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Everything You Need to Know About Vitamin D for Your Health

Analysis by Dr. Joseph Mercola | November 12, 2026

STORY AT-A-GLANCE

- Vitamin D3 is important for bone strength and immune function; your body produces it naturally from sunlight, or you can get it through supplements when sun exposure is limited
- The optimal blood level of vitamin D is between 60 and 80 ng/mL; to stay in this range, test your levels regularly and adjust sun exposure or supplementation accordingly
- Getting safe sun exposure requires monitoring your skin for even a slight shade of pink, while avoiding peak hours until you've been off seed oils for four to six months
- Risk factors for vitamin D deficiency include darker skin, older age, living in northern climates, limited outdoor time, obesity, and certain digestive conditions
- Beyond bone health, optimal vitamin D levels are linked to a lower risk of chronic diseases, autoimmune conditions and mood disorders, and to less severe COVID-19

You've probably heard about vitamin D from your doctor or a friend — and how your body produces it when you spend time outside on a sunny day. But why does vitamin D matter so much for your health? In the video above, Dr. Sunil Wimalawansa breaks it all down for you in a simple way, explaining the essentials of why you need vitamin D to keep your body feeling great.[1]

Vitamin D is like a superhero for your body. It's a nutrient that helps your bones stay strong, your immune system fight off germs, and even supports your mood. You probably think of it as something you get from the sun — and you're right. Because sun exposure has many health benefits beyond vitamin D, it's useful to view your vitamin D level as a marker showing you're getting the right amount of sun exposure. But there's more to the story.

What Is Vitamin D and Why Should You Care?

There are a few types of vitamin D, but the one you really need to know about is vitamin D3 (cholecalciferol). Your skin makes vitamin D3 when sunlight hits it, and it's found in supplement form. There's also vitamin D2 (ergocalciferol), which comes from fungi such as yeast and mushrooms exposed to ultraviolet (UV) light, making it a popular option for vegetarians and vegans.

However, vitamin D3 is significantly more effective than D2 at raising blood vitamin D levels. Another form, called calcifediol, is what your liver makes from vitamin D3; it's used in special medical cases, but for everyday life, stick with D3. The active version your body uses is calcitriol, which helps control things like calcium levels and regulates gene expression, influencing many cellular processes, including cell growth and differentiation, immune function, and inflammation.

Why should you care? Because without enough vitamin D, your body can't work at its best. It's key for strong bones, helps your body fight colds, and may even lower your risk of serious diseases.

How Does Vitamin D Work in Your Body?

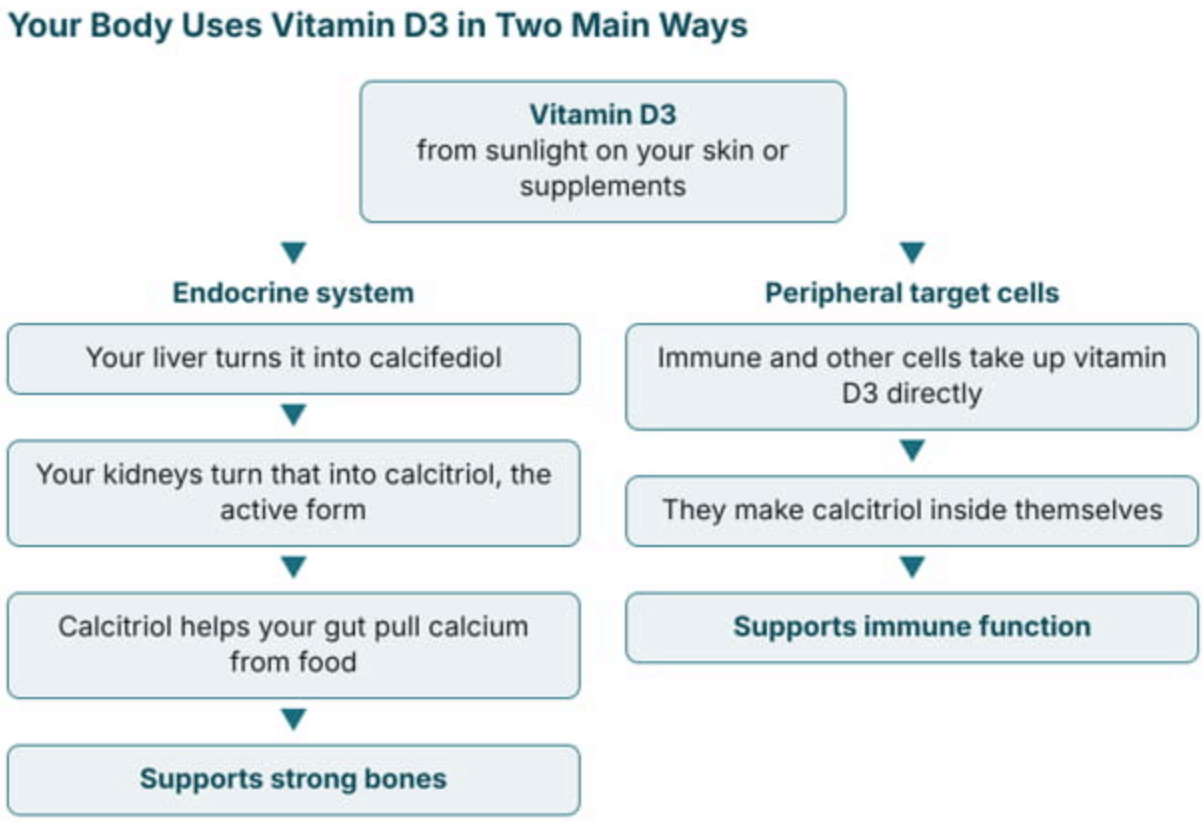
Your body uses vitamin D in two primary ways, and both are important for your health.

1. **Keeping your bones strong —** This is the job of your endocrine system. When you have enough vitamin D, it turns into calcitriol in your kidneys. This helps your gut pull calcium from food to build strong bones. Without it, children get rickets (soft

bones) and adults develop osteomalacia, or weak, painful bones. Vitamin D gives your skeleton the tools it needs to stay tough.

2. **Boosting your immune system and more —** Other cells, like your immune cells, use vitamin D differently. These are called peripheral target cells. They need vitamin D3 directly to make calcitriol inside themselves. This helps your immune system to fight off viruses and may also support heart and brain health.

Here's the catch: These two systems need enough vitamin D3 to do their jobs. If you're low, your bones might weaken, and you could get sick more often. So, how do you make sure you're getting enough?



How vitamin D works. Source: From article text

Figure 1. Your body uses vitamin D3 in two ways: your liver and kidneys convert it to calcitriol to support bones, while immune and other cells make their own calcitriol from it.

What's the Best Way to Get Vitamin D?

You've got two main options to keep your vitamin D levels up: sunlight and supplements. Sunlight is the best option for optimizing your vitamin D levels. Let's break it down.

- **Sunlight is nature's vitamin D factory —** When sunlight hits your skin, it turns a substance in your body into vitamin D3. Here's how to get sun exposure safely:
    - **How much sun?** Expose your bare skin to direct sunlight daily. To gauge safe sun exposure, perform a simple "sunburn test." Pay close attention to your skin as you're in the sun. You're aiming to stay just below the point where your skin starts to turn even slightly pink. Any redness at all is a signal to get out of the direct sun, so avoid getting a sunburn — that's a sign of damage, not benefit.
    - **Eliminate seed oils before peak-hour sun exposure —** Seed oils, rampant in processed and fast food, are packed with linoleic acid (LA). When LA that has built up in your skin interacts with the sun's UV rays, it can trigger inflammation and DNA damage.

      It's best to avoid direct sunlight during peak hours (10 a.m. to 4 p.m.) until you've been off seed oils for four to six months. This gives your body time to clear some of the accumulated LA. After that, solar noon is the best time for sun exposure.



Safe sun exposure. Source: From article text

Figure 2. Avoid direct sun from 10 a.m. to 4 p.m. for your first four to six months off seed oils; after that, solar noon is the best time for sun exposure.

- **Fun fact —** Your skin limits how much vitamin D it makes from sunlight, so you can't overdo it from sunlight alone. However, if you have darker skin, you'll need to spend more time in the sun to produce the same amount of vitamin D as someone with lighter skin.

However, sunlight isn't always reliable. If you live far north (like in Canada or Scandinavia), it's difficult to get enough sun exposure during the winter months. Even in the summer, many people spend most of their time indoors, missing out on valuable sun exposure. That's where supplements come in.

- **Vitamin D3 supplements are a backup plan —** Vitamin D3 supplements are inexpensive and easy to find. If you can't get enough vitamin D from sun exposure, here's what you need to know about vitamin D supplementation:

  - **How much vitamin D3?** Your goal is to reach and maintain optimal vitamin D levels, ideally between 60 and 80 ng/mL (150 to 200 nmol/L). The best way to know if you're in this range is to get your vitamin D levels tested. I recommend doing this twice a year.

    Based on your test results, adjust your sun exposure or your supplement dose. Regular monitoring is key to keeping your vitamin D level in that sweet spot. Talk to your healthcare provider about whether this testing is appropriate for you.

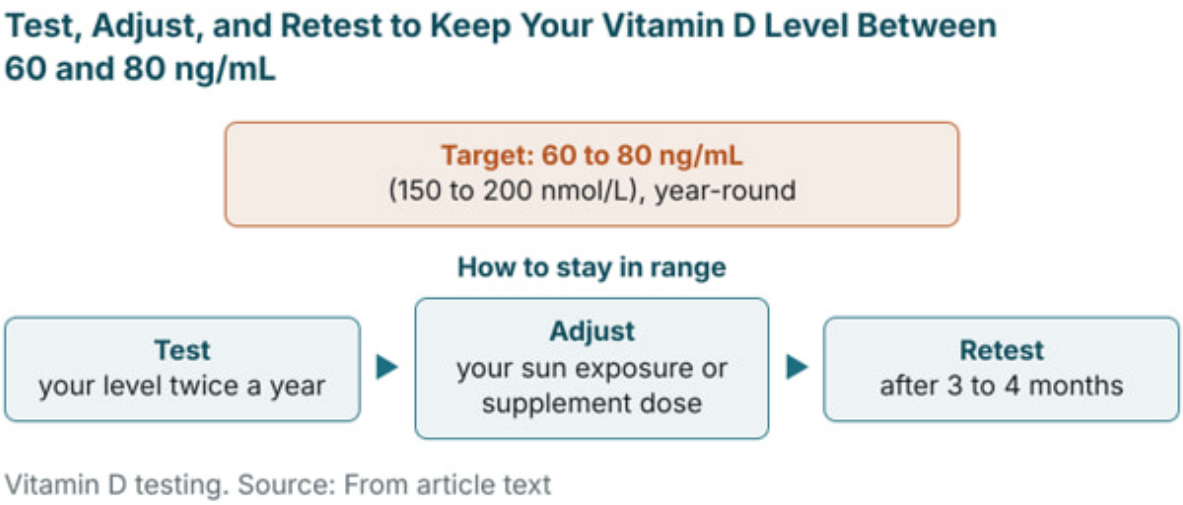


Figure 3. Keep your vitamin D level between 60 and 80 ng/mL by testing twice a year, adjusting sun exposure or supplements, and retesting after three to four months.

- **Vitamin D3 supplement tip —** Take vitamin D3 with a meal that has some healthy fat, like grass fed butter or tallow, to help your body absorb it. Balance your vitamin D3 with magnesium, and take about 180 micrograms (mcg) of vitamin K2 for every 5,000 IUs of vitamin D3. K2 helps direct calcium to your bones and away from your arteries.

Are You at Risk for Low Vitamin D?

So, sun or supplements — or both — keep your vitamin D on track. But how do you know if you're low? Some people have a tougher time getting enough vitamin D. You might be at risk of vitamin D deficiency if:

- **You have darker skin —** More melanin means you need more sun to make vitamin D.
- **You're older —** As you age, your skin doesn't produce it as well.
- **You live far north —** Weak winter sun makes it challenging to get enough vitamin D from sunlight, especially in the winter.

- **You cover up or stay indoors —** Clothes and sunscreen block sunlight, so you miss out on vitamin D. Likewise, if you don't spend much time outdoors.
- **You have certain conditions —** Obesity and gut issues make it harder to use vitamin D.

What Are the Benefits of Optimal Vitamin D Levels?

Keeping your vitamin D level in the optimal range supports your health in many ways. Here's what research suggests:

1. **Stronger bones —** Vitamin D helps prevent rickets in children and osteomalacia in adults, and it supports bone strength as you get older.
2. **Better immunity —** Ever notice you get fewer colds when you're out in the sun? Vitamin D supports your immune system, and low levels have been linked to more severe respiratory infections, including influenza.[2]
3. **Lower chronic disease risk —** Studies link healthy vitamin D levels to a lower risk of heart disease, diabetes,[3] and cancer.[4]
4. **Fewer autoimmune problems —** Conditions like multiple sclerosis, psoriasis, and rheumatoid arthritis have been linked to low vitamin D levels.[5]
5. **Happier mood —** Feeling down? Some research suggests vitamin D may help lift your mood and ease symptoms of depression.[6]

To get these perks, you need steady levels — not just a random dose here and there. Aim for between 60 and 80 ng/mL of vitamin D in your blood, and stick with it year-round.

Can Vitamin D Help with COVID-19?

You might've heard buzz about vitamin D during the pandemic. In fact, a 2022 analysis of 72 observational studies involving nearly 2 million adults reported that people with low vitamin D levels had higher odds of developing severe COVID-19.[7] In one small pilot trial, hospitalized COVID-19 patients given high-dose calcifediol had a lower risk of being admitted to intensive care or mortality.[8]

It's not a magic cure, but having enough vitamin D supports your immune system's ability to fight off viral illness. Keeping your levels steady year-round matters, though researchers note that more randomized trials are needed to confirm vitamin D's role in COVID-19.*[9]

There you have it — practical steps to help you optimize your vitamin D levels and support your overall health. From understanding its role in strong bones, a robust immune system, and a brighter mood, to knowing how to harness sunlight, supplements, and regular testing, you're now equipped to make a real difference.

**These findings are from research conducted in clinical settings. Results may not apply to all individuals.*

FAQs About Vitamin D

Q: What's the best way to get vitamin D?

A: The best way to optimize your vitamin D level is through sensible sun exposure. However, avoid direct sunlight during peak hours (10 a.m. to 4 p.m.) until you've been off seed oils for four to six months.

Unfortunately, getting regular sun exposure is difficult for many, especially during the winter season and/or if you live in northern regions. If you cannot obtain sufficient amounts of vitamin D through sun exposure, taking a vitamin D3 supplement is recommended.

Q: How much vitamin D should I take daily?

A: The only way to know how much vitamin D to take in supplement form is to monitor your levels. Test your vitamin D levels twice yearly, adjust sun exposure or supplementation based on the results, and retest after three to four months to confirm you've reached your target — ideally between 60 and 80 ng/mL (150 to 200 nmol/L).

Q: Can I get too much vitamin D?

A: It's rare, but very high doses of vitamin D from supplements over time can cause issues like high calcium. However, your skin limits how much vitamin D it makes from sunlight, so you can't get too much from sunlight exposure.

Q: What if my vitamin D levels are low?

A: You might feel tired, achy, or get sick a lot if you're vitamin D deficient. Get a blood test to confirm your level, then boost it using safe sun exposure and/or vitamin D3 supplements.

Q: Is vitamin D important for children?

A: Yes, it helps their bones grow strong and supports their immune system. Children should ideally optimize their vitamin D levels by spending time outdoors in the sun, using the same care to avoid sunburn.

This article is for informational purposes only and does not constitute medical advice. Consult a qualified healthcare provider before making changes to your health regimen.

Sources and References

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