



Are you wearing sunscreen right this minute? You probably should be. Even if you're indoors, chances are there's a UVA wave heading for your epidermis. And if you think UVA is nothing to worry about, think again.

"The latest research suggests the relatively ignored spectrum of ultraviolet A is an important co-contributor to skin cancer production," says associate professor Greg Goodman, chief of surgery at The Skin & Cancer Foundation Australia. "It's a deeply penetrating wavelength responsible for much of the photo damage and photo ageing seen in middle-aged and elderly Australians."

If, like most Australians, you're not up to speed on the difference between UVA and UVB, here are a couple of pointers. UVA has a longer wavelength, travels through glass and damages collagen, speeding up the ageing process. On the other hand, UVB is shorter, penetrates only through to the epidermis, and causes sunburn and cancerous changes.

Dermatologist Robert Hannaford believes it's imperative we all understand the latest research on sun damage and update our sunscreen protection accordingly. "Choose a sunscreen that has broad spectrum protection against both UVB and UVA rays, as both forms of UV light can cause skin cancer," he says.

And then, we need to actually apply it. A study funded by Neutrogena reveals 75 per cent of us do not apply sunscreen to our faces daily. It's hard to understand, given that the humble sunscreen is hands down the most effective anti-ageing tool you can buy. Up to 90 per cent of ageing is caused by external factors, the big one being sun exposure. And as if that weren't enough, there's also the skin cancer risk:

two in three Australians will be diagnosed with skin cancer by the age of 70. So you'd think young, enlightened Aussies would be swearing off sunbathing, right?

Suns and daughters

"At the beginning of summer, I lie in the sun until I have a reasonable tan, then I stop. I always put sunscreen on my face when sunbathing, but I have friends who don't even do that," says "Emily", 22, who prefers to remain anonymous.

This is no surprise to Goodman, who laments the ongoing blasé attitude towards sunbathing. "It's common for young people to engage in all kinds of risky behaviour. They can't contemplate what their skin will look like in 20 years' time when they'll have to pay the health bill for their current tanning activity." He believes positive changes like improved sunscreens over the past 10 years, sun-safe education programs and a shift from sunbathing to spray tans will help future generations. But what we really need is a shift in attitude. Especially since tanning can become physically addictive.

"Some research has found that solariums, which produce long-range UVA, are addictive, releasing endorphin-like chemicals."

But tanning was not always so addictive, and creamy complexions were once revered, so what happened?

The Bronze Age

Tanning was something to be avoided at all costs until 1923, when Coco Chanel returned from a Riviera holiday with bronzed skin. To be tanned was suddenly chic. By 1927 we had the first tanned model in British *Vogue*, and a honeyed complexion has been deemed attractive in Western cultures ever since.

"I don't like looking pale," says Emily. "When you go on holidays you really want to return with a tan – it's an attention-getting thing."

It's true that a tan – whether fake or real – temporarily evens out the complexion and camouflages blood vessels and brown spots. "Ironically, though," Goodman points out, "over time, sun damage has the exact opposite

effect, increasing skin's apparent age with uneven appearance, wrinkling, thickening, pigmentation and more noticeable blood vessels."

For young women, skin cancer seems far, far away. But maybe an anti-ageing message might get them to slip, slop, slap. Says Emily, "Girls my age will tan until they notice some kind of damage – like a wrinkle. For me, noticing a fine wrinkle made me start wearing sunscreen on my face daily."

Strange as it is, the fear of looking like a leather handbag is more pressing for the majority of young people than concerns about cancer. ►

A little ray of sunshine

Catching a bit of sun is actually good for you, as exposure to ultraviolet B rays gets the body producing vitamin D. In fact, it's thought a lack of exposure to sunlight is responsible for a recent resurgence in rickets (a disease caused by vitamin D deficiency). But since sun exposure is linked to skin cancer, what's the answer? Start your day having a cuppa outside and soaking up a few morning rays for 5 to 10 minutes; just avoid the more direct rays during 11am to 3pm.

And if vanity is likewise one of your priorities, then Sharon Dowling, medical affairs manager at Johnson & Johnson, will have you running for your sunhat. She says the natural ageing process represents just 10 per cent of visible ageing, while close to 90 per cent is due to environmental factors such as the sun. "Excessive sun exposure throughout our lifetime can greatly increase the rate of collagen and elastin breakdown, resulting in fine lines, wrinkles and skin sagging." Dowling says the best methods to prevent premature ageing of skin are protective clothing and an effective sunscreen used daily.

Dowling emphasises that a daily broad-spectrum product with UVA and UVB protection is a must. "UVA is relatively constant throughout the

DID YOU KNOW?

that an estimated **20%** reduction in lifetime exposure to UV could result in about **1/3 fewer cases** of skin cancer in Australia.
www.sunsmart.com.au

Remember:

- ✦ Excess sugars in your diet may increase the appearance of sun damage.
- ✦ Deep wrinkling caused by sun exposure may occur in the absence of any history of sunburn.
- ✦ Skin cancers *can* occur in people with olive skin.
- ✦ Uneven skin tone produced by sun damage can change a person's perceived age by up to 10 to 15 years.

- Associate professor Greg Goodman

Smoking increases the effects of sun damage.

year, even on cloudy days," she says. "Protection from UVA is particularly important, as it's the UVA rays that penetrate deep into the skin, damaging collagen and elastin and resulting in premature ageing including skin sagging."

The future of skin

Thankfully, science isn't just the bearer of bad news; research is underway into remedies that may be able to reverse damage on a cellular DNA level. It's long been known some animals enjoy a key enzyme that repairs sun damage (humans and other mammals don't have it), but scientists never knew how it actually worked until now. Researchers in Ohio, USA, were able to observe how the enzyme photolyase repaired an injured strand of DNA. They made synthetic DNA, exposed it to ultraviolet light (giving it sunburn-like damage), and then added photolyase and watched what happened. Now that we understand the mechanism of cellular repair, you could say the future looks bright for a cure for sun damage. ✦

Essential ingredients

1 It's not enough to choose a sunscreen based on SPF alone – also consider broad-spectrum protection and photostability, which means that it won't break down after exposure to sunlight. Neutrogena's latest sunscreen technology, Helioplex, offers photostable, durable protection against UVA and UVB (see 'Sunscreens for every occasion', right).

2 Physical blockers such as zinc and titanium tend to offer the best protection against both UVB and UVA. Technological advances have transformed zinc from pasty and opaque to lightweight, transparent formulas.

3 Studies have shown that lycopene-rich tomatoes give some protection against sun damage, neutralising the harmful effects of UV light. But don't just eat tomatoes – you've got to wear sunscreen, too!

Sunscreens for every occasion



Our pick for the face
Neutrogena Healthy Defence Daily Moisturiser SPF 30+, \$16.49 (stockists 1800 678 380). UVA/UVB, non-greasy, light, great under make-up.



Our pick for children
Invisible Zinc Junior Clip-On Sunscreen, \$19.95 (stockists 1300 738 850). SPF 30+, UVA/UVB, low-irritant, natural zinc oxide, clips onto your bag.



Our pick for daily defence
ASAP Daily Moisturiser Plus Sunscreen, \$44 (stockists 1300 131 970). UVA/UVB, dewy, moist, antioxidant-packed lotion.



Our pick for sport
Natural Instinct Micro-Mineral Sunscreen SPF 30+, \$13.95 (stockists 1800 020 225). UVA/UVB, four-hour water resistance.



Our pick for beach babes
Nivea Ultra Beach Protect SPF 30+, \$13.95 (stockists 1800 103 023). UVA/UVB protection, four-hour water resistance.



Our pick for damage control
Danné Montague-King Melanoplex Crème, \$109 (stockists 1300 007 546). Inhibits melanin production, oxygenates skin cells, non-bleaching.



Our pick for natural solutions
Mineral Pro SPF 30+ Daily Triple Defense Moisturiser, \$59 (stockists (02) 9712 8188). UVA/UVB, with no titanium dioxide, parabens or chemical UV filters.

The golden rules

- ✦ If you don't like greasy sunscreen, try a sunscreen spray.
- ✦ Pop a pump bottle of sunscreen inside the entrance of your home so the family can apply some before heading out.
- ✦ Re-apply your make-up: studies show that foundation's sun-protective value lasts only a couple of hours.