



Perfect Tan, NOT!

Bake at your own risk.

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a glossy golden brown tan to set off toned limbs—that's the stuff which teenage dreams are made of. The pursuit of that bronzed, sun-kissed look has led to an influx of sun worshippers in bikinis, board shorts, and bare chests congregating at Sentosa's Siloso beach and East Coast Park. But just how much do they know about the dangers associated with excessive sun exposure?

It's not that they are ignorant, says Dr Wong Su-Ni, a member of the Dermatological Society of Singapore. She feels that teenagers are simply more adventurous, fun-loving, and participate in sports passionately. Sometimes, this may just cause them to overlook the necessity of sun-protection, she adds.

Indeed, many teenagers love to participate in outdoor sports like soccer, wakeboarding, windsurfing, and volleyball. While these activities are

undoubtedly beneficial to their health, the risks of excessive sun exposure are very real.

Sun damage

The sun emits three types of ultraviolet (UV) rays: UVA, UVB, and UVC. Only UVA and UVB rays reach the earth's surface because UVC is filtered out by the ozone layer.

UVA penetrates deeply into the skin and triggers the production of melanin, which is a pigment in our bodies that causes skin to tan. UVB primarily affects the skin's outer layer and causes sunburn. UV rays are thought to be responsible for chronic photo-ageing (cluster of skin conditions like hyperpigmentation, wrinkles, and sagging skin), and skin cancer.

Sunburn is one of the short-term damages of sun exposure, says Dr Wong, also an associate consultant dermatologist with the

National Skin Centre (NSC). It ranges from redness and pain to redness and swelling, and even blisters.

Frequent sunburns have been associated with increased risks of getting skin cancers. The Singapore Cancer Society lists skin cancer as the seventh most common cancer for both males and females in Singapore. There are three common types of skin cancers: squamous cell carcinoma (SCC), basal cell carcinoma (BCC), and malignant melanoma.

Most SCC and BCC cases are caused by chronic exposure to sunlight. These tumours appear most commonly on sun-exposed areas like the face, hands, back, shoulders, and lower lip. SCC tumours are irregular and



A skin cancer tumour that has been taken out.



Skin cancer tumours appear most commonly on sun-exposed areas.

fleshy growths that can enlarge and break down into ulcers.

BCC tumours are often shiny and pigmented, with raised borders. The Skin Cancer Foundation (SCF) in New York, US, estimates that some 800,000 and 200,000 Americans suffer from BCC and SCC annually respectively. The NSC diagnoses 200 cases of BCC and 140 of SCC a year among Singaporeans.

Malignant melanoma is cancer of the skin's pigment cells. It may form in pre-existing moles, where pigmentation is heavily concentrated. The tumours are presented as large, thick, and coloured (red, black or blue) patches that grow rapidly, with irregular outlines. The SCF estimates that about 51,000 new cases of malignant melanoma are reported annually in the US. It is rather uncommon in Asians and the NSC diagnoses on average 10 cases a year.

On a less fatal note, exposure to bright light can also trigger migraines and headaches, for up to 24 hours even. Melasma is another UV-related skin disorder characterised by symmetrical brown patches in UV-exposed areas and affects women 90% of the time.

Block out the sun

Much as knowledge of sun exposure dangers is important, knowing how to minimise risks is even more essential.

Techniques to minimise damage from sun rays can be divided into those to do with behaviour and those to do with fabrics, says Dr Wong. Behaviour wise, teenagers can refrain from carrying out high-risk activities between 10:00 am and 4:00 pm, when the sun's rays are strongest. Try to keep in the shade while going about normal activities.

Fabrics that are sun-protective have tight weaves and are dark-coloured. To test for a tight weave, hold the garment about seven inches from your eyes towards a light source. If visible light can penetrate holes between the threads, so can UV rays. Dark colours absorb harmful UV rays better than light-coloured clothes and hence protect the skin better.

To protect the face, sunblock is essential, preferably one with at least Sun Protection Factor (SPF) 20. Reliable brands include Sunkiller, La Roche-Posay, Coppertone, and an internal sunscreen Estime. If sun exposure time is expected to be long, then a higher SPF of 45 or 60 is recommended. One often-neglected directive is to reapply sunblock frequently throughout the day, as sweat or friction may have washed it away. For the eyes, sunglasses with UV-protective coating are advised. Certified opticians can advise on reliable brands.

Alternative tones

Fashion-conscious teenagers who covet a tan but are afraid of increasing their skin cancer risk have started to frequent tanning

salons. This misguided attempt only reduces the incidence of sunburn and not skin cancer, warns Dr Wong.

"In fact, by going to tanning salons, you are exposed to unnecessary excessive UVA, which may increase your risk of getting skin cancer as it is primarily UVA-mediated."

One relatively harmless alternative to sun tanning is to use self-tanning lotions. These contain dihydroxyacetone (DHA), which reacts with proteins in dead skin cells on the skin surface to result in brown pigmentation—hence the tan. While self-tan lotions, like other topical products, have been known to cause skin irritation, no adverse long-term effects have been recorded.

As we welcome the return of warm, sunny weather, do keep in mind the relevant risks and precautions. Being cautious when young may just save you lots of heartache and pain in later years •

