

What are 'collarium' sunbeds? Here's why you should stay away

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Credit: Teona Swift from Pexels

Reports have recently emerged that solariums, or sunbeds—largely banned in Australia because they [increase the risk](#) of skin cancer—are being [rebranded](#) as "collarium" sunbeds ("coll" being short for collagen).

Commercial tanning and beauty salons in Queensland, New South Wales and Victoria are marketing collariums, with manufacturers and operators claiming they provide a longer-lasting tan and stimulate collagen production, among other purported benefits.

A collarium sunbed emits both UV radiation and a mix of visible wavelength colors to produce a pink or [red light](#). Like an old-school sunbed, the user lies in it for 10 to 20 minute sessions to quickly develop a tan.

But as several experts [have argued](#), the providers' claims about safety and effectiveness don't stack up.

Why were sunbeds banned?

Commercial sunbeds have been [illegal](#) across Australia since 2016 (except for in the Northern Territory) under state-based radiation safety laws. It's still legal to sell and own a sunbed for private use.

Their dangers were highlighted by [young Australians](#) including [Clare Oliver](#) who developed melanoma after using sunbeds. Oliver featured in the [No Tan Is Worth Dying For campaign](#) and died from her melanoma at age 26 in 2007.

Sunbeds lead to tanning by emitting UV radiation—as much as [six times](#) the amount of UV we're exposed to from the summer sun. When the skin detects [enough DNA damage](#), it boosts the production of melanin, the brown pigment that gives you the tanned look, to try to filter some UV out before it hits the DNA. This is only partially successful, providing the equivalent of [two to four SPF](#).

Essentially, if your body is producing a tan, it has detected a [significant amount](#) of DNA damage in your skin.

Research shows people who have used sunbeds at least once have a [41% increased risk](#) of developing melanoma, while ten or more [sunbed](#) sessions led to a 100% increased risk.

In 2008, [Australian researchers](#) estimated that each year, sunbeds caused 281 cases of melanoma, 2,572 cases of squamous cell carcinoma (another common type of skin cancer), and \$3 million in health-care costs, mostly to Medicare.

How are collarium sunbeds supposed to be different?

Australian sellers of collarium sunbeds imply they are safe, but their machine descriptions note the use of UV radiation, particularly [UVA](#).

UVA is one part of the spectrum of [UV radiation](#). It penetrates deeper into the skin than UVB. While UVB promotes cancer-causing mutations by discharging energy straight into the DNA strand, UVA sets off damage by creating [reactive oxygen species](#), which are unstable compounds that react easily with many types of cell structures and molecules. These damage cell membranes, protein structures and DNA.

Evidence shows [all types](#) of sunbeds increase the risk of melanoma, including those that use only UVA.

Some manufacturers and clinics suggest the machine's light spectrum increases UV compatibility, but it's not clear what this means. Adding red or pink light to the mix won't negate the harm from the UV. If you're getting a tan, you have a significant amount of [DNA damage](#).

Collagen claims

One particularly odd claim about collarium sunbeds is that they stimulate

collagen.

[Collagen](#) is the main supportive tissue in our skin. It provides elasticity and strength, and a youthful appearance. Collagen is constantly synthesized and broken down, and when the balance between production and recycling is lost, the skin loses strength and develops wrinkles. The collagen bundles become thin and fragmented. This is a natural part of aging, but is accelerated by UV exposure.

The reactive oxygen species generated by UVA light damage [existing collagen](#) structures and kick off a [molecular chain of events](#) that downgrades collagen-producing enzymes and increases collagen-destroying enzymes. Over time, a build-up of degraded collagen fragments in the skin promotes even more destruction.

While there is growing evidence [red light therapy](#) alone could be useful in wound healing and skin rejuvenation, the UV radiation in tanning sunbeds is likely to undo any benefit from the red light.

What about phototherapy?

There are [medical treatments](#) that use controlled UV radiation doses to treat chronic inflammatory skin diseases like [psoriasis](#).

The anti-collagen effects of UVA can also be used to treat thickened scars and [keloids](#). [Side-effects](#) of UV phototherapy include tanning, itchiness, dryness, cold sore virus reactivation and, notably, premature skin aging.

These treatments use the minimum exposure necessary to treat the condition, and are usually restricted to the affected body part to minimize risks of future cancer. They are administered under medical supervision and are not recommended for people already at high risk of

[skin](#) cancer, such as people with [atypical moles](#).

So what happens now?

It looks like many collariums are just sunbeds rebranded with red light. Queensland Health is currently [investigating](#) whether these salons are breaching the state's [Radiation Safety Act](#), and operators could face large fines.

As the [2024 Australians of the Year](#)—melanoma treatment pioneers Georgina Long and Richard Scolyer—highlighted in their acceptance speech, "there is nothing healthy about a tan," and we need to stop glamorizing tanning.

However, if you're desperate for the tanned look, there is a safer and easy way to get one—[out of a bottle](#) or by visiting a salon for a spray tan.

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