

Vitamin D

DNA Health Report

REPORT CATEGORIES —



BONE HEALTH



NUTRITION

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

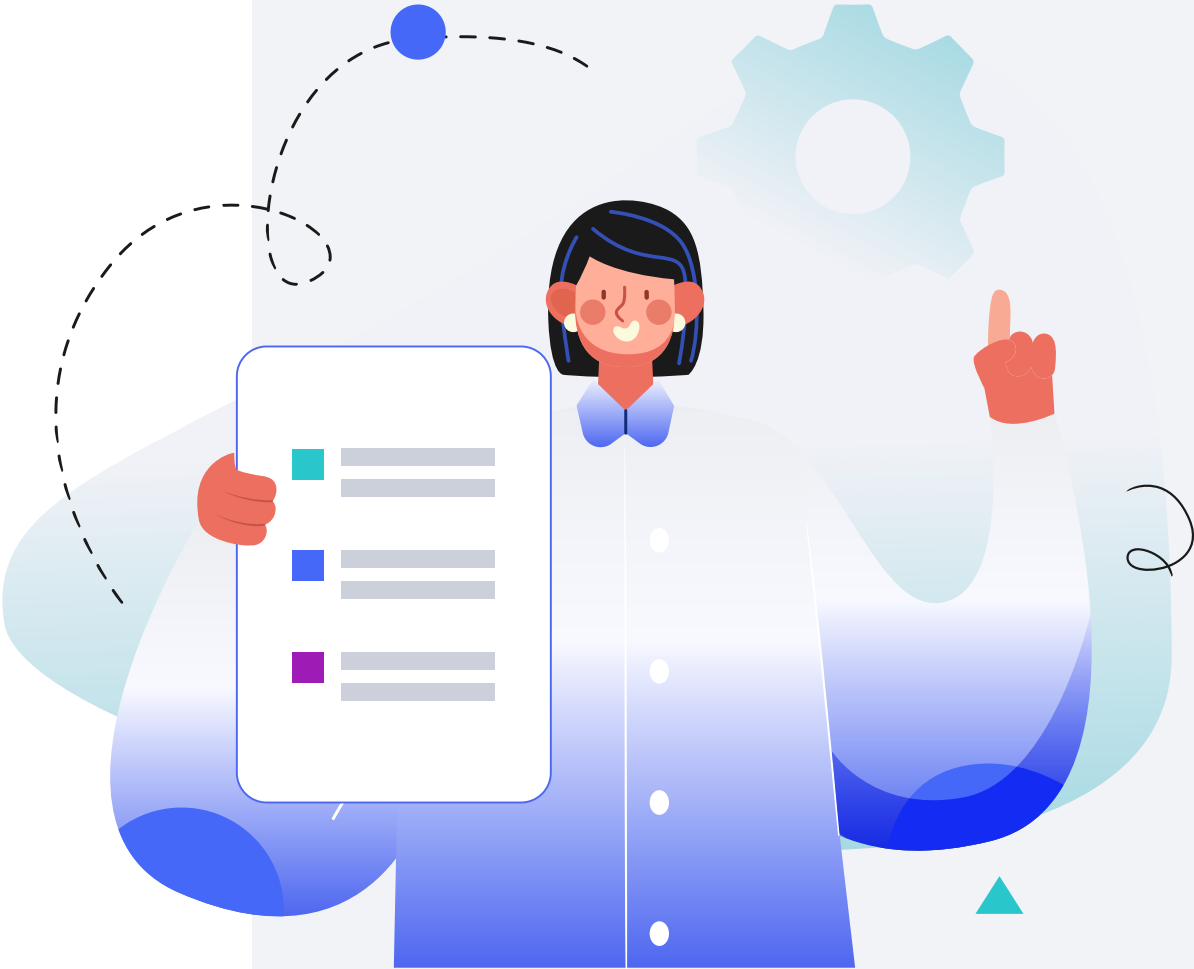
5ft 5" 165cm

WEIGHT

137lb 62kg

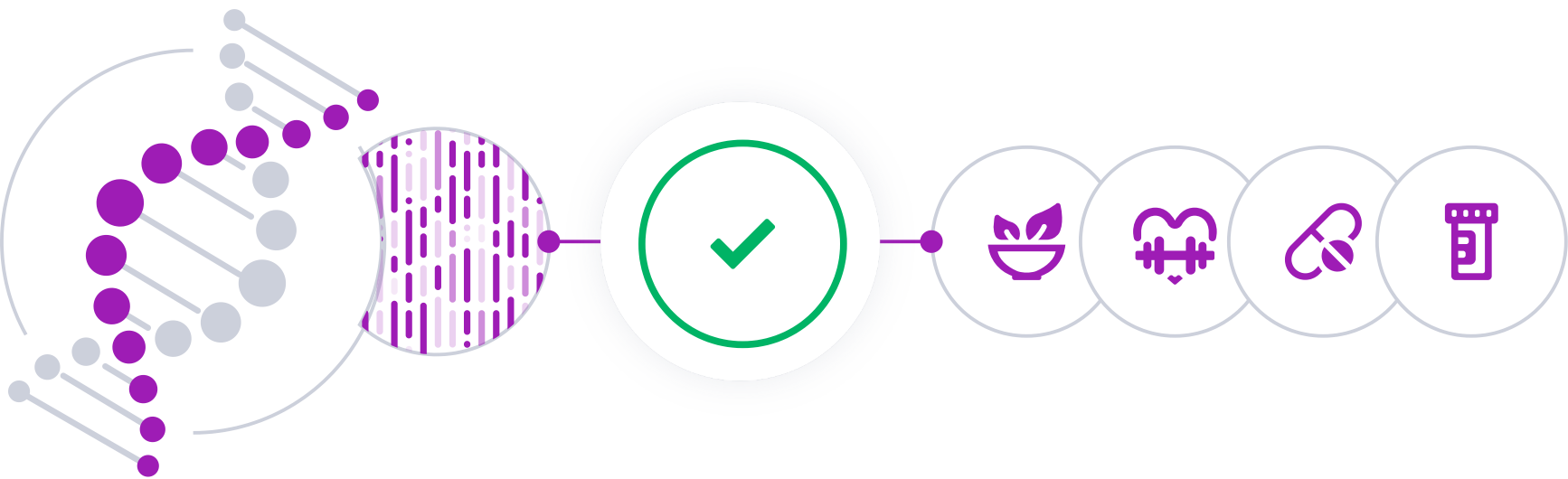
DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.



How this works

Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.

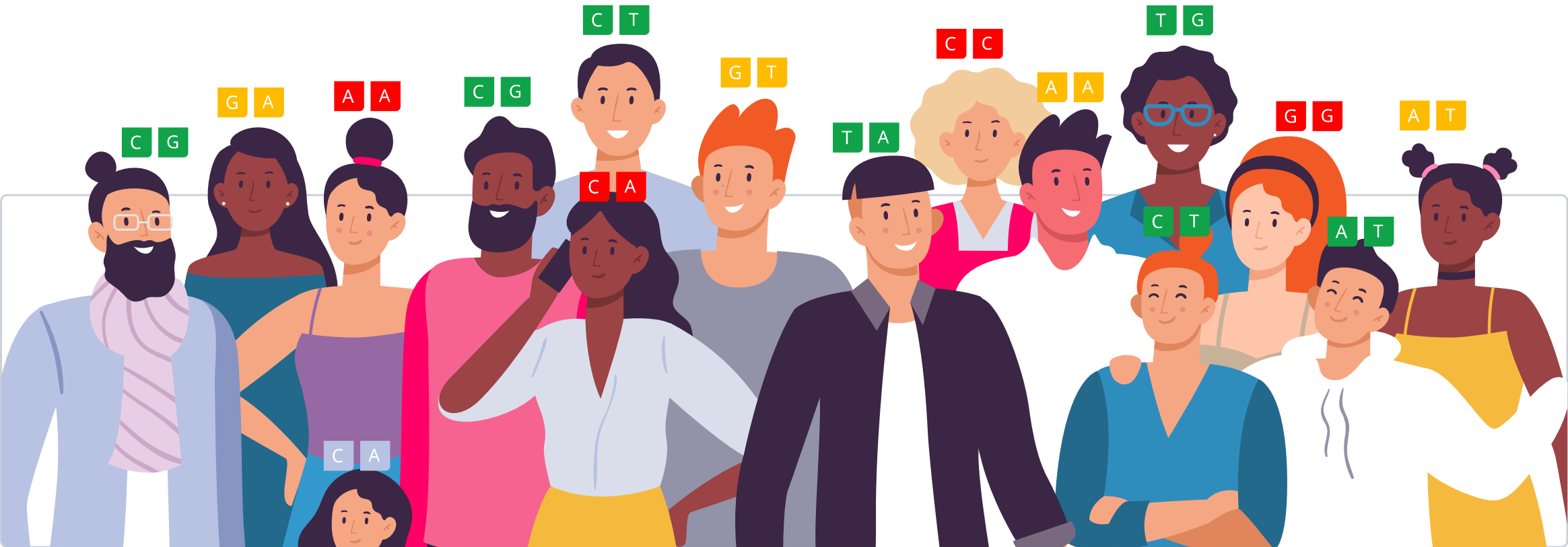


Similarly, our Trait Reports look at how your DNA influences your traits.



Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



We use artificial intelligence and machine learning to analyze all this information.
We then summarize your results as a risk score or display it on a gauge.

In total, we analyze up to 83 million genetic variants.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

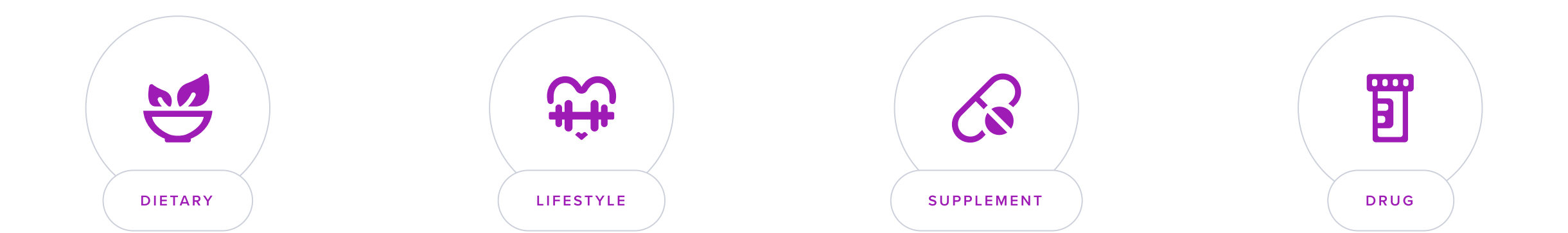
You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs.
The following icons tell you which category a recommendation falls into:



Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):



Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

- 5 / 5
- Recommendations that are considered effective and generally recommended by experts and medical bodies.
-
- 4 / 5
- Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.
-
- 3 / 5
- Recommendations that are considered possibly effective and have many studies supporting them
-
- 2 / 5
- Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.
-
- 1 / 5
- Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.
-
- 0 / 5
- No evidence in humans.

Genotype-specific Evidence

- High-quality
- Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).
- Medium-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).
- Low-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).
- Indirect
- A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).
- In theory
- A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

[Vitamin D](#) is an essential nutrient, which means your body can’t produce enough on its own. **Your body needs vitamin D for strong bones.** It also plays a role in [\[R\]](#):

- Mood
- Immunity
- Heart health
- Blood sugar control

There are two main forms of vitamin D [\[R\]](#):

- **Vitamin D2 (ergocalciferol)** is made by plants, fungi, and yeasts
- **Vitamin D3 (cholecalciferol)** is made in the skin and found in animal products

Our skin naturally makes vitamin D when exposed to [sunlight](#). Getting regular, moderate sun exposure is a safe way to maintain healthy vitamin D levels [\[R\]](#).

Many factors can impact the amount of vitamin D your skin makes. These include [\[R\]](#), [\[R\]](#):

- The time of day
- Season
- Sunscreen use
- Latitude
- Your skin pigmentation
- Your age

Experts recommend getting **at least 5-15 minutes of midday sun, 2-3 times per week.** People with darker skin and those living at high latitudes may need longer periods of sun exposure [\[R\]](#), [\[R\]](#).

We also get small amounts of vitamin D from foods such as [\[R\]](#):

- Fatty fish (salmon, tuna, mackerel, sardines)
- [Cod liver oil](#)
- Fortified foods (soy milk, dairy, orange juice, cereals)
- Beef liver
- Egg yolks
- Cheese
- Mushrooms (shiitake, portobello)

Most adults should get 800 IU of vitamin D per day. Different vitamin D supplements are available for those who can’t maintain healthy levels through sun exposure and a balanced diet [\[R\]](#), [\[R\]](#).

Vitamin D is fat-soluble. For this reason, it’s better absorbed when consumed with food containing fat [\[R\]](#).

Factors Influencing Vitamin D Levels

PERSONALIZED TO GENES

Based on the genetic variants we looked at, you likely have a typical need for vitamin D.

Try to aim for the recommended daily amount of **vitamin D**. For most adults, that’s **600 IU** of vitamin D per day.

Key Takeaways:

- Vitamin D is an essential nutrient that you need outside sources of to achieve adequate levels. It is important for mood, immunity, heart health, and blood sugar control.
- Vitamin D levels can be impacted by intensity and amount of sun exposure, age, skin color, and your genetics.
- If you are genetically predisposed to needing more vitamin D, you may want to consider supplementation and addressing possible issues like sun exposure.
- Click the **next steps** tab for relevant labs.

[Vitamin D](#) is an essential nutrient. **Your body needs vitamin D for strong bones.** Our skin naturally makes vitamin D when exposed to [sunlight](#). We also get small amounts of vitamin D from foods such as fatty fish, egg yolks, beef liver, and mushrooms [\[R,R\]](#).

Around **20-40%** of differences in people's vitamin D levels may be due to genetics [\[R\]](#).

Genes that influence vitamin D levels may play a role in its [\[R\]](#):



TYPICAL NEED

Likely typical need for vitamin D based on 1,766 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
COPB1	rs2060793	GG
COPB1	rs12794714	AA
COPB1	rs10832289	TT
GC	rs2282679	GT
COPB1	rs10741657	GG
GC	rs7041	AC
CYP1B1	rs1800440	CT
VDR	rs1544410	CT
VDR	rs2228570	GA
/	rs189918701	GG
/	rs558560635	GG
/	rs375984409	GG
PDE3B	rs571484036	AA
COPB1	rs117913124	GG
GC	rs222026	TT
GC	rs4588	TG
VDR	rs731236	AG
GC	rs11723621	GA
PDE3B	rs201501563	TT
RRAS2	rs117206369	TT
/	rs201561609	TT
ADH1B	rs1229984	TC
GC	rs113938679	GG
CYP2R1	rs117576073	GG
/	rs561089663	GG
PSMA1	rs577185477	TT
/	rs557657187	GG
NADSYN1	rs12785878	GG
PSMA1	rs554808052	CC
GC	rs565277381	TT
/	rs567415847	GG
/	rs529640451	CC

- Production
- Activation
- Transport
- Breakdown

Besides genetics, the following factors also influence vitamin D levels [\[R\]](#):

- Sun exposure
- Skin color
- Age

Genetically high vitamin D levels may be causally associated with positive outcomes for:

- Alzheimer's [\[R,R,R\]](#)
- COPD [\[R,R\]](#)
- Uterine fibroids [\[R\]](#)
- Migraines [\[R\]](#)
- Heart Failure [\[R,R\]](#)
- Psoriasis [\[R\]](#)
- Lupus [\[R\]](#)
- Delirium [\[R\]](#)
- Hypertension [\[R\]](#)
- Rosacea [\[R\]](#)
- Total Testosterone [\[R\]](#)
- Muscle loss [\[R,R\]](#)
- Muscle mass [\[R\]](#)
- CRP [\[R,R\]](#)
- Longevity [\[R,R\]](#)
- Lower cholesterol, lipoprotein particles, and phospholipids within VLDL and IDL [\[R\]](#)
- Higher HDL cholesterol [\[R\]](#)
- Lower triglycerides [\[R\]](#)
- Higher adiponectin [\[R\]](#)
- eGFR (lower) [\[R\]](#)
- Primary biliary cholangitis [\[R\]](#)

Genetically lower vitamin D levels may be causally associated with negative outcomes for:

- Multiple sclerosis [\[R,R,R,R,R,R,R,R\]](#)
- Pneumonia [\[R\]](#)
- Gut Inflammation: ulcerative colitis, non-infective colitis, and Crohn's disease [\[R\]](#)
- Lupus [\[R,R,R\]](#)
- Psoriasis [\[R,R\]](#)
- Longevity [\[R,R,R,R,R,R\]](#)

A blood test is the only reliable way to determine vitamin D status [\[R\]](#).

GENE	SNP	GENOTYPE
NADSYN1	rs536006581	AA
COPB1	rs148514005	CC
/	rs185433896	AA
PDE3B	rs188480917	CC
GC	rs3775150	TT
NPFFR2	rs143106299	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

DOSAGE		DOSAGE			
1	Maintain Optimal Vitamin D Levels	1000 iu	2	Omega-3 (Fish Oil)	500 mg
3	Avoid Organochlorine Pesticide Exposure		4	Tuna	
5	Beef liver		6	Avoid Lead Exposure	
7	Halibut		8	Sardines	
9	Trout		10	Eggs	
11	Mackerel		12	Mushrooms	
13	Salmon		14	Herring	
15	Cod Liver Oil				

1

Maintain Optimal Vitamin D Levels

IMPACT

5 / 5

EVIDENCE

5 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE
1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs [vitamin D](#) for strong bones. Vitamin D also plays a role in [\[R\]](#):

- Mood
- Immunity
- Heart health
- Blood sugar control

[Sunlight](#) is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [\[R, R\]](#).

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [\[R\]](#).

How it helps

People who don't get enough vitamin D through sunlight or dietary sources might need vitamin D supplements. Supplementation may be more effective in people with low baseline intake or levels [\[R, R\]](#).

Vitamin D3 is approximately 87% more effective in raising and maintaining the vitamin D levels in the body than vitamin D2 [\[R, R\]](#).

The recommended vitamin D dose for children up to 1 year old is 400 IU, for ages 1-70 years 600 IU, and for people over 70 years old 800 IU [\[R, R\]](#).

Please note: *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day* [\[R\]](#).

2



Omega-3 (Fish Oil)

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are three major types of omega-3s: ALA, EPA, and DHA [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

How it helps

Omega-3 supplementation (up to 1,000 mg/day for at least 8 weeks) may increase vitamin D levels. People with low baseline vitamin D levels may get greater benefits [\[R\]](#).

3

Avoid Organochlorine Pesticide Exposure

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Minimize exposure by choosing organic fruits and vegetables, thoroughly washing produce before consumption, and avoiding areas where organochlorine pesticides are applied. Consider using air purifiers in homes close to agricultural areas to reduce indoor pesticide levels.

Description

Reducing organochlorine pesticide exposure involves minimizing contact with pesticides like DDT, which can accumulate in the body and potentially lead to adverse health effects, including disruption of hormonal functions and carcinogenicity.

How it helps

A study of 1,275 participants associated p,p'-DDT, p,p'-DDE, and β -hexachlorocyclohexane with lower serum vitamin D levels. The effects of p,p'-DDT were strongest in subjects who were old, white, and with chronic conditions [\[R\]](#).

4

Tuna

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate tuna into your meals 2-3 times per week, aiming for a serving size of about 3.5 ounces (100 grams) per meal. Choose fresh or water-packed tuna instead of oil-packed to reduce unnecessary calorie intake.

Description

Tuna is a type of saltwater fish commonly consumed worldwide, rich in lean protein, omega-3 fatty acids, and essential vitamins and minerals. Its health benefits include heart health support, improved brain function, and reduced inflammation. Tuna is often included in diets for conditions like cardiovascular disease prevention and cognitive enhancement.

Tuna is a source of niacin, vitamin D, as well as being a very good source of protein and omega-3 fatty acids. A 3-ounce serving has 8.6 mg of niacin or 54%DV.

How it helps

Tuna is high in vitamin D, which is essential for the proper functioning of the immune system, bone health, and cell growth. Eating it regularly could help prevent vitamin D deficiency.

5



Beef liver

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate beef liver into your diet 1-2 times per week, aiming for a serving size of about 3-4 ounces (85-113 grams) each time. This can be pan-fried, baked, or incorporated into dishes like stews or pate to make it more palatable.

Description

Beef liver is a commonly recommended organ meat due to its rich content of protein, B-vitamins, and minerals.

Chickpeas are a good source of vitamin B6, iron, folate, fiber, and rich in minerals like copper, zinc, and phosphorus. A ½ cup serving provides 1.1 mg of vitamin B6 or 65%DV.

How it helps

Beef liver is rich in vitamin D, which is crucial for bone health and immunity. Consuming it can ensure you meet your daily needs and prevent deficiencies.

6



Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Prevent lead exposure by using cold water for drinking and cooking, regularly cleaning dust from windowsills and floors, and ensuring that your home's paint is not chipping if it was built before 1978. For occupations involving potential lead exposure, use protective gear and follow safety protocols. Test your home for lead if it's old or you're concerned about contamination.

Description

Lead is a heavy metal. It is naturally found in the environment in small amounts [\[R\]](#), [\[R\]](#).

Exposure to lead can cause it to build up in the body. A buildup of lead can contribute to oxidative stress and cell damage. This is called **lead poisoning** [\[R\]](#), [\[R\]](#).

Lead is no longer used in the manufacturing of some products like gasoline and paint. However, it can still be found in some pipes, batteries, and the wall paint of older homes [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

A meta-analysis of 11 studies including 837 lead-exposed individuals and 739 controls found that those in the lead-exposed group had reduced vitamin D levels compared to controls [\[R\]](#).

Lead may inhibit vitamin D absorption.

7



Halibut

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate halibut into your meals two to three times per week, opting for baked, grilled, or broiled preparations. Each serving should be about 3 to 4 ounces (85 to 113 grams), ensuring it's cooked thoroughly until it reaches an internal temperature of 145°F (63°C).

Description

Halibut is a lean fish known for its high-quality protein content and essential nutrients like omega-3 fatty acids. Regular consumption of halibut can contribute to heart health, support brain function, and provide key vitamins and minerals.

Halibut is an excellent source of omega-3 fatty acids, selenium, B-vitamins, and other minerals like magnesium and phosphorus. Halibut contains 15.2 mg of methionine per gram.

How it helps

Halibut can serve as a good source of vitamin D, aiding in bone health and immune support.

8



Sardines

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate two to three servings of sardines into your diet each week. You can eat them grilled, steamed, or straight from the can as part of salads, sandwiches, or as a snack. Each serving should be about 3.5 ounces (100 grams), which is roughly one can of sardines.

Description

Sardines are small, oily fish known for their rich content of omega-3 fatty acids, calcium, B12, and vitamin D. Consuming sardines can support heart health, bone strength, and provide essential nutrients, and they are typically found in coastal waters.

Sardines are a good source of iron, omega-3 fatty acids, and a host of vitamins and minerals including calcium, iron, and vitamin D. A 2-sardine serving provides 2 mg of iron or 11%DV.

How it helps

Sardines are rich in vitamin D, which is essential for bone health and immune system function. Regular consumption helps replenish vitamin D levels, preventing deficiency-related diseases like rickets and osteomalacia.

9



Trout

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Integrate trout into your diet 2-3 times per week, either grilled, baked, or steamed, aiming for a serving size of about 3-4 ounces (85-113 grams) per meal.

Description

Trout is a type of freshwater fish known for its rich content of omega-3 fatty acids and vitamins A, D, and B12, which are beneficial for heart health and cognitive function. Including trout in one's diet can support overall cardiovascular wellness and brain health.

Trout is not only rich in vitamin D, but also vitamins A and B12, as well as full of protein and good amounts of calcium potassium, magnesium, and niacin. A 3 ounce serving has 16.2 mcg of vitamin D or 81%DV.

How it helps

Trout is high in vitamin D, a nutrient that is crucial for bone health, immune function, and cell growth. Regularly eating trout can help overcome a vitamin D deficiency and potentially prevent it from developing.

10



Eggs

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate eggs into your diet 3-4 times a week, preferably for breakfast or as part of a balanced meal. They can be boiled, scrambled, or made into omelets, ensuring they are cooked thoroughly.

Description

Eggs are a nutrient-dense food rich in protein, vitamins, and minerals. They support various aspects of health, including muscle development, brain function, and eye health.

Eggs are great nutrition sources, with protein, healthy fats, arachidonic acid, and numerous vitamins and minerals.

How it helps

Eggs, particularly the yolks, are a great source of vitamin D, which is important for absorbing calcium and boosting your immune system. Incorporating eggs into your diet can help maintain your vitamin D levels and prevent deficiencies.

11



Mackerel

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate mackerel into your diet 2-3 times per week, preferably choosing baked or grilled preparation methods to preserve its nutritional quality.

Description

Mackerel is a fatty fish high in omega-3 fatty acids, which are known for their anti-inflammatory properties and potential cardiovascular benefits. Regular consumption of mackerel can support heart health and provide essential nutrients like vitamin D and selenium.

Mackerel is a good source of omega-3s along with histidine, vitamins D and B12, protein, selenium, phosphorus, and magnesium. Mackerel contains 11.37 mg of histidine per gram.

How it helps

Incorporating mackerel into your diet is a highly effective way to enhance your vitamin D intake, which is crucial for maintaining bone health and overall physiological functions. Here are some key findings from recent research:

- Mackerel, along with other fatty fish like salmon, is an excellent source of vitamin D, providing substantial amounts even when compared to fortified foods like milk [\[R\]](#).
- Consuming fish rich in fat-soluble vitamins, including vitamin D, is crucial not only for bone health but also for overall health throughout life [\[R\]](#).
- The fat-soluble vitamin content of fish, such as vitamin D in mackerel, is retained well even after cooking methods like smoking, which only slightly reduces these vitamins [\[R\]](#).

12



Mushrooms

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a variety of mushrooms such as shiitake, button, portobello, and oyster into your diet. Aim for at least 100-150 grams (roughly one cup) of fresh mushrooms or 15-20 grams of dried mushrooms, 2-3 times per week. You can add them to salads, soups, sandwiches, or sauté them as a side dish.

Description

Mushrooms are fungi rich in nutrients like B vitamins and copper, and bioactive compounds. They are used in various cuisines and have been associated with potential health benefits, including immune support and antioxidant properties.

How it helps

Mushrooms naturally contain vitamin D, especially when exposed to sunlight. Consuming them helps increase your vitamin D levels, which is essential for bone health and immune system function.

13



Salmon

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least two servings of salmon into your weekly diet, aiming for each serving to be about 3.5 ounces (100 grams), cooked. Choose wild-caught salmon when possible for higher omega-3 content.

Description

Salmon is a nutrient-rich fish known for its high content of omega-3 fatty acids, which can support heart health and reduce inflammation. It's also an excellent source of protein, vitamin D, and various minerals.

How it helps

Salmon is rich in vitamin D, which helps your body absorb calcium. Eating salmon regularly can boost your vitamin D levels and potentially prevent a deficiency. A 3-ounce serving provides 14.2 mcg of vitamin D or 81% DV.

14



Herring

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate herring into your diet 2-3 times per week, aiming for a serving size of about 3.5 ounces (100 grams) each time. You can enjoy it grilled, baked, or as part of salads and sandwiches.

Description

Herring is a fatty fish rich in omega-3 fatty acids, protein, and essential vitamins and minerals. Consuming herring as part of a balanced diet can support heart health, brain function, and overall well-being.

Herring is a great source of omega-3 fatty acids, antioxidants, vitamins A, D, and B12, and protein. A 3-ounce serving provides 0.94 g of DHA and 0.77 g of EPA.

How it helps

Herring is a beneficial source of vitamin D, especially when consumed as smoked or in the form of belly flaps. Here are some key insights from recent research:

- Smoked herring contains approximately 12.12 µg of vitamin D per 100 g, contributing significantly to the daily vitamin D requirement. Consuming around 124 g of smoked herring can help meet daily vitamin D needs [\[R\]](#).
- Salted herring products have been analyzed for their vitamin D content, and it has been found that they remain good sources of vitamin D throughout their shelf life. Notably, no significant loss of vitamin D occurs during storage [\[R\]](#).
- The belly flaps of Norwegian spring-spawning herring contain a notably high vitamin D content, with about 53.5 µg per 100 g, which is substantially higher compared to other parts of the fish. This makes the belly flaps a particularly rich source of vitamin D [\[R\]](#).

15



Cod Liver Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1-2 teaspoons of cod liver oil daily with a meal. It's best to incorporate it into your routine with breakfast or dinner to help with absorption and to minimize any potential fishy aftertaste or reflux.

Description

Cod liver oil is a supplement derived from cod liver and is a source of omega-3 fatty acids and vitamin D. It can help maintain healthy bones, support immune function, and promote cardiovascular health when used as a dietary supplement.

Cod liver oil is high in vitamin D and A as well as a lot of omega-3 fatty acids and health fats. A single tablespoon provides 34 mcg of vitamin D or 170%DV.

How it helps

Cod liver oil is rich in vitamin D, which our bodies require to absorb calcium and maintain bone health. Regular consumption can increase vitamin D levels, avoiding deficiencies that cause ailments like osteoporosis and rickets.

Next Steps

Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

	Phosphorus	2 mg/dL		9 Nov 2025
	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL		9 Nov 2025
	Calcium	9.2 mg/dL		9 Nov 2025