

Skin care - tanning

A tan is a sign of skin damage. A tan is not a sign of good health but rather a sign that your skin is trying to protect itself from the sun's ultraviolet (UV) rays. There is no such thing as a 'safe' tan. Exposure to UV radiation from sunlight or a solarium increases your risk of skin cancer and ages your skin. People with fair skin are at higher risk of skin cancer than people with naturally very dark skin.

Many people mistakenly believe that having a tan protects their skin against sunburn and further DNA damage by ultraviolet radiation. However, a tan offers minimal protection (around SPF3). Even without burning, UVB radiation ages the skin through irreparable DNA damage. Repeated doses of UVA radiation also contribute to long-term damage, even when no sunburn occurs.

Over the past 30 years, campaigns to heighten awareness of skin cancer have resulted in fewer people sunbaking. Commonly used alternatives to sunbaking include fake tanning lotions, tan accelerators and solariums. Each carries potential health risks.

If you want your body to appear tanned, a tanning method that doesn't use UV radiation is preferable. When the UV Index level is 3 and above you still need to protect yourself from UV radiation, even when using alternative tanning methods.

How skin tans

Skin cells in the top layer of skin (epidermis) produce a pigment called melanin that gives skin its natural colour. When skin is exposed to UV radiation, more melanin is produced, causing the skin to darken. This is what we know as a 'tan'. A tan is a sign that the skin is attempting to protect itself against UV damage. It is not a sign of good health.

There is no 'safe' tan. Any method that involves exposure of the skin to UV radiation, either by sunlight or in a solarium, will cause skin damage. The more your skin is exposed to UV radiation from any source, the greater the risk of skin cancer and the more quickly skin will age. Compare the skin on the back of your hand with the inside of your thigh to see the damage caused by years of sun.

Australians and tanning

The desire for a tan has been part of the Australian culture since the mid-1900s. However, we now know that deliberately exposing skin to UV radiation can increase your risk of developing skin cancer.

Australians are exposed to some of the highest levels of UV radiation exposure in the world. Combined with the fashion for tanned skin, this has led to an epidemic of skin cancer. Australia has one of the highest rates of skin cancer in the world. More than 1,800 Australians die from skin cancer each year.

Challenging the 'tan is beautiful' myth

Recent public awareness campaigns challenge the perception that tanned skin is more desirable than pale skin. Despite these campaigns, the desire for the appearance of tanned skin is still high, especially among younger people. Consequently, alternative tanning methods have become increasingly popular. If you must tan your body, a tanning method that doesn't use UV radiation is preferable.

Fake tanning products

The range of fake tanning products includes:

- **Topical dyes** – includes tanning lotions, creams, sprays, mousses, combined moisturiser and fake tan products. These are generally made up of vegetable dyes that stain the skin a darker colour and give a temporary appearance of a tan. This colour does not stimulate the production of melanin nor does it provide protection against UV radiation. The dye is shed, along with dead skin cells, after a few days.
- **Bronzers and tinted sunscreens** – includes tinted cosmetic and sun protection products such as moisturisers, foundation, powders and sunscreen. Bronzers provide the skin with temporary colour which, unlike dyes, wash off with soap and water.
- **Tan accelerators** – claim to speed up the natural tanning process by stimulating melanin production in the body. They come in tablet or lotion form.
- **Spray tanning booths** – these use misters to apply an even coat of fake tan solution to all, or parts of the body. They are often found at beauty salons, hairdressers and some gymnasiums.

Tanning lotions

A few fake tanning lotions include sunscreens, ranging from sun protection factors (SPF) 4 to 15. However, this protection only lasts for a short time following application and not for the duration of the fake tan. Promoting a fake tanning product as being protective against UV radiation may be misleading to consumers. Remember, a fake tan product does not protect you from the sun. You must still use a combination of sun protection measures.

Tan accelerators

Tan accelerators are available in tablet or lotion form. These preparations contain the chemicals psoralens and tyrosine, among others. These chemicals contribute to the production of melanin, the pigment responsible for skin colour. With sensitised melanin cells, it is possible to get a suntan in a shorter time than usual. However, no sun protection is offered.

There is no evidence that the topical use of tyrosine has any effect on melanin cells. When applied to the skin, tan accelerator products can cause painful conditions, including blistering. Psoralens should only be used under medical supervision to treat skin problems such as psoriasis.

Using tan accelerators for a long time has also been associated with an increased risk of skin cancer. When taken by mouth, the possible side effects of tan accelerator products include nausea, headaches and itchy skin.

A solarium tan is not a safe tan

Some Australians use solariums (also known as sunbeds, sunlamps or tanning beds) with the mistaken belief that these devices provide 'safe' tans. In fact, the opposite is true. Research shows that UV radiation from solariums can increase your risk of developing skin cancer by 75 per cent if they are first used before the age of 35.

The International Agency for Research on Cancer (IARC) has moved ultraviolet emitting tanning beds to its highest cancer risk category and labelled them as 'carcinogenic to humans'. Solariums can also cause eye damage, immediate skin damage (such as sunburn, irritation, redness and swelling) and possible immune system changes.

A solarium tans the skin by radiating it with a concentrated dose of UV, which may be up to six times as strong as the summer midday sun. Solarium use is not a safe way to tan and a solarium tan won't protect your skin from natural UV radiation. In Victoria, it is illegal for solarium operators to advertise their services as safe. It is also against the law to allow people under the age of 18 or who have skin which burns and doesn't tan to use these facilities.

Cancer Council Australia and the Australasian College of Dermatologists do not support tanning in solariums in any circumstances.

Where to get help

- Your doctor
- Your local pharmacist
- Dermatologist
- Cancer Council Helpline Tel. 13 11 20
- SunSmart

- Multilingual Cancer Information Line, Victoria Tel. (03) 9209 0169

Things to remember

- The desire for the appearance of tanned skin is still high, especially among younger Australians.
- Most fake tanning lotions provide a safer way to change the tone of your skin but offer no sun protection.
- The UV radiation emitted by solariums contributes to skin and eye damage and an increased risk of skin cancer.
- Both sun and solarium tans are a sign your skin has been damaged by too much UV radiation exposure.

This page has been produced in consultation with, and approved by:

SunSmart

Content on this website is provided for education and information purposes only. Information about a therapy, service, product or treatment does not imply endorsement and is not intended to replace advice from your doctor or other registered health professional. Content has been prepared for Victorian residents and wider Australian audiences, and was accurate at the time of publication. Readers should note that, over time, currency and completeness of the information may change. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2012 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.