanoma of the eye.

Radiation damage

If you keep using sunbeds, your skin will age more quickly and you will develop wrinkles and freckly spots. If you sunburn easily and find it difficult to tan, you will not tan on a sunbed either.

Sun beds are particularly dangerous if you:

- Have skin that is fair and/or doesn't tan easily
- Have lots of freckles and moles
- Are under 30 years

- Have been treated for skin cancer or other sun-related skin growths
- Are taking drugs or medicines or are under medical treatment (unless your doctor agrees that you should have UVR therapy)
- Have had sunlamp or ultraviolet treatment or have been sunbathing within the last 48 hours
- Have abnormal, discoloured patches on your skin.

What are the effects of excess UVR?

The effects of excessive doses of UVR include:

- Premature ageing of the skin
- Increased risk of skin cancer, including melanoma
- Damage to the eyes
- Immunosuppression
- Photosensitivity/photosensitive disorders as a result of simultaneous use of prescription medicines.

Sometimes people using sunlamps and sunbeds suffer fierce burns with blistering and swelling. Others suffer less severe reactions. These burns are usually more serious than other sunburns as they may cover large parts of the body. Exposure from artificial tanning devices, also adds to the detrimental effects of solar UVR exposure. New Zealand already has far higher summer UVR levels compared with similar latitudes in the northern hemisphere.²

Are there benefits from using a sunbed?

It is sometimes also claimed that solariums are good for your health. But, if you decide to use a sunbed you are taking a risk with your health.^{1,3} Commonly cited reasons for using sunbeds are for cosmetic purposes or to boost vitamin D levels. However, in the long term, sunbed use has a detrimental cosmetic effects, adding to skin aging, wrinkles and damage. Nor should sunbeds be used to increase vitamin D levels because of the associated health risks.

Many sunbeds emit only low levels of UVB radiation, which is required for the body to produce vitamin D. The patterns of UV emissions from sunbeds are also very different from those associated with sunlight, and they are in no way 'natural.' If you are concerned about your vitamin D levels, talk to your doctor, not a commercial sunbed operator.

Are solariums controlled and regulated in New Zealand?

The World Health Organization advises governments to enact legislation / regulations to control the operation and use of solariums.⁴ In contrast to many other countries, New Zealand does not currently require training for people who operate solariums or work in tanning centres. Nor is equipment regulated. So when you use a tanning clinic you have no way of knowing if the equipment is safe or if the operator is using the equipment safely.

The current Australia / New Zealand Standard for the solarium industry (AS/NZ2635:2008) is voluntary, which means it is not mandatory for solarium operators to abide by it.⁵

The Standard advises operators to:

- Ban people under 18 years from using a solarium
- Ban people with fair skin that easily burns from using the solarium
- Display a warning notice in the foyer

- Provide a consent form for customers to read and sign — outlining the risks of solarium use
- Complete a skin assessment of all customers
- Train staff in carrying out skin checks and implementing the Standard
- Not promote a solarium as a 'safe' or 'healthy' way to tan, or as providing any health benefits
- Provide protective eye goggles
- Maintain strict hygiene and maintenance controls.

In order to find out whether operators were complying with the Standard, The Consumers' Institute has carried out undercover surveillance operations. Their surveys showed poor compliance with the voluntary code of practise agreed by the solarium industry.⁶

Are there any circumstances in which you should use a sunbed?

The Cancer Society has a Position Statement on Solariums.⁷

It recommends that:

1. The public avoid use of any type of artificial ultraviolet (UV) radiation tanning device (solarium) for cosmetic purposes.
2. The public be informed of the risks associated with solarium use.
3. Legislation governing the operation of solariums that prohibits access for those under 18 years of age and people with skin that burns easily, provides for informed client consent, bans unsupervised solarium operations and ensures adequate training of staff needs to be implemented.

References

1. International Agency for Research on Cancer Monograph Working Group. (2009). Special Report: Policy. A review of human carcinogens—Part D: radiation. *Lancet Oncology online*. Vol 10.
2. McKenzie, R. et al (1996). UV radiation in New Zealand: Measured North to South differences, and relationship to other latitudes. *Weather and Climate* 16 (1): 17-26.
3. The International Agency for Research on Cancer Working Group on artificial ultraviolet (UV) light and skin cancer. (2006). "The association of sunbeds with cutaneous malignant melanoma and other skin cancers: A systematic review." *International Journal of Cancer*, 120: 1116-1122.
4. World Health Organization. (2003). *Artificial tanning sunbeds: risk and guidance*. Geneva: WHO.
www.who.int/uv/publications/en/sunbeds.pdf
5. Refer Standards New Zealand, Wellington.
www.standards.org.nz
6. Refer Consumer NZ.
www.consumer.org.nz/reports/sunbeds
7. Position Statement on Solariums, Approved by the Australasian College of Dermatologists, The Cancer Council Australia and the Cancer Society of New Zealand, March 2007. www.cancernz.org.nz/Uploads/CSNZ_PS_Solari_a07.pdf