



## HEALTH

# We all need a daily dose of sunlight — but how much?

ABC Health & Wellbeing / By [Shelby Traynor](#) for [What's That Rash?](#)

Posted Thu 4 Jan 2024 at 1:30pm

Many Australians have been raised on the slip, slop, slap slogan — slip on a shirt, slop on sunscreen and slap on a hat.

The sun safety saying was launched by the Cancer Council in 1981, and since then attitudes around sun exposure have changed drastically.

Now we've got the expanded slip, slop, slap, seek, slide slogan — seek shade and [slide on some sunglasses](#).

Australia has more sunny days than many countries, which also means more exposure to ultraviolet radiation and higher rates of skin cancer.

But along with these risks, there are benefits to sun exposure, and we do need to spend some time outdoors. So how do you get the timing right?

## The sunshine vitamin

When sunlight hits your skin, you absorb UV radiation and convert it into vitamin D.

Your body then uses vitamin D to absorb calcium and phosphate, which are both critical for skeletal health.

But it goes beyond your bones. There are vitamin D receptors in nearly every cell in your body. This includes immune cells, muscle cells and brain cells.

So not only can vitamin D deficiency lead to bone disease, it is also associated with autoimmune diseases, cancers and [dementia](#).

Rachel Neale from the Queensland Institute of Medical Research says even mild to moderate deficiency is a problem.

"We want everyone to be in a normal range," Professor Neale says.

The 2011–12 [Australian Health Survey](#) found an average of 23 per cent of the population were deficient throughout the year.

That percentage went up considerably for south-eastern states during winter — 49 per cent in both Victoria and the ACT.

"That's a pretty high number," Professor Neale says. "We shouldn't be accepting even mild to moderate deficiency."

It's also possible that if people aren't getting adequate vitamin D, they're missing out on other benefits from sunlight.

## Beyond vitamin D

The Sun keeps your internal clock, or circadian rhythm, ticking.

Your circadian rhythm not only ensures you're alert in the mornings and tired at night, but also influences everything from appetite to your internal temperature.

Which is why, Professor Neale says, exposure to morning light is so important.

"You're not getting much exposure to UVB, you're not making vitamin D, but you are getting the benefits of visible light, which are particularly important for mood and sleep," she says.

ere are health benefits to sunlight outside of vitamin D production. *(Getty Images: RunPhoto)*

There are three main types of UV radiation: UVA, UVB and UVC, which are all invisible to the human eye.

UVC doesn't reach the Earth's surface, but UVA and UVB do. That's what you'll be exposed to when you get some sun during the main part of the day — along with their risks and benefits.

While UVB triggers vitamin D production, UVA triggers the production of a different chemical messenger: nitric oxide.

Nitric oxide [dilates your blood vessels](#), and has been shown to lower blood pressure. It is also being investigated as a [possible treatment avenue](#) for diabetes, because of its role in insulin secretion.

UV radiation is [known to suppress](#) the immune system. It has been theorised exposure to sunlight may protect against some autoimmune disorders like [multiple sclerosis](#) and rheumatoid arthritis.

But immune suppression can also lead to skin cancer.

On the flip side, some ultraviolet radiation can kill germs. But don't go sunbathing to kill COVID-19 — there's no evidence it protects against the coronavirus, and plenty of evidence it can give you melanoma.

Which, Professor Neale says, speaks to the overarching challenge of sun exposure.

"How do we balance the fact that there are benefits as well as harms?"

## Getting the dose right

The amount of sun you need will differ depending on where you live, the time of year, your skin type and your skin cancer risk.

However there has been general guidance developed by the Cancer Council, Healthy Bones Australia and dermatologists.

In summer, wherever you live in Australia, [a few minutes](#) is adequate on most days.

In winter, it depends where you are.

In Brisbane and Darwin, it's recommended people limit their sun exposure to a few minutes all year round. Elsewhere, it's recommended people aim for two to three hours a week.

Professor Neale says it's important to monitor UV levels, and not assume you're getting the right amount of sun based on the weather.

"In southern states in winter, even when it's bright and sunny, the UV index really doesn't get above three," she says.

"Whereas in Queensland, in the middle of winter, it can be overcast and you can still have a UV index over three."

This balancing act will differ from person to person.

"People at high risk of skin cancer might be better off meeting vitamin D requirements with a supplement, and having an early morning walk to get the mood and sleep benefits from the Sun," Professor Neale says.

People at high risk include those with a fair complexion, freckles, light hair colour or a family history of skin cancer.

For people with lower skin cancer risk, getting some sun is beneficial.

"A lot of people are doing that naturally in summer. If you're picking the kids up after school, or you're ducking out for a cup of coffee. A lot of people are doing what they need to do."

However there are people at greater risk of not getting the sun they need. This includes those who are housebound, and those who cover their skin for religious or cultural reasons.

People with darker skin are also at increased risk of vitamin D deficiency, because melanin competes for the same UVB radiation needed to synthesise vitamin D.

These individual variations are why Professor Neale's team has been working on an online tool to provide personalised advice depending on where you live and your circumstances.

"More nuanced advice enables people to make more informed decisions about how they would like to balance the fact the Sun has some benefits."

But until that tool is up and running, Professor Neale says it's wise to take a cautionary approach.

"The one-size-fits-all message is that in Australia we spend over \$2 billion a year managing skin cancer.

## "When the UV is three or more, protect your skin from the Sun."

That includes applying sunscreen daily.

A [survey of close to 5,000 Australians](#) found about a quarter of respondents believed sunscreen could hinder vitamin D production.

Professor Neale, who was an author on the survey, says [it's unlikely sunscreen](#) is having a significant effect. She urges everyone to make sunscreen application a part of their morning routine.

majority of respondents to a 2020 survey overestimated the time they needed to spend in the sun. (Getty Images: Ezequiel)

Critically, the survey also found 76 per cent of respondents overestimated the time they needed to spend outdoors in summer to maintain adequate vitamin D.

While in winter, 32 per cent of people underestimated the time required.

"Ultimately, what we want to do is make sure that people can protect themselves from the Sun, but also avoid being vitamin D deficient," she says.

"Whether that be through sun exposure or recognising that their sun exposure is sub-optimal, and taking a supplement."

**Listen to Dr Norman Swan and Tegan Taylor discuss [the health benefits of sunlight](#) on RN's *What's That Rash?* And [subscribe to the podcast](#) for more.**

## Health in your inbox

Get the latest health news and information from across the ABC.

**SUBSCRIBE**

Your information is being handled in accordance with the [ABC Privacy Collection Statement](#).

This site is protected by reCAPTCHA and the Google [Privacy Policy](#) and [Terms of Service](#) apply.