How safe is sunscreen?

Sunscreen is an important barrier against the sun’s rays, but could its use pose its own risks, asks KYLIE MATTHEWS.

The evidence is irrefutable - sun exposure can cause skin cancer. This fact isn’t a surprise to any of us, but could its use pose its own risks, asks KYLIE MATTHEWS.

Recent scientific research reveals that the existence of the nanoparticles in sunscreens, added to make the zinc oxide in creams invisible, “might” cause damage to the skin when exposed to the sun.

The Australian Government’s Therapeutic Goods Administration (TGA) is the governing body that regulates sunscreen formulas and their components. It has also identified that nanoparticles in sunscreens “may” have a damaging effect on the skin.

The TGA’s online fact sheet states: “Concerns relate to the theoretical possibility that if nanoparticles were to be absorbed into skin cells, they could possibly interact with sunlight to increase the risk of damage to these cells.”

Sunscreen contains nanoparticles, which are smaller particles of TiO2 and ZnO, used to absorb UV rays. But some molecules in these nanoparticles remain on the outside layer of the skin and are not absorbed.

While the TGA does not require sunscreen brands that include nanoparticles to publish a specific warning on their packaging, but it must be declared in the ingredients.

In an article to be published in the Australian Journal of Dermatology, Wollongong dermatologist Dr Robert Salmon resolves that all sunscreens and cosmetic products containing nanoparticles should be labelled.

The message to slip, slop, slap is clear, but research has raised questions about the safety of some sunscreens.

Dr Salmon runs a specialist dermatology practice focusing on skin cancer surgery and laser procedures. His interest in the nanoparticles debate was sparked after he read a scientific paper on a study that observed the corrosive effects of sun exposure on Colorbond steel roofing.

The study observed that nanoparticles in sunscreen which rubbed off roofer’s hands and onto the roofing was actually deteriorating the paint coating on the roof.

"Concerns about the use of nanoparticles in sunscreens had been around before, but this study, which was written by Wollongong scientist and academic Philip Barlow and Amos Branch, was a significant breakthrough,” he says.

Dr Salmon says the study suggests there may be a crossover between the damage the sun caused the paint after sunscreen containing nanoparticles was applied and the potential damage they might have to skin exposed to the sun.

But with few objective scientific studies on the issue, the scientific proof that nanoparticles may be causing skin damage is not yet conclusive.

Cancer Council Australia’s Head of Consumer Affairs, Dr Partland, says that despite the recent scientific studies, there is enough evidence to back up the claim that nanoparticles are harmful.

"It’s dangerous when a celebrity makes these kinds of claims,” she says.

"Parents need to talk to their children and continue to educate them about why we must wear sunscreen, particularly here in Australia where we have the highest rate of skin cancer in the world.”

Bundchen has since retracted her comments, but not before they added fuel to an already raging debate concerning the use of certain chemicals in sunscreens.

After undertaking its own review, Cancer Council Australia has removed nanoparticle ingredients from its own brand of sunscreens.

“The Cancer Council have come to the conclusion that there currently isn’t enough evidence to back up the claim that nanoparticles are harmful,” Partland says.

“But yes, we have removed the ingredient from our products, just to be careful.”

Partland says that despite the debate on the use of nanoparticles, the sun’s harmful UV rays pose a much more immediate and detrimental threat to our health.

“We urge everyone to use a combination of measures to protect themselves from the sun ... people need to wear sunscreen,” she says.

Some nano-free sunscreen brands

- Invisible Zinc
- The Wiggles
- Chemmart
- Face of Australia
- Le Tan
- First
- Cancer Council
- Woolworths
- Select and Coles
- Jurlique
- Austra
- Banana Boat
- Nutrimetics
- UV SolarCare
- Source: Friends of the Earth Australia