



Who is at risk of vitamin D deficiency?

A majority of Australians get enough exposure to sunlight to ensure they have enough vitamin D to form and maintain healthy bones.

However, certain sections of the population are more likely to be at risk of vitamin D deficiency. These include:

- Naturally dark skinned people – who need more UV exposure to produce adequate levels of vitamin D as the pigment in their skin reduces UV penetration
- People who cover their skin for religious or cultural reasons
- The elderly and people who are housebound or in institutional care
- Babies and infants of vitamin D deficient mothers, especially babies who are exclusively or partially breastfed
- Patients with osteoporosis.

People in these groups should consult their doctor for advice on whether they need to take a vitamin D supplement.

See your doctor if you are concerned about your vitamin D levels. Vitamin D levels can be checked with a simple blood test, and your doctor can advise if a vitamin D supplement is necessary.

Given the health risks associated with the use of solariums, it is not recommended that they be used to boost vitamin D levels.

For more information

- Cancer Council
www.cancer.org.au/positionVitD
Cancer Council Helpline,
ph 13 11 20
(cost of a local call anywhere in Australia)
- Australasian College of Dermatologists
www.dermcoll.asn.au
- Osteoporosis Australia
www.osteoporosis.org.au
- Australian and New Zealand Bone and Mineral Society
www.anzbms.org.au
- Bureau of Meteorology
www.bom.gov.au/weather/uv
- Australian Radiation Protection and Nuclear Safety Agency
www.arpansa.gov.au

1 Gies P, Roy C, Javorniczky J, Henderson S, Lemus-Deschamps L, Driscoll C. Global Solar UV Index: Australian Measurements, Forecasts and Comparison with the UK. Photochemistry and Photobiology, 2004; 79(1): 32-39.

2 Hobart and Canberra data is supplied from personal communication from ARPANSA



This information has been jointly developed by:



The Australasian College of Dermatologists



Australian and New Zealand Bone and Mineral Society



osteoporosis australia



The Australasian College of Dermatologists



How much sun is enough?

GETTING THE BALANCE RIGHT
VITAMIN D AND SUN PROTECTION





The sun's ultraviolet (UV) radiation is both the major cause of skin cancer and the best source of vitamin D.

In Australia we need to balance the risk of skin cancer from too much sun exposure with maintaining adequate vitamin D levels.

Sensible sun protection does not put people at risk of vitamin D deficiency. But there are times when it's safe to leave your hat and sunscreen off.

What is vitamin D and why is it important?

Vitamin D forms in the skin when it is exposed to UV from sunlight. Vitamin D can also be obtained in some foods, such as margarine and some dairy products fortified with vitamin D, as well as oily fish, eggs and liver. However the vitamin D in food makes a relatively small contribution to a person's overall vitamin D levels.

We need vitamin D to maintain good health and to keep bones and muscles strong and healthy.

How much sun do we need for healthy bones?

The majority of Australians achieve adequate vitamin D levels through the sun exposure they receive during typical day-to-day outdoor activities.

During summer the majority of people can maintain adequate vitamin D levels from a few minutes of exposure to sunlight on their face, arms and hands or the equivalent area of skin on either side of the peak UV periods (10 am to 3 pm) on most days of the week.

In winter in the southern parts of Australia, where UV radiation levels are less intense, people may need about two to three hours of sunlight to the face, arms and hands, or equivalent area of skin, spread over a week to maintain adequate vitamin D levels.

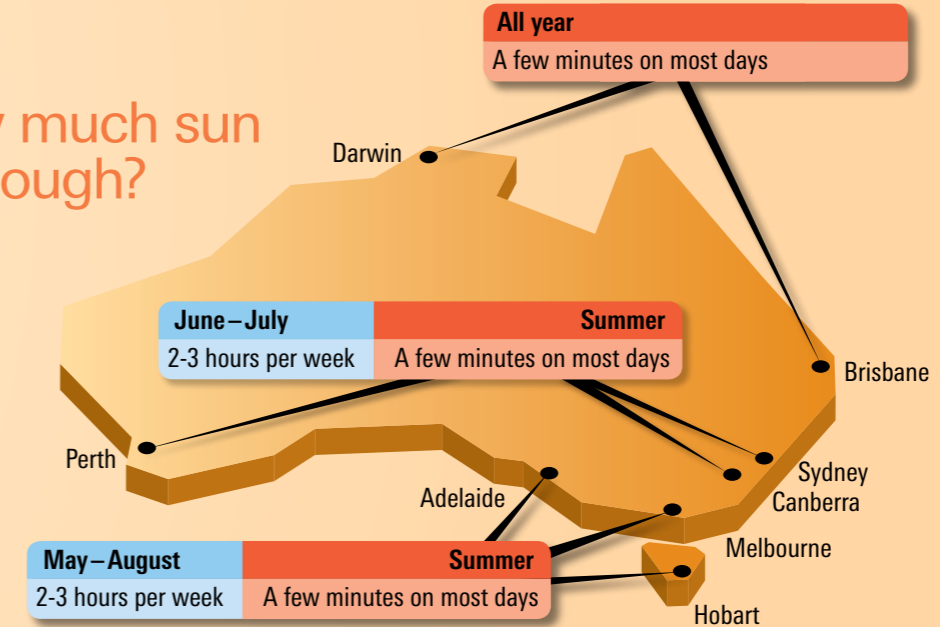
In winter in northern parts of Australia, people will continue to maintain adequate vitamin D levels going about their day-to-day activities, so it is not necessary to deliberately seek UV radiation exposure.

When do I need sun protection?

Most Australians need sun protection when the UV Index is 3 or above. UV radiation levels in northern states are higher than southern states, so in some parts of Australia, sun protection is needed all year round at certain times of the day. In these areas, it is safe to go outside without sun protection in the early morning and late afternoon when the UV Index is below 3.

However in southern states, there are times of the year when sun protection may not be necessary. People in southern states may not need sun protection from May to August when the UV Index is likely to be below 3. The only exception is if they are at high altitudes or near highly reflective surfaces like snow or water.

How much sun is enough?



The table below is a guide to average peak UV levels by month for Australian capital cities.

UV Index* in selected Australian cities averaged over the days in each month

Location	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Darwin	11	12	11	6	8	7	7	9	11	11	11	10
Brisbane	11	10	9	6	4	3	3	5	7	8	10	11
Perth	11	10	8	5	3	2	2	4	6	8	9	10
Canberra	10	9	7	5	3	2	2	3	5	7	9	10
Sydney	10	9	7	5	3	2	2	3	5	7	8	8
Adelaide	11	10	7	5	2	2	2	2	5	7	9	10
Melbourne	9	9	6	4	2	1	1	2	4	6	8	9
Hobart	8	7	4	3	1	1	1	2	3	4	6	7

Table is from Gies et al^{1,2}.

* The UV Index is a measure of the amount of UV from the sun at the earth's surface at solar noon on a particular day. The shaded area identifies the months of the year when sun protection may not be required.

How do I check the UV Index?

The SunSmart UV Alert provides the best guide on when to wear your sunscreen and hat, and when to leave them at home. The SunSmart UV Alert is issued when the UV Index reaches 3 or above. You can find it on the weather page of all Australian daily newspapers, or on the Bureau of Meteorology website at www.bom.gov.au (search for 'UV Alert'). The UV Alert is issued for over 200 locations across Australia, and shows the time period that sun protection is needed for that day. When UV Index levels are below 3, the SunSmart UV Alert will report 'No UV Alert' and sun protection may not be necessary.