

The Sun Is Your Best Source of Vitamin D



There's good reason why vitamin D is called "the sunshine vitamin."

When your skin is exposed to sunlight, it makes vitamin D from cholesterol. The sun's ultraviolet B (UVB) rays hit cholesterol in the skin cells, providing the energy for vitamin D synthesis to occur.

Vitamin D has many roles in the body and is essential for optimal health ([2](#)).

For example, it instructs the cells in your gut to absorb calcium and phosphorus — two minerals that are essential for maintaining strong and healthy bones ([3](#)).

On the other hand, low vitamin D levels have been linked to serious health consequences, including:

- Osteoporosis
- Cancer
- Depression
- Muscle weakness
- Death

In addition, only a handful of foods contain significant amounts of vitamin D.

These include cod liver oil, swordfish, salmon, canned tuna, beef liver, egg yolks and sardines. That said, you would need to eat them nearly every day to get enough vitamin D.

If you do not get enough sunlight, it's often recommended to take a supplement like cod liver oil. One tablespoon (14 grams) of cod liver oil contains more than three times the recommended daily amount of vitamin D ([4](#)).

It's important to note that the sun's UVB rays cannot penetrate through windows. So people who work next to sunny windows are still prone to vitamin D deficiency.

Expose Your Skin Around Midday

Midday, especially during summer, is the best time to get sunlight.

At noon, the sun is at its highest point, and its UVB rays are most intense. That means you need less time in the sun to make sufficient vitamin D (5Trusted Source).

Many studies also show that the body is most efficient at making vitamin D at noon (6Trusted Source, 7Trusted Source).

For example, in the UK, 13 minutes of midday sunlight exposure during summer three times per week is enough to maintain healthy levels among Caucasian adults (5Trusted Source).

Another study found that 30 minutes of midday summer sun exposure in Oslo, Norway was equivalent to consuming 10,000–20,000 IU of vitamin D (8Trusted Source).

The commonly recommended daily dose of vitamin D is 600 IU (15 mcg) (3).

Not only is getting vitamin D around midday more efficient, but it might also be safer than getting sun later in the day. One study found that afternoon sun exposure may increase the risk of dangerous skin cancers

Skin Color May Affect Vitamin D Production

The color of your skin is determined by a pigment called melanin.

People with darker skin typically have more melanin than people with lighter skin. What's more, their melanin pigments are also larger and darker (10).

Melanin helps protect the skin against damage from excess sunlight. It acts as a natural sunscreen and absorbs the sun's UV rays to defend against sunburn and skin cancers (11Trusted Source).

However, that creates a big dilemma because darker-skinned people need to spend longer in the sun than lighter-skinned people to produce the same amount of vitamin D.

Studies estimate that darker-skinned people may need anywhere from 30 minutes to three hours longer to get sufficient vitamin D, compared to lighter-skinned people. This is a major reason why darker-skinned people have a higher risk of deficiency (12).

For that reason, if you have dark skin, you may need to spend a bit more time in the sun to get your daily dose of vitamin D.

How to Safely Get Vitamin D From Sunlight

- [Overview](#)
- [Time of Day](#)
- [Skin Color](#)

- [Distance From the Equator](#)
- [Amount of Skin](#)
- [Sunscreen](#)
- [Dangers](#)

Vitamin D is a unique vitamin that most people don't get enough of.

In fact, it's estimated that more than 40% of American adults have a vitamin D deficiency.

This vitamin is made from cholesterol in your skin when it's exposed to the sun. That's why getting enough sunlight is very important for maintaining optimal vitamin D levels.

However, too much sunlight comes with its own health risks.

This article explains how to safely get vitamin D from sunlight.

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Vitamin D has many roles in the body and is essential for optimal health .

For example, it instructs the cells in your gut to absorb calcium and phosphorus — two minerals that are essential for maintaining strong and healthy bones .

On the other hand, low vitamin D levels have been linked to serious health consequences, including:

- Osteoporosis
- Cancer
- Depression
- Muscle weakness
- Death

In addition, only a handful of foods contain significant amounts of vitamin D.

These include cod liver oil, swordfish, salmon, canned tuna, beef liver, egg yolks and sardines. That said, you would need to eat them nearly every day to get enough vitamin D.

If you do not get enough sunlight, it's often recommended to take a supplement like cod liver oil. One tablespoon (14 grams) of cod liver oil contains more than three times the recommended daily amount of vitamin D .

It's important to note that the sun's UVB rays cannot penetrate through windows. So people who work next to sunny windows are still prone to vitamin D deficiency.

Summary Vitamin D is made in the skin when it's exposed to sunlight. Sun exposure is by far the best way to boost vitamin D levels, particularly because very few foods contain significant amounts.

Expose Your Skin Around Midday

Midday, especially during summer, is the best time to get sunlight.

At noon, the sun is at its highest point, and its UVB rays are most intense. That means you need less time in the sun to make sufficient vitamin D.

Many studies also show that the body is most efficient at making vitamin D at noon .

For example, in the UK, 13 minutes of midday sunlight exposure during summer three times per week is enough to maintain healthy levels among Caucasian adults .

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The commonly recommended daily dose of vitamin D is 600 IU (15 mcg) .

Not only is getting vitamin D around midday more efficient, but it might also be safer than getting sun later in the day. One study found that afternoon sun exposure may increase the risk of dangerous skin cancer.

Summary Midday is the best time to get vitamin D, as the sun is at its highest point and your body may manufacture it most efficiently around that time of day. This means you may need less time in the sunlight at midday.

Skin Color May Affect Vitamin D Production

The color of your skin is determined by a pigment called melanin.

People with darker skin typically have more melanin than people with lighter skin. What's more, their melanin pigments are also larger and darker .

Melanin helps protect the skin against damage from excess sunlight. It acts as a natural sunscreen and absorbs the sun's UV rays to defend against sunburn and skin cancers

However, that creates a big dilemma because darker-skinned people need to spend longer in the sun than lighter-skinned people to produce the same amount of vitamin D.

Studies estimate that darker-skinned people may need anywhere from 30 minutes to three hours longer to get sufficient vitamin D, compared to lighter-skinned people. This is a major reason why darker-skinned people have a higher risk of deficiency

For that reason, if you have dark skin, you may need to spend a bit more time in the sun to get your daily dose of vitamin D.

Summary Darker-skinned people have more melanin, a compound that protects against skin damage by reducing the amount of UVB light absorbed. Darker-skinned people need more time in sunlight to make the same amount of vitamin D as lighter-skinned people.

ADVERTISING

If You Live Far From the Equator

People living in areas farther away from the equator make less vitamin D in their skin.

In these areas, more of the sun's rays, especially UVB rays, are absorbed by the earth's ozone layer. So people who live farther away from the equator usually need to spend more time in the sun to produce enough

What's more, people who live farther from the equator may not produce any vitamin D from the sun for up to six months a year during the winter months.

For example, people who live Boston, USA and Edmonton, Canada struggle to make any vitamin D from sunlight between the months of November and February

People in Norway cannot make vitamin D from sunlight between October and March

During this time of year, it's important that they get their vitamin D from foods and supplements instead.

Expose More Skin to Make More Vitamin D

Vitamin D is made from cholesterol in the skin. That means you need to expose lots of skin to the sunlight to make enough.

Some scientists recommend exposing around a third of the area of your skin to the sun

According to this recommendation, wearing a tank top and shorts for 10–30 minutes three times per week during the summer should be sufficient for most people with lighter skin. People with darker skin may need a bit longer than this.

Just make sure to prevent burning if you're staying in the sun for a long time. Instead, try going without sunscreen for just the first 10–30 minutes, depending on how sensitive your skin is to sunlight, and apply sunscreen before you start burning.

It's also perfectly fine to wear a hat and sunglasses to protect your face and eyes while exposing other parts of your body. Since the head is a small part of the body, it will only produce a small amount of vitamin D.

Does Sunscreen Affect Vitamin D?

People use sunscreen to protect their skin against sunburns and skin cancer.

That's because sunscreen contains chemicals that either reflect, absorb or scatter sunlight.

When this happens, the skin is exposed to lower levels of harmful UV rays

However, because UVB rays are essential for making vitamin D, sunscreen could prevent the skin from producing it.

In fact, some studies estimate that sunscreen of SPF 30 or more reduces vitamin D production in the body by about 95–98%

However, several studies have shown that wearing sunscreen only has a small impact on your blood levels during the summer

One possible explanation is that even though you are wearing sunscreen, staying in the sun for a longer period of time may cause enough vitamin D to be made in the skin.

That said, most of these studies were conducted over a short period of time. It's still unclear whether frequently wearing sunscreen has a long-term impact on blood vitamin D levels.

Dangers of Too Much Sunlight

While sunlight is great for vitamin D production, too much can be dangerous.

Below are some consequences of too much sunlight:

- **Sunburns:** The most common harmful effect of too much sunlight. Symptoms of a sunburn include redness, swelling, pain or tenderness and blisters
- **Eye damage:** Long-term exposure to UV light can damage the retina. This can increase the risk of eye diseases like cataracts
- **Aging skin:** Spending too long in the sun can cause your skin to age faster. Some people develop more wrinkled, loose or leathery skin
- **Skin changes:** Freckles, moles and other skin changes can be a side effect of excess sunlight exposure
- **Heat stroke:** Also known as a sunstroke, this is a condition in which the body's core temperature may rise due to too much heat or sun exposure (
- **Skin cancer:** Too much UV light is a major cause of skin cancers

If you plan on spending a lot of time in the sun, make sure to avoid getting sunburned.

It's best to apply sunscreen after 10–30 minutes of unprotected sun exposure to avoid the harmful consequences of excess sunlight. Your exposure time should depend on how sensitive your skin is to sunlight.

Note that experts recommend reapplying sunscreen every two to three hours you spend in the sun, especially if you're sweating or bathing.

The Bottom Line

Regular sun exposure is the most natural way to get enough vitamin D.

To maintain healthy blood levels, aim to get 10–30 minutes of midday sunlight, several times per week. People with darker skin may need a little more than this. Your exposure time should depend on how sensitive your skin is to sunlight. Just make sure not to burn.

Factors that can affect your ability to make vitamin D from sunlight include the time of day, your skin color, how far you live from the equator, how much skin you expose to sunlight and whether you're wearing sunscreen.

For example, people who live farther away from the equator typically need more sunlight because the sun's UV rays are weaker in these areas.

They also need to take vitamin D supplements or eat more vitamin-D-rich foods during the winter months, since they cannot make it from sunlight.

If you're planning to stay in the sun for a while, it's best to apply sunscreen after 10–30 minutes of unprotected sun exposure to help prevent sunburn and skin cancer.