

Shining a light on sunbeds

After a dismal winter, consumers may be enticed to top up their tan by using a sunbed. However, there's no safe way to do this. We look at the risks of using a sunbed and the long-awaited proposed regulation.

The Irish are well known for their pale and freckly complexions. However, some consumers don't seem too proud of their skin tone and turn to sunbeds for a Mediterranean glow.

Research conducted in 2007 for the Irish Cancer Society found that 6% of Irish consumers use sunbeds regularly: 2% of users once a week, 9% every two weeks and 20% once a month. The findings also suggest that sunbed use can begin at a young age, with 34% first using a sunbed before they were 19.

While the use of sunbeds and their damaging UV rays may bring the desired short term cosmetic effect of a tan, in the long term UV exposure damages collagen and contributes to premature ageing, an

effect most tanners avoid thinking about. But as most know, the implications of UV exposure are also more serious than these superficial effects, with increased risk of skin cancer the most serious.

Damaging light

Sunbeds tan the skin by artificially generating UV light. Artificial UV rays are just as harmful as natural rays. According to the World Health Organisation, radiation produced from a sunbed can produce adverse effects similar to those of natural sunlight, and more so in fair-skinned persistent users. The damaging effects of UV radiation accumulate over a lifetime and users of sunbeds are most likely also fond of natural tanning,

further increasing the associated risks. The younger we are when we first use a sunbed, the higher the risk of developing skin cancer, as lifetime UV exposure is increased. Children should not use sunbeds at all as their skin cells are still developing and are more sensitive to UV light.

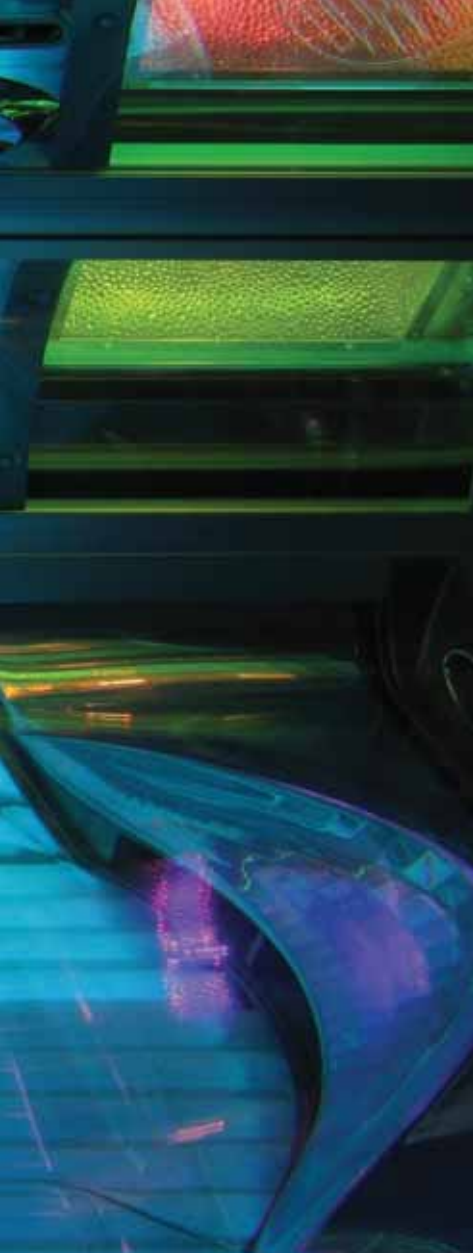
Tanning is a sign of skin damage, as it's the body's attempt to protect itself from UV rays. Sunburn is the result of more severe UV damage and tanned skin can still burn. Skin cells will try to repair themselves when burned, but may not completely succeed. When this happens, DNA is permanently damaged, which can then contribute to the development of skin cancer.

AT A GLANCE

UV radiation.

Skin cancer.

Regulation.



Since sunbeds only came into widespread use in the 1990s, their full health effects are not yet known, according to the European Commission's Scientific Committee on Consumer Products (SCCP) 2006 opinion on UV radiation and sunbed use. The International Agency for Research on Cancer's 2007 report, which looked at the link between sunbed use and skin cancer, found that people who begin using sunbeds before the age of 35 increase their risk of developing malignant melanoma by 75%. Recent statistics from Cancer Research UK found that 82% of sunbed users first used them before the age of 35.

Cancer risk

Ireland has one of the highest rates of skin cancer in Europe. One in every eight men and one in every ten women develop skin cancer by the age of 74. The predominant factor influencing this is that fair skin is the most common skin type in Ireland. The presence of freckles,

naturally red or fair hair, blue, green or grey eyes also increases skin cancer risk.

The latest available data (2005) from the National Cancer Registry shows all diagnosed cancer cases are increasing, but by less than 3%, which can mostly be attributed to our ageing population. However, the risks are greater for some cancers, including melanoma skin cancer, which shows a 2% increase for females and a 4% increase in males. The risk of dying from most cancers is decreasing, but increasing for some types, including melanoma. Malignant melanoma was the second highest cancer diagnosed in the 30-45 year age group and the third highest in the 25-40 age group.

Other effects

UV light can also damage the eyes, causing conjunctivitis or inflammation of the outer membrane covering the eye. In the long term, UV can contribute to the development of cataracts and cancer of the eye affecting the conjunctiva. Research has also suggested a link between reduced immune system function and UV exposure, but results are not conclusive.

Benefits not justified

UV rays are not without benefits. They are needed if the body is to produce its own vitamin D. According to the Irish Cancer Society, most people gain sufficient vitamin D from 10-15 minutes of normal daily sun exposure on the face and hands, along with an adequate diet. If people need more vitamin D, other measures should be taken, such as food supplements, but not sunbeds.

UV can be used to treat skin conditions, such as dermatitis and

psoriasis. The WHO recommends this treatment only when conducted in a medical setting and not unsupervised in commercial tanning premises.

Regulation

The European Commission's Scientific Committee on Consumer Products opinion on UV radiation and sunbed use recommends that people with skin cancer risk factors should not use sunbeds. Risk factors include having skin type I or II, freckles and moles or a family history of melanoma. From these recommendations it follows that two thirds of Irish people should not use sunbeds, as this proportion have skin type I or II.

With such a high number of our pale population in the risk category, regulation is necessary. The National Cancer Forum's 2006 Strategy for Cancer Control in Ireland recommended that along with campaigns to promote safe sun practices, sunbeds should be regulated, including restricting their use to adults only. Only in 2008 was regulation finally proposed by the Department of Health and Children and eighteen organisations submitted their views on the matter. The CAI welcomes the proposals, having first called for regulation in 1989.

The proposed regulation includes: prohibiting use by under-18s, control on the sale or rental of tanning machines, warning labels to highlight risks, restrictions on unsupervised sunbed operators, registration of operators with the competent authority, inspections to ensure they comply with requirements and exemptions for medical use. The views submitted were considered by the Minister and the regulatory impact assessment carried out.

SKIN CANCER

Most skin cancers can be treated successfully if detected early. Watch out for change in the colour, size or shape of an existing freckle or mole. Remember your 'ABCD'

- **Asymmetry:** one half unlike the other.
- **Border irregular:** rough or poorly defined edges.
- **Colour variations:** shades of tan, brown, black and other colours such as white, red or blue may also appear.
- **Diameter:** larger than 6mm or has increased in size.

However, prevention by reducing skin cancer risk is the best approach. Protect yourself from UV rays and avoid using sunbeds. Follow the Irish Cancer Society's Sunsmart code (see *Useful contacts*). Avoid the sun's peak rays, seek the shade, slip on a shirt, hat, sunscreen and sunglasses.

Last year's annual report from the National Cancer Registry stated that 6794 new cases of skin cancer were diagnosed in 2005, which is the latest available data. Malignant melanoma is the least common, but the most serious skin cancer. There were 598 new cases of malignant melanoma in 2005.

Useful contacts

Irish Cancer Society
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fax (01) 2310 555
Cancer helpline 1800
200 700
www.cancer.ie/sunsmart

Report by
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Irish Cancer Society recommends

The Irish Cancer Society welcomed the proposal that sunbed use by under-18s be banned, while other parts of the regulation can protect users over the age of 18. However, the Society's ultimate goal is an outright ban on sunbeds and its 2007 survey found that 36% of respondents would also support this.

The Irish Cancer Society's survey last year found that 10% of sunbed users got their tans in unsupervised tanning outlets. This means no evaluation of the consumers' skin type is done before they expose themselves to intense UV rays.

The Irish Cancer Society recommends that the regulations include the requirement that a trained supervisor is available at all times in tanning salons. Training should include information on how to evaluate the user's skin type and should have supervisors restricting sunbed use based on skin evaluation. The Society also suggests that sunbed manufacturers provide a schedule of exposure and recommend the maximum exposure duration based on the emission characteristics of the sunbed.

Strengthening weak standards

Total UV rays and their wavelengths differ depending on the type of sunbed. According to Cancer Research UK the

RAY'S OF LIGHT

Most of the ultraviolet (UV) radiation we are exposed to comes from the natural light of the sun. Cloudy, cold days also contribute to exposure as about 80% of the sun's rays pass through clouds. There are three types of UV radiation: UVA, UVB and UVC. The ratio of each type reaching the earth differs throughout the day and is strongest between the hours of 11am and 3pm. The damaging effects of ultraviolet radiation are generally caused by UVA and UVB radiation. UVA penetrates the dermis, the deeper layer of skin, causing premature ageing and contributes to skin cancer risk including the most serious type, malignant melanoma. UVB penetrates the skin's top layers potentially causing sunburn and increasing skin cancer risk. It can also cause eye damage. UVC rays rarely reach the earth as the ozone layer blocks them. However, with ozone damage more can reach the earth in places where it is destroyed, such as Australia. UVC rays cause serious damage to the skin. The amount of UVA or UVB emitted by sunbeds differs depending on the appliance and they don't emit UVC rays. Most sunbeds emit more UVB than UVA radiation.

intensity of rays from sunbeds can be 10 to 15 times greater than those from the midday sun. However, sunbeds must comply with requirements of the Low Voltage Directive, implemented by the European standard governing electrical appliances (EN 6033-5-2-27). The standards have been criticised for not being stringent enough. The SCCP's 2006 opinion raised the issue that the standards didn't sufficiently address health aspects of UV exposure, because they did not set a limit on sunbeds' maximum radiance.

Since the SCCP opinion was issued, the European Commission called for the standard to be amended. In 2007 a

maximum level of irradiation was set for all new sunbeds, which is equivalent to the strength of rays emitted by the midday sun at the equator. This only applies to new sunbeds and phasing out of sunbeds already in use that do not have limits on maximum rays is to be set by the relevant national authorities.

No safe level of exposure

The Irish Cancer Society, dermatologists, medical and cancer experts do not advise the use of sunbeds to achieve a tan.

Don't use sunbeds if you:

- Have skin type I or II (see 'Staying safe in the sun', *Consumer Choice*, June 2008, p223).
- Are less than 18 years old.
- Have a large number of moles (more than 50).
- Have a history of frequent childhood sunburn.
- Have premalignant or malignant skin lesions.
- Have sun damaged skin
- Have a family member who has had skin cancer.

Precautions

The best and safest tan is fake (see *Faking it*). However, if consumers still wish to use sunbeds despite the dangers, they should consider the following precautions:

- Cosmetics can make the skin more UV sensitive, so don't use them before a tanning session. Certain medications can also make the skin more UV sensitive, check with your doctor.
- If any adverse effects occur further use is not recommended and consult your doctor if necessary.
- Avoid exposure to sunlight or sunbeds for 48 hours after use.
- Always wear goggles provided to protect the eyes.

Faking it

Cosmetic products that give an instant or build a gradual tan are the safest way to achieve a sun-kissed glow. Testing on a small patch of skin before use is recommended in case of any sensitivity. Tanning products come in many forms, from mousse and cream to spray and gel. They contain a substance called Dihydroxyacetone, a sugar which reacts with the top layer of skin cells turning them brown. When applying fake tan, first exfoliate the skin and moisturise afterwards. Wear latex gloves while applying the product or wash hands well afterwards, to avoid the undesired effect of tanned palms.

Fake tans vary in price. We priced a few leading brands. Gradual tanning moisturisers were the cheapest at around €8 per bottle. Tanning products that develop over a few hours and instant tans ranged from around €10 to €30.

Consumer tests haven't shown clear preference for more expensive tanning products. This summer *Which?* tested gradual and instant tans and the most pricey weren't rated the highest. Instant tans first gave a good finish, but when they started to fade were more patchy. Gradual tans were rated more favourably for their smell. The Australian consumer group *Choice* tested fake tanning products in 2006. Their main conclusion was that big brands or high prices were no guarantee you'll prefer the product. Pricey tans rated highly, but so did cheaper versions. Different types of tanning products were tested, such as mousse, cream and spray, but none was preferred overall.

While faking it is a definite option, maybe we could consider ditching the tan altogether and celebrate our natural skin colour, as have beauties such as Nicole Kidman, Scarlet Johansson and Cate Blanchett. We seem to live with the burden of wanting what we don't have.

