THROWING SHADE

Is your sunscreen dangerous? It's meant to save lives, but there's a backlash brewing. AMY MOLLOY sorts fact from fiction

IT'S A SCORCHING SUMMER'S DAY and Rachel Jones★, an executive assistant from Sydney, is getting ready to meet her friends for brunch. However, there's one beauty ritual she doesn't spend time on. "I stopped wearing sunscreen regularly a few years ago," she admits. "I wanted to move away from putting chemicals on my skin, and when I looked at the ingredients listed on the bottle, I couldn't pronounce most of them, which concerned me."

Despite being raised in Australia, a country with one of the highest rates of skin cancer, the 32-year-old relaxed her sun protection strategy after reading an article about the "dangers" of sunscreen written by a health blogger. "I work in an office job, so putting on makeup with SPF doesn't seem worth it," Jones says. "If I go to the beach, I bring a caftan, hat and parasol so I don't have to slather myself. It may sound naive, but I feel like if I'm not coming home sunburned I'll be OK with not wearing sunscreen day to day."

It's a controversial confession, but not an uncommon one. In my group, I can name six women who limit their use of sunscreen or no longer wear it because they want their skincare regimen to be free of synthetics. Supermodel Gisele Bündchen avoids what she termed "poison on my skin", anti-sugar activist Sarah Wilson prefers to "protect" herself with midday-sun avoidance and a diet rich in coconut oil (which contains a natural SPF), and nutritionist Pete Evans has called "poisonous" sunscreens and sunbathing a "recipe for disaster". The attitude shift has alarmed skin cancer charities. "In around 95 per cent of cases, melanoma is preventable, and that's where sunscreen comes in," says Carole Renouf, CEO of Melanoma Institute Australia. "It's disappointing when television personalities so publicly argue against scientific evidence that has the potential to save lives. If people have concerns they can research their choices to find a type of sunscreen that only includes certain ingredients."

There are some beauty trends that, quite rightly, have a shelf life — hair crimping, frosted lipstick and bleached eyebrows spring to mind. But is sunscreen really at risk of going out of fashion as consumers become concerned about the toxicity of their beauty products? According to a Choice survey, 60 per cent of women check the ingredients on their sunscreen bottles. But do we know what we're looking for and what we're meant to be avoiding?

SLIP, SLOP, SOAK UP "Do a search on sunscreen safety and some scary stuff shows up," says Dr Jacquelyn Dosal, a dermatologist from the University of Miami. "You'll read that retinyl palmitate causes skin cancer and oxybenzone causes estrogen-like effects on the body. As an organic-loving, Whole Foods-shopping, yoga-practising doctor myself, I've researched the issues of sunscreen safety personally, and it can certainly be confusing and contradictory."

In the anti-sunscreen debate, nanoparticles are often mentioned. To make sunscreen less sticky, some ingredient molecules are divided up so they're a billionth of a metre. "Concerns arose that these molecules might be small enough to penetrate the skin to the bloodstream and could affect our DNA," Dosal says. "But human studies have shown that, in nature, these nanoparticles aggregate into clumps that are too large to penetrate living skin." What about the claims that oxybenzone, a UVA blocker, can disrupt women's hormones? "These concerns come from a study where rats were fed megadoses of sunscreen and the size of their uterus enlarged," Dosal insists. "There is a monstrous difference between eating super-high doses of sunscreen and applying it to your skin daily." In fact, a 2011 study in *JAMA Dermatology* showed it would take 200 years of daily sunscreen application to reach the same amount of exposure as the rats in the early research.

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CARE FACTOR OK, your sunscreen probably isn't deadly, but this doesn't mean we should slop on a cocktail of chemicals. It is important to mention that oxybenzone can cause allergic skin reactions, as can para-aminobenzoic acid and parabens (generally any ingredient beginning with butyl-, ethyl-, methyl- or propyl-). "Remember, the skin is the largest organ in the body," says Dr Andrew Monk, chairman of Australian Organic, the organisation that regulates and certifies organic products. "If you're careful about what you consume internally, be careful about what you 'consume' externally, too. There is a growing number of 'organic' and 'natural' sunscreens on the market, but don't always trust the label."

Currently, Australian Organic does not officially certify any brands of sunscreen because its rules state that 95 per cent of a product's ingredients must be agricultural. "It's been a challenge for cosmetics companies to create products to our standards that still have the UV protection," Monk says. "We say no to parabens, no to genetically modified organisms and no to petroleum products, but cosmetics companies can still use zinc, for example. If you don't recognise an ingredient, write to the company, question them and see if there's an alternative."

Many dermatologists advise using a 'physical sunscreen' (the Invisible Zinc brand, for example), which works by reflecting UV from the skin, as opposed to so-called 'chemical sunscreens', which absorb UV before breaking it down. As for the future of sunscreen, look out for the term 'bioadhesive nanoparticles' — these are natural substances that have the capacity to stick to a surface. Researchers at Yale University are developing a sunscreen that acts like a semipermanent shield by clinging to the proteins on top of skin cells instead of soaking into them.

Finally, don't rely on coconut oil to be an adequate replacement for sunscreen. Sorry, but that's a myth. While it does naturally contain SPF, it's only the equivalent to a factor of between four and eight. Melanoma Institute Australia recommends using at least factor 50 to prevent skin damage. Still tempted to skip the slop? While there is no proven evidence that sunscreen ingredients can kill you, we do know that one Australian dies from malignant melanoma every six hours. Absorb that. ■

★ *Name has been changed.*

GREEN SCREENS

Cover up with these effective yet natural sunblockers

1. Wotnot 30+ SPF Natural Sunscreen, $19.95. Free from genetically modified organisms, sulphates, petrochemicals, parabens, fragrances and artificial preservatives: all Wotnot products adhere to these rules. Even its preservative system — which stops the sunscreen becoming a haven for bacteria — has been approved by the Australian Certified Organic organisation. On top of this, all packaging is recyclable. ***nourishedlife.com.au.***

2. Eco SPF 30+ Natural Sunscreen, $19.95. Containing zinc oxide blended with green tea, grape seed, shea butter and jojoba, this sunscreen is not only protective but also contains antioxidants that have anti-ageing properties. While it doesn't claim to be nanoparticle-free, it doesn't contain synthetic ingredients, which is a compromise. There's also a baby-friendly hypoallergenic version. ***biome.com.au.***

3. Invisible Zinc SPF 50+ 4HR Water Resistant, $22. Zinc oxide is a longtime favourite with lifeguards, but you can now get its protective properties without the thick white stripe across your nose. The newest formulation of this physical sunscreen uses "microfine" zinc oxide, which is invisible to the naked eye. Plus, it's a paraben-free zone. ***invisiblezinc.com.***

4. Lush The Great Barrier SPF 15, $17.95. Lush's new range of SPF products contain some synthetic materials, such as octocrylene, which absorbs UVA and UVB light. But all non-natural ingredients are tested on human volunteers in the brand's New Jersey lab, which is run by a vegetarian scientist. The Great Barrier bar combines calamine powder with toasted sesame oil and fair trade cocoa butter. It will melt in the sun, so don't leave it out on your beach towel. ***lush.com.au.***

5. Mieessence Reflect Outdoor Balm, $37.95. This Australian-made product combines zinc oxide with carrot seed and rosemary extract, a herb that has been shown to preserve skin cells affected by UVB radiation. It's only SPF 15, so is better for cooler days rather than scorchers. Worried about your carbon footprint? Mieessence calculates its freight emissions and plants trees to offset them. ***mieessence.com.***

6. Cosmedix Reflect Antioxidant Moisturising Spray SPF 15, $77. This titanium-dioxide-based, non-chemical spray protects from all environmental aggressors with the bonus of potent antioxidants that'll deliver skin-soothing benefits. Spritz on before heading out to allow time for the formula to get to work. ***cosmedix.com.***