Who is at risk of vitamin D deficiency?

There are groups within the population that are at higher risk of vitamin D deficiency including:

- People with naturally very dark skin. The melanin in dark skin affects UV penetration.
- People with little or no sun exposure including: older adults, those in residential care or housebound; people who wear concealing clothing for religious or cultural purposes; people who deliberately avoid sun exposure for cosmetic or health reasons; people hospitalised for a long time.
- Breast-fed babies from vitamin D deficient mothers.
- People with conditions (obesity, end stage liver disease, renal disease and fat malabsorption syndromes such as cystic fibrosis, coeliac disease, inflammatory bowel disease) or are taking medications affecting vitamin D metabolism.

If you belong to one of these groups at risk of vitamin D deficiency and you’re concerned about your vitamin D levels, consult your GP. Vitamin D levels can be checked with a blood test, and your GP can advise on options, such as supplementation, depending on your individual circumstances.
Sun protection and vitamin D – getting the balance right

What is vitamin D and why is it important?
Vitamin D forms in the skin when it is exposed to UVB radiation from the sun. We need vitamin D to maintain good health, in particular to keep bones and muscles strong and healthy. Some foods, such as oily fish and eggs, also contain small amounts of vitamin D, while margarine and some types of milk have added vitamin D. However, food only makes a small contribution to the body’s overall vitamin D levels and it is difficult to get enough from diet alone.

How much sun do we need for vitamin D?
When the skin is exposed to UV radiation from the sun, vitamin D is formed through a series of processes that start in the skin. The amount of sun exposure you need to make vitamin D depends on a range of factors such as the UV level, your skin type, and your lifestyle. UV levels vary across Australia and throughout the year. Therefore, the amount of time you need to be in the sun to make vitamin D will vary according to your location, the season and the time of day. The amount of vitamin D you make is also related to the amount of skin exposed to the sun – if you expose more of your skin, in most cases you’ll make more vitamin D. Prolonged sun exposure does not cause your vitamin D levels to increase further but does increase your risk of skin cancer.

When UV levels are 3 or above, most people need just a few minutes of sun exposure, such as walking from the office to get lunch, to get enough vitamin D. When UV levels are below 3, sun protection is not generally required. In some southern areas of the country where UV levels fall below 3 for most of the winter season, you can help maintain your vitamin D by spending short periods outdoors and being physically active.

When do I need sun protection?
Sun protection is required when UV levels are 3 or above. The UV Index is an international standard measurement of the strength of UV radiation from the sun at a particular place on a particular day. UV levels are low in the early morning as the sun comes up, gradually increasing to a peak around the middle of the day when the sun is at its highest, and then decreasing slowly as the sun gets lower in the sky.

In the northern parts of Australia (for example Brisbane and Darwin), maximum daily UV levels are above 3 all year round and reach extreme levels of 14+ in the summer, so sun protection is needed daily.

In the southern parts of the country, there are times of the year when sun protection is not generally required. For example, in Melbourne and Hobart, UV levels remain below 3 from May to August, so sun protection is not generally required unless you are at high altitudes, regularly work outside for extended periods or are near highly reflective surfaces like snow and water.

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