

Vitamin A

DNA Health Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026



Powered by

 omicsege

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

28 Next Steps

- 28 Your Lab Results

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.

Personal information

NAME

Sample Client

SEX AT BIRTH

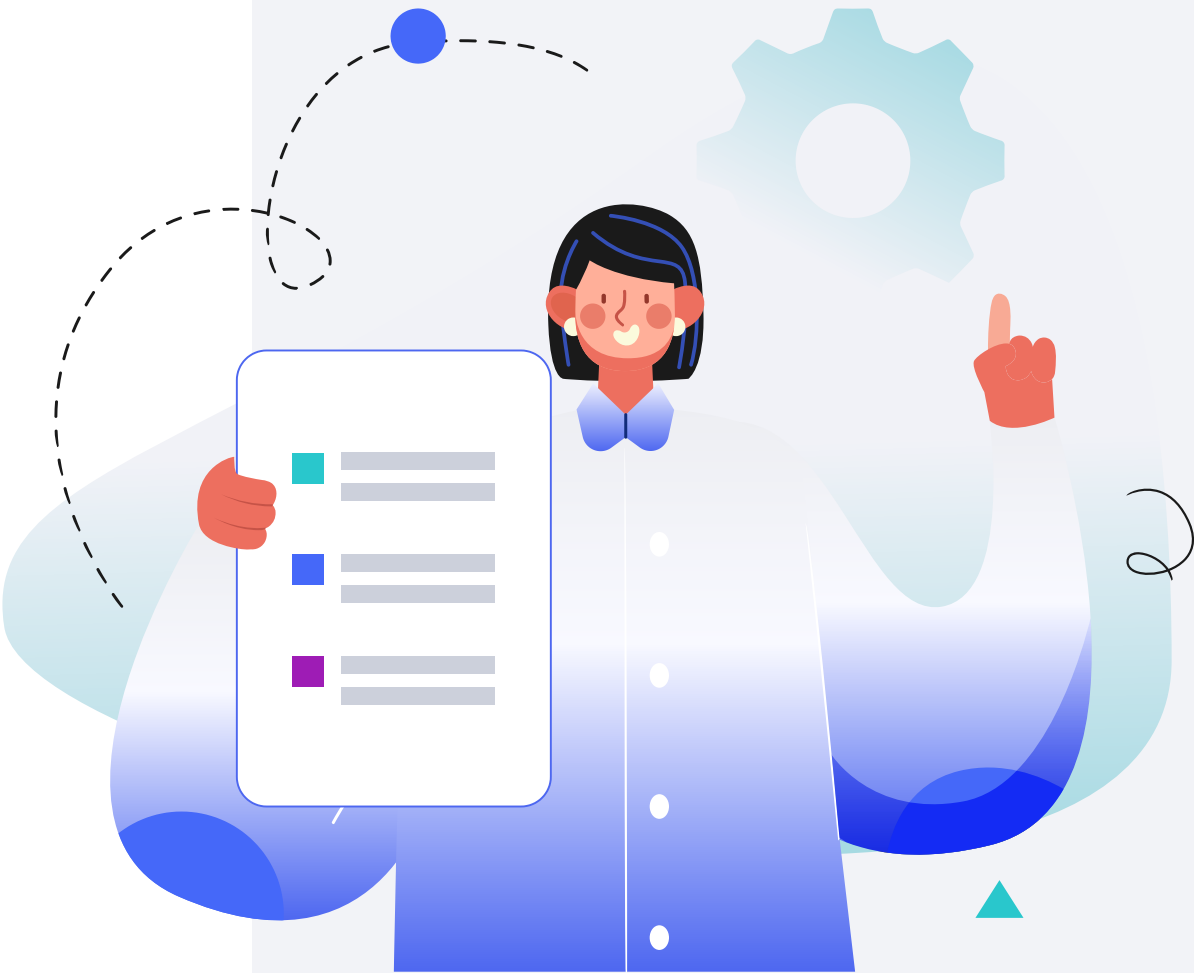
Male

HEIGHT

5ft 5" 165cm

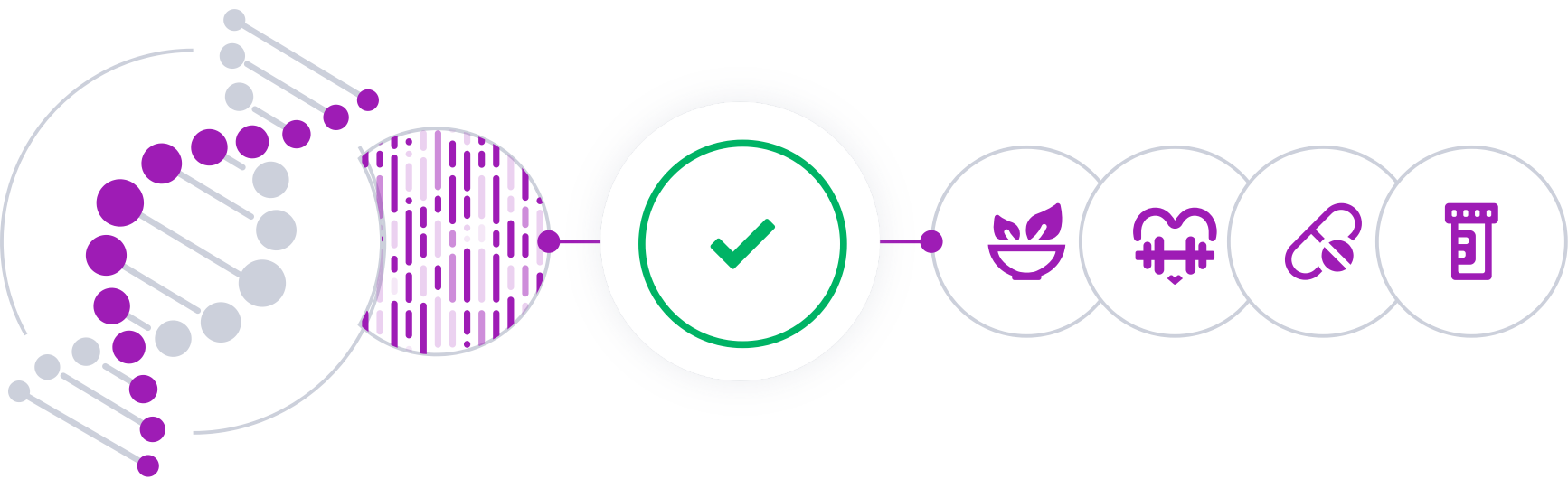
WEIGHT

137lb 62kg



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.

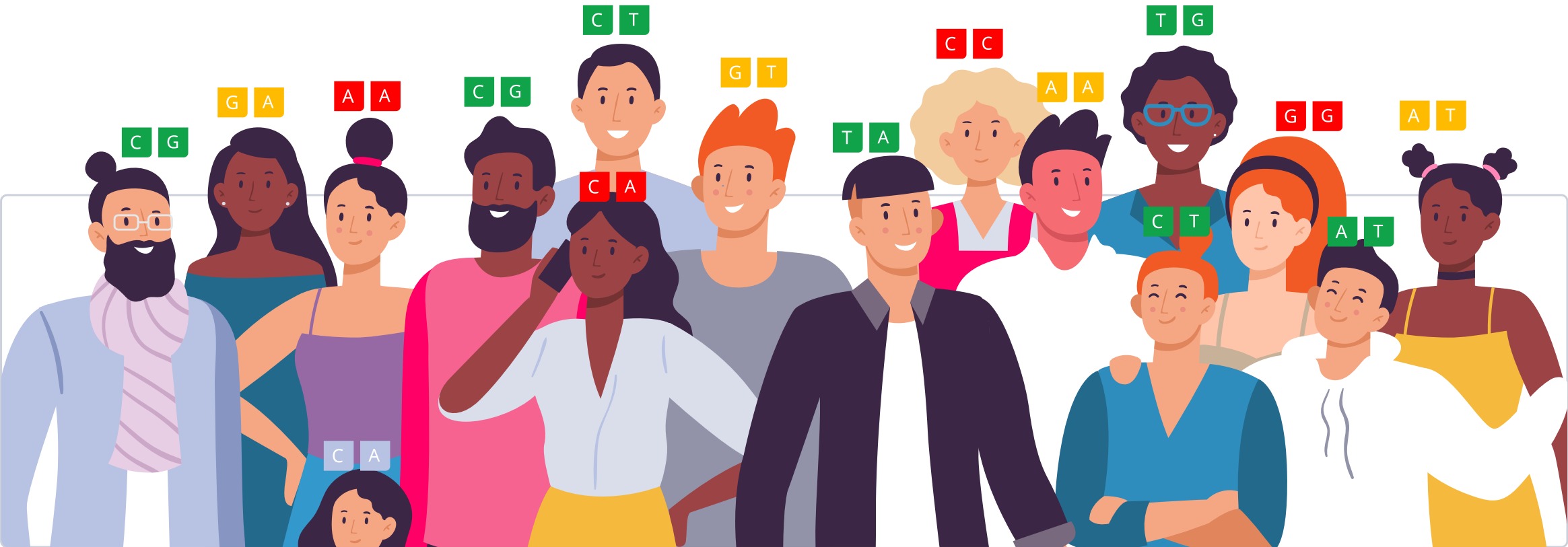


Similarly, our Trait Reports look at how your DNA influences your traits.



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

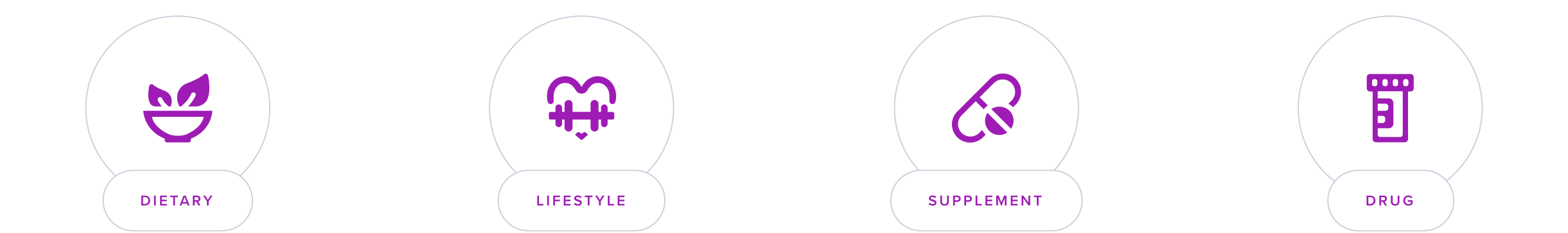
You have 2 risk alleles

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 A is a nutrient important for [\[R\]](#), [\[R\]](#):

- Vision
- Immunity
- Gut health
- Skin health

There are two types of vitamin A found in food [\[R\]](#), [\[R\]](#):

- **Active vitamin A (retinol):** The active form of vitamin A.
- **Provitamin A carotenoids:** Plant pigments that are turned into vitamin A in the body. One example is beta-carotene.

Animal foods contain active vitamin A. Good sources include [\[R\]](#):

- Beef liver
- Herring
- Cheese

Plant foods contain provitamin A. Good sources include [\[R\]](#):

- Sweet potato
- Spinach
- Carrots

Vitamin A is also available in supplement and topical form.

Adults should be getting 700-900 micrograms of vitamin A per day. Experts recommend against taking more than 3,000 micrograms of active vitamin A per day [\[R\]](#), [\[R\]](#).

Vitamin A can be stored in the body and can accumulate over time. **Taking high amounts of active vitamin A over a long period of time can be harmful and may cause liver damage, bone thinning, and birth defects.** Active vitamin A may also interact with some medications. Talk to your doctor before supplementing with active vitamin A [\[R\]](#), [\[R\]](#), [\[R\]](#).

High amounts of provitamin A carotenoids don't cause the same issues, but they can temporarily turn the skin a yellow-orange color [\[R\]](#).

Genetics of Vitamin A Needs

 PERSONALIZED TO GENES

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

Try to aim for the recommended daily amount of vitamin A. For most adults, that’s 900 mcg of vitamin A per day [\[R\]](#).

Some people may have higher blood levels of vitamin A after consuming vitamin A or provitamin A-rich foods or supplements.

This may partly be due to genetics. Genes involved may influence:

- Vitamin A transport in and out of cells [\[R\]](#)
- Vitamin A metabolism (i.e., the conversion of beta-carotene into vitamin A) [\[R\]](#), [\[R\]](#)

To optimize vitamin A absorption in the gut, try to eat vitamin A-rich foods with meals that are higher in fat. This is because vitamin A is fat-soluble [\[R\]](#).

Genetically higher vitamin A levels may play a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Longevity
- Joint Pain
- Joint Inflammation
- High Blood Sugar



TYPICAL NEED

Likely typical need for vitamin A based on 6 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
BCO1	rs7501331	CT
C16ORF46	rs11645428	GG
FFAR4	rs10882272	CT
BCO1	rs12934922	AA
C16ORF46	rs6564851	TT
BCO1	rs6420424	GG
BCO1	rs4889294	TT

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	Papaya	500 mg	2	Spinach	
3	Dairy Products		4	Collard Greens	
5	Broccoli		6	Beef liver	
7	Kale		8	Black-Eyed Peas	
9	Red Bell Peppers		10	Tangerines	
11	Carrots		12	Pumpkin	
13	Herring		14	Peaches	
15	Sweet Potatoes		16	Vitamin A	700 mcg
17	Moringa	400 mg	18	Avocado	
19	Salmon		20	Cantaloupe	
21	Apricots		22	Cod Liver Oil	
23	Swiss Chard		24	Ricotta Cheese	
25	Mango		26	Brussels Sprouts	
27	Eggs		28	Dietary Beta-Carotene	
29	Dietary Vitamin A				

1



Papaya

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of papaya extract daily for at least one month to observe potential health benefits. If using powdered form, it can be mixed with water or juice for easier consumption.

TYPICAL STARTING DOSE

500 mg

Description

Papaya is a tropical fruit native to Central America and Mexico that is rich in vitamins A and C, folate, and dietary fiber. It has a long history in traditional medicines as a digestive aid and promoting skin health. Papaya's extract, papain, is used as a dietary supplement for digestive support.

Papaya is a tropical orange fruit. It originates from Central America, but today it’s most widely grown in India.

People enjoy the great taste of papaya. It’s also rich in healthy nutrients that may support the immune system.

How it helps

Papaya is packed with beta-carotene, which your body can convert into Vitamin A, helping counteract a deficiency of this vitamin. This can support your vision, immune system, and skin health.

In a placebo-controlled trial of 196 lactating women, supplementation with pureed papaya (650 g/day) for 60 days improved vitamin A and iron status. Carotenoids are more bioavailable from papaya than from tomato and carrot according to a non-placebo-controlled trial of 16 healthy volunteers. Papaya and mangoes in the form of juice or fresh fruit showed the highest carotenoid bioavailability in a non-placebo-controlled trial of 14 healthy volunteers [R, R, R].

2



Spinach

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate one cup of fresh spinach or half a cup of cooked spinach into your daily diet. You can add spinach to salads, smoothies, omelets, or pastas to easily increase your intake.

Description

Spinach is a leafy green vegetable packed with essential nutrients, including vitamins A and K, iron, and folate. Incorporating spinach into the diet supports eye health, bone health, and overall nutrition.

Spinach is a good source of molybdenum, folate, calcium, and iron, as well as vitamins A, C, and K1. A ½ cup serving provides 8 mcg of molybdenum or 18%DV.

How it helps

Spinach contains beta carotene, a form of Vitamin A, which helps maintain healthy skin, vision and boosts the immune system. Regularly consuming spinach can therefore contribute to your daily Vitamin A requirement, lowering the risk of a deficiency.

3



Dairy Products

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 2-3 servings of low-fat or fat-free dairy products into your daily diet. One serving could be 8 ounces of milk, 1 cup of yogurt, or 1.5 ounces of cheese. Choose options that are low in added sugars and consume as part of balanced meals or snacks throughout the day.

Description

Dairy products, such as milk, yogurt, and cheese, are rich sources of calcium and protein. They are essential for bone health, providing nutrients that support strong bones and teeth, as well as overall nutritional well-being.

Dairy products are made from milk. They include [\[R\]](#):

- Cheese
- Yogurt
- [Kefir](#)
- Butter
- Cream

Dairy products contain high levels of [calcium](#). Calcium helps build strong bones [\[R\]](#).

How it helps

Dairy products such as milk and cheese are often fortified with vitamin A, which is important for bone health, vision, and cellular communication.

4



Collard Greens

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one cup of cooked or two cups of raw collard greens into your diet 3-4 times a week. Wash the greens thoroughly before use to remove any dirt or pesticides.

Description

Collard greens are a nutritious leafy vegetable rich in vitamins, minerals, and antioxidants. They are known for their potential to support bone health, provide essential nutrients, and contribute to a balanced diet.

Collard greens contain vitamins K, A, and C, as well as decent amounts of calcium and folate. A 1-cup (cooked) serving provides 836 mcg of vitamin K or 697%DV.

How it helps

Eating collard greens, which are rich in vitamin A, helps to replenish your body's store of this essential nutrient, improving vision, immune system, and skin health. Regular intake can help correct vitamin A deficiency and prevent associated complications.

5



Broccoli

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one cup of chopped broccoli, either steamed or raw, into your daily diet. This can be as part of a meal or snack. Continue this practice daily for ongoing health benefits.

Description

Broccoli and broccoli sprouts are nutrient-dense vegetables packed with vitamins, minerals, and antioxidants. They are known for their potential to support a healthy immune system, protect against chronic diseases, and promote overall nutritional wellness.

Broccoli is high in vitamin K and C, as well as a number of other vitamins and minerals, and antioxidants like quercetin. A ½ cup serving provides 110 mcg of vitamin K or 92%DV.

How it helps

Broccoli is rich in beta-carotene, which your body converts into Vitamin A, essential for good eye health and immune function. Regular intake of broccoli can therefore help prevent a Vitamin A deficiency.

6



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 very rich in vitamin A, which helps maintain healthy vision, skin, and immune function. Regularly consuming it may help prevent vitamin A deficiency and related conditions.

7



Kale

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one cup of kale, cooked or raw, into your daily diet. You can add it to smoothies, salads, or use it as a cooked vegetable side dish.

Description

Jumping, such as through activities like jumping jacks or trampolining, is a cardiovascular exercise that can improve heart health, strengthen muscles, and boost overall fitness. It's an effective way to increase physical activity and promote a healthy lifestyle.

Kale is a good source of calcium, and is also abundant in vitamins A, C, and K, manganese, and potassium. A 1-cup serving (cooked) has 94 mg of calcium or 7%DV.

How it helps

Kale is a rich source of vitamin A, which is essential for maintaining good vision and a strong immune system. Consuming kale can help prevent vitamin A deficiency by providing the essential nutrient your body needs.

8



Black-Eyed Peas

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate black-eyed peas into your diet 2-3 times per week. You can add them to soups, salads, or make them a key ingredient in a stew or side dish. Each serving should be about 1/2 cup (cooked) to ensure you get their full nutritional benefits.

Description

Black-eyed peas are a type of legume that are a good source of protein, fiber, and essential vitamins and minerals. Incorporating black-eyed peas into your diet can support digestive health, provide sustained energy, and contribute to overall nutritional wellness.

Black-eyed peas are an excellent source of molybdenum and folate, along with potassium, iron, and fiber. A ½ cup serving provides 288 mcg of molybdenum or 640%DV.

How it helps

Black-eyed peas are rich in vitamin A, an essential nutrient for maintaining eye health and boosting the immune system. Regular consumption can support your body's natural defenses and fortify eyesight, possibly preventing vitamin A deficiency.

9



Red Bell Peppers

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate one cup of sliced red bell peppers into your daily diet. You can add them raw to salads, sandwiches, or eat them as a snack with hummus. Alternatively, you can cook them and include them in dishes like stir-fries, stews, and fajitas.

Description

Red bell peppers are a type of Capsicum annuum, originating from Central and South America. They are known for being rich in nutrients, including vitamin C, vitamin A, dietary fiber, and antioxidants, which may support immune health, vision, and digestion.

Red bell peppers are excellent sources of both vitamin A and C, as well as being good sources of antioxidants. A ½ cup serving provides 117 mcg of vitamin A or 13%DV.

How it helps

Red bell peppers are rich in beta-carotene which the body converts into vitamin A, important for eye health and boosting immunity. Regular intake can prevent vitamin A deficiency, helping keep your eyes and immune system healthy.

10



Tangerines

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Include fresh tangerines in your diet, consuming 1-2 whole fruits daily either as a snack or part of a meal. Continue this practice consistently for overall dietary improvement and potential health benefits.

Description

A tangerine is a citrus fruit believed to have originated in Southeast Asia. Tangerine oil, derived from the peel, contains compounds like limonene and myrcene. Tangerines are also rich in vitamin C, dietary fiber, and other antioxidants.

How it helps

Tangerines are rich in beta-carotene, which the body converts to Vitamin A. This helps improve eye health and boosts the immune system, combating Vitamin A deficiency effectively.

11



Carrots

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one medium-sized carrot (about 61 grams) into your daily diet by either eating it raw, steamed, or as part of salads, soups, and stews to support eye health and provide essential nutrients.

Description

Carrots are a nutritious vegetable known for their high vitamin A content and numerous health benefits. They support eye health, provide essential nutrients, and contribute to a well-rounded diet.

Carrots are an excellent source of vitamin A, as well as biotin, vitamins K1 and B6, potassium, and antioxidants. A ½ cup serving provides 459 mcg of vitamin A or 51%DV.

How it helps

Carrots are rich in beta-carotene, a type of vitamin A, which is essential for good vision, immune system support, and overall health. Regular consumption can supplement your body's vitamin A needs, preventing deficiencies that could lead to conditions like night blindness.

12



Pumpkin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate pumpkin into your diet by adding it to meals a few times a week. This can be in the form of roasted pumpkin as a side dish, pumpkin puree in soups and sauces, or adding pumpkin seeds to salads, yogurts, or as a snack on their own.

Description

Pumpkin is a nutritious orange squash rich in nutrients such as vitamin K, C, E, and B6, and minerals like potassium, iron, manganese, magnesium. Eating pumpkin may provide benefits for eye health.

Pumpkin is a good source of vitamin K, C, E, and B6, and minerals like potassium, iron, manganese, magnesium. A ½ cup serving provides 20 mcg of vitamin K or 17%DV.

How it helps

Pumpkin is rich in beta-carotene, which the body converts to vitamin A. This vitamin helps support vision and the immune system.

13



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

Eating herring can help prevent vitamin A deficiency because it is rich in this nutrient which is crucial for maintaining good vision, immune system function, and overall body growth. Regular intake of herring ensures adequate levels of vitamin A in your body, thereby preventing deficiencies.

14



Peaches

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh or canned peaches into your diet, aiming for at least one serving (about one medium-sized peach or approximately 150 grams) each day. Peaches can be enjoyed as a snack, blended into smoothies, or added to salads and yogurt.

Description

Peaches are the fruit of the peach tree and are believed to have originated in China, where they have been cultivated for thousands of years, but now grown all over the world. They are rich in various nutrients, including vitamins A and C, dietary fiber, and antioxidants.

How it helps

Peaches are rich in Vitamin A, which is essential for healthy vision, skin, and immune system. Eating peaches can help to replenish Vitamin A in the body and manage deficiencies.

15



Sweet Potatoes

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate sweet potatoes into your diet 2-3 times per week, either baked, steamed, or boiled, as a side dish or part of your main meals.

Description

Sweet potatoes are nutritious root vegetables packed with vitamins A and C, fiber, and antioxidants. They contribute to eye health, immune support, and overall nutrition.

Sweet potatoes are a rich source of vitamins, minerals, and antioxidants, including vitamins A, C, B5, and B6, fiber, manganese, and potassium. One potato provides 1,403 mcg of vitamin A or 156%DV.

How it helps

Sweet potatoes are packed with beta-carotene, a compound our bodies convert into vitamin A, which is essential for vision, immune function, and skin health. Regularly consuming sweet potatoes can therefore help prevent vitamin A deficiency.

16



Vitamin A

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a vitamin A supplement daily with a fat-containing meal to enhance absorption. The recommended daily allowance (RDA) for most adults is 700-900 micrograms (mcg) for men and women, respectively. Ensure not to exceed the upper intake level (UL) of 3000 mcg per day to avoid toxicity.

TYPICAL STARTING DOSE

700 mcg

Description

Vitamin A is a fat-soluble vitamin essential for various bodily functions, including vision, immune system support, and skin health. It is found in foods like carrots, sweet potatoes, and spinach and is important for maintaining overall health.

Vitamin A is a nutrient important for [\[R\]](#), [\[R\]](#):

- Vision
- Immunity
- Gut health
- Skin health

Foods rich in vitamin A include [\[R\]](#):

- Beef liver
- Sweet potato
- Spinach
- Carrots
- Cheese

Vitamin A is also available in supplement form.

Women should be getting 700 micrograms of vitamin A per day, while men should be getting 900 micrograms [\[R\]](#).

How it helps

Vitamin A promotes good vision, immune health and cell growth in the body. A supplement can help replace deficiencies, prevent night blindness, and support overall health.

Please note: *A high dose of vitamin A or taking high amounts of vitamin A long-term can be harmful, especially in women planning pregnancy or already pregnant. Vitamin A may cause harm to the fetus Vitamin A may also interact with some medications. Talk to your doctor before supplementing with vitamin A [\[R\]](#), [\[R\]](#).*

17



Moringa

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 400-800 mg of moringa leaf powder capsule form once daily, preferably with meals to enhance absorption. For fresh moringa leaves, a dose of 10 grams daily can be consumed directly or added to meals. Continue this regimen for at least 3 to 6 months to observe significant benefits.

TYPICAL STARTING DOSE

400 mg

Description

Moringa is a nutrient-dense plant known for its high levels of vitamins, minerals, and antioxidants. It is used in traditional medicine for a range of issues due to it's potential anti-inflammatory, antioxidant, and antimicrobial properties.

How it helps

Moringa is rich in Vitamin A, which is essential for maintaining good vision, immune system function, and overall growth. Taking Moringa supplement can help replenish Vitamin A in your body and alleviate the symptoms of its deficiency.

In a placebo-controlled trial of 65 infant-mother pairs, giving moringa leaf powder to the infants for 6 weeks improved their vitamin A status. In a non-placebo-controlled trial of 15 well-nourished children, pureed moringa leaves (1 mg β -carotene) were an important source of vitamin A with a relative bioefficacy of β -carotene retinol activity equivalents of 28% and a vitamin A equivalence of 3.3:1 by weight (0.56 μ mol retinol:1 μ mol β -carotene) [\[R\]](#), [\[R\]](#).

18



Avocado

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Incorporate half to one whole avocado into your daily diet. You can add it to salads, sandwiches, or use it as a healthy fat substitute for spreads or dressings.

Description

Avocado is a nutrient-dense fruit known for its creamy texture and healthy monounsaturated fats. It is packed with vitamins, minerals, and dietary fiber, and may support heart health, skin health, and overall nutrition.

[Avocado](#) is a fruit first cultivated in Mexico in 500 BCE [\[R\]](#), [\[R\]](#).

You can eat it raw in salads, sandwiches, and dips. Avocado oil has recently become popular, but it’s much less nutritious than the whole fruit.

Avocado is rich in antioxidants, vitamins, minerals, and fiber. It may support [\[R\]](#):

- Heart health
- Healthy weight
- Healthy aging

How it helps

Avocados are rich in carotenoids, including beta-carotene, which the body can convert into vitamin A, helping to maintain good eye health and support the immune system. Additionally, the healthy fats in avocados can enhance the absorption of fat-soluble vitamins like vitamin A.

In a [non-placebo-controlled trial of 12 healthy volunteers](#), consuming a meal with avocados **increased beta-carotene absorption from tomato sauce (by 2.4-fold) and raw carrots (by 6.6-fold) and enhanced its conversion to vitamin A by 4.6- to 12.6-fold** [\[R\]](#).

19



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 A, which is essential for maintaining healthy vision, skin, and immune system. Consuming salmon regularly can replenish your body's vitamin A levels and protect you from deficiencies.

20



Cantaloupe

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate one serving (approximately one cup of diced fruit) of cantaloupe into your daily diet. You can enjoy this as a part of your breakfast, as a snack between meals, or as a sweet, nutritious dessert.

Description

Cantaloupe is a good source of vitamin A and C, beta-carotene, fiber, folate, potassium, and several other vitamins and minerals.

Cantaloupe is a good source of vitamin C, beta-carotene, fiber, folate, potassium, and a lesser source for many vitamins and minerals. A ½ cup serving provides 29 mg of vitamin C or 32%DV.

How it helps

Cantaloupe is packed with beta-carotene, which your body converts into vitamin A. Regular consumption helps maintain healthy skin, boosts your immune system, and supports good eye health, preventing vitamin A deficiency.

21



Apricots

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh or dried apricots into your diet daily. Fresh apricots can be eaten as a snack, sliced into salads, or blended into smoothies. Dried apricots can be added to oatmeal, yogurt, or trail mix. Aim for a serving size of about 30 grams (approximately 4 fresh apricots or a handful of dried apricots) per day.

Description

Apricots are a nutritious fruit packed with vitamins, minerals, and fiber. They support eye health, provide immune-boosting antioxidants, and contribute to overall well-being when included in a balanced diet.

Apricots are a nutritious little fruit, containing vitamins A, C, and E, potassium, and several antioxidants. A ½ cup serving provides 755 mcg of potassium or 16%DV.

How it helps

Apricots are rich in Vitamin A, which is crucial for maintaining good vision, boosting immune system, and cell growth. Regularly consuming apricots can therefore help satisfy your body's Vitamin A needs and prevent deficiencies.

22



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 a dietary supplement rich in vitamin A, which plays a significant role in maintaining eye health, immune function, and skin integrity.

23



Swiss Chard

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate Swiss chard into your diet by adding it to salads, sautéing it with olive oil and garlic for a side dish, or mixing it into soups and stews. Aim to eat Swiss chard 2-3 times per week to benefit from its nutrients.

Description

Swiss chard is a leafy green vegetable rich in vitamins K, A, and C, as well as minerals like potassium and magnesium. It supports bone health, immunity, and overall nutrition.

How it helps

Swiss Chard is rich in Vitamin A which is essential for maintaining healthy vision, skin, and immune system functions. Incorporating it into your diet can help replenish Vitamin A stores in your body and correct deficiencies.

24



Ricotta Cheese

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate ricotta cheese into your diet by adding it to meals or snacks. Aim for about 1/4 to 1/2 cup of ricotta cheese, 2-3 times a week. You can spread it on toast, mix it into pasta dishes, or use it as a filling in baked goods.

Description

Ricotta cheese is a creamy dairy product with a mild flavor and is a good source of protein, calcium, vitamin A, selenium, and riboflavin.

Ricotta cheese is an excellent source of vitamin A, protein, selenium, phosphorus, calcium, and riboflavin. A ½ cup serving provides 133 mcg of vitamin A or 15%DV.

How it helps

Ricotta cheese is rich in Vitamin A which is essential for maintaining the health of our eyes and skin. Incorporating it into your diet can help boost your Vitamin A levels, thereby preventing the risk of Vitamin A deficiency.

25



Mango

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh mango into your diet 2-3 times a week, either as a snack or part of a meal. Opt for ripe mangoes for the best taste and nutritional value. If fresh mangoes are not available, frozen or dried mango can be a good alternative, but be mindful of any added sugars in dried mangoes.

Description

Mangoes are a delicious tropical fruit packed with vitamins, minerals, and antioxidants, promoting immune health, eye health, and skin vitality. They also provide dietary fiber and may support digestive regularity when included in a balanced diet.

Mangos are good for a host of nutrients, including vitamins E, C, A, and K, potassium, copper, and folate. A ½ cup serving provides 0.7 mg of vitamin E or 5%DV.

How it helps

Mangoes are rich in vitamin A, which is essential for good eye health and a strong immune system. Regular consumption of mangoes can contribute towards your daily intake of this vitamin and thus help prevent vitamin A deficiency.

26



Brussels Sprouts

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate brussels sprouts into your diet by eating them 2-3 times per week. They can be steamed, roasted, or sautéed and seasoned to taste, forming part of a balanced meal. Each serving should be about 1 cup, which roughly equals 5-6 medium-sized brussels sprouts.

Description

Brussels sprouts are a cruciferous vegetable packed with vitamins, fiber, and antioxidants. They are a nutritious addition to a balanced diet and may support immune health and overall well-being.

Brussels sprouts are good sources of vitamin C, vitamin K, fiber, as well as small amounts of other vitamins and minerals. A ½ cup serving provides 48 mg of vitamin C or 53%DV.

How it helps

Brussels sprouts are packed with vitamin A, which is essential for eye health and immune function. Regular consumption can boost vitamin A levels, preventing deficiencies potentially related to vision problems and weakened immunity.

27



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 are a great source of Vitamin A, which is necessary for healthy vision, skin, and immune system. Incorporating eggs into your diet can help replenish your body's vitamin A stores and help prevent a deficiency.

28



Dietary Beta-Carotene

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate foods rich in beta-carotene into your diet daily. These include carrots, sweet potatoes, spinach, kale, and cantaloupe. Aim for at least one serving of these vegetables or fruits at each meal to ensure an adequate intake of beta-carotene.

Description

Beta-carotene is a type of dietary antioxidant and a precursor to vitamin A. It supports healthy vision, skin, and immune function, and may reduce the risk of certain diseases.

[Beta-carotene](#) is a plant-derived golden-yellow carotenoid pigment. In addition to its antioxidant activity, **beta-carotene is converted to vitamin A in the body**. Beta-carotene **contributes about 30-35% of the dietary intake of this vitamin** in western countries. In developing countries, it represents the most abundant, and sometimes the sole source of vitamin A [\[R\]](#), [\[R\]](#), [\[R\]](#)

Good sources of beta-carotene include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fruits (apricots, peaches, persimmons, melons, citrus, tomatoes, etc.)
- Green vegetables (spinach, broccoli, parsley, collard greens)
- Orange tuber vegetables (carrots, sweet potatoes)

How it helps

Consuming foods that are rich in beta-carotene supports an increase in vitamin A levels since beta-carotene acts as a precursor that the body converts into vitamin A.

 PERSONALIZED TO YOUR GENES

Conversion of beta-carotene to vitamin A may be less efficient in people with your [BCO1](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
C16ORF46	rs11645428	GG	

29



Dietary Vitamin A

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Include foods high in vitamin A in your daily diet, such as sweet potatoes, carrots, spinach, and fortified foods like milk. Aim for 700-900 micrograms (mcg) of vitamin A per day for adults, depending on your age and sex, with a slightly higher intake recommended for women who are pregnant or breastfeeding.

Description

Vitamin A is essential for maintaining healthy vision, immune function, and skin integrity. It also plays a role in cell differentiation and growth, supporting various bodily functions.

How it helps

Eating foods that are high in dietary vitamin A is essential for maintaining sufficient vitamin A levels, which is crucial for proper vision, immune function, and cell growth.

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.