



Sunscreen: skin cancer prevention

Intervention

Regular, daily, SPF30+ or higher, broad-spectrum sunscreen application.

Indication

Australia has one of the highest incidences of skin cancer in the world – two out of every three Australians are likely to be diagnosed with skin cancer before they reach age 70 years.

Adults at risk of nonmelanoma squamous cell carcinoma and melanoma, particularly people at high risk, such as those:

- with a past history of any skin cancer
- with multiple risk factors for skin cancer such as:
 - being over age 40 years
 - having Northern European ethnicity
 - having fair skin or skin with a tendency to freckle
 - having a history of sunburns.
- using immunosuppressive therapy, such as organ transplant patients.

Precautions

The effects of lifelong daily sunscreen use have not been evaluated. The randomised controlled trial (in Nambour, Queensland) on which this HANDI intervention is based followed daily sunscreen use for almost 15 years.

Nanotechnology

There has been some concern about whether the titanium dioxide and zinc oxide nanoparticles used in some sunscreens can be absorbed into the skin. The Cancer Council advises that nanotechnology does not pose a risk to patients based on the current available evidence.

Research suggests that sunscreen nanoparticles do not penetrate into the deeper skin layers containing the viable skin cells or reach the bloodstream through the skin. Research is ongoing into the potential side effects of this technology.

Note: The 'microfine' or 'micronised' particles found in some sunscreens are larger than nanoparticles.

Contraindications

None known

Adverse Effects

None known but see Precautions

Availability

Sunscreen products offering SPF30+ or higher protection can be readily purchased from supermarkets and pharmacists.

Description

Every morning sunscreen should be applied to the head, neck, arms and hands. It should be reapplied after heavy sweating, bathing or long sun exposure, especially if outdoors when the UV Index is 3 or above.

Sunscreen must be applied properly to provide skin protection. About two teaspoons of sunscreen are needed for the head, neck and arms. Ideally, it should be applied about 15 to 20 minutes before going outdoors.



Practice Points

Using sunscreen regularly does not appear to affect vitamin D levels in Caucasian populations.

A 2012 joint position statement from the Australian and New Zealand Bone and Mineral Society and Osteoporosis Australia suggest the following sun exposure times for maintaining vitamin D levels in moderately fair-skinned people (people with dark skin will probably need to be exposed to the sun three to six times longer):

- in summer, 6–7 minutes of sun exposure mid-morning or mid-afternoon, with arms exposed
- in winter, 7–40 minutes of sun exposure (depending on latitude) at noon on most days, with as much of the body exposed as is feasible.

www.mja.com.au/journal/2012/196/11/vitamin-d-and-health-adults-australia-and-new-zealand-position-statement

Patients should be advised that application of sunscreen is only one strategy for preventing skin cancer, along with wearing protective clothing such as broad-brimmed hats.

Patients at high risk should get regular skin cancer checks.

Grading

NHMRC Level 2 evidence

References

Green AC, Williams GM, Logan V, Strutton GM. Reduced melanoma after regular sunscreen use: randomized trial follow-up. *J Clin Oncol* 2011;29: 257–63.

Jayarathne N, Russell N, van der Pols JC. Sun protection and vitamin D status in an Australian subtropical community. *Prev Med* 2012;55: 146–50.

van der Pols JC, Williams GM, Pandeya N et al. Prolonged prevention of squamous cell carcinoma of the skin by regular sunscreen use. *Cancer Epidemiol Biomarkers Prev* 2006;15: 2546–8.

Consumer Resources

- Cancer Council Australia, Patient information on sun protection, nanotechnology, the UV index, skin cancer, vitamin D and advice on sun protection for young children www.cancer.org.au/preventing-cancer/sun-protection/
- Australasian College of Dermatologists, Patient leaflets on sun protection and skin cancer for your practice www.dermcoll.edu.au/publications/patient-information-brochures

First published: November 2014