

Biotin

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

15 Next Steps

- 15 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

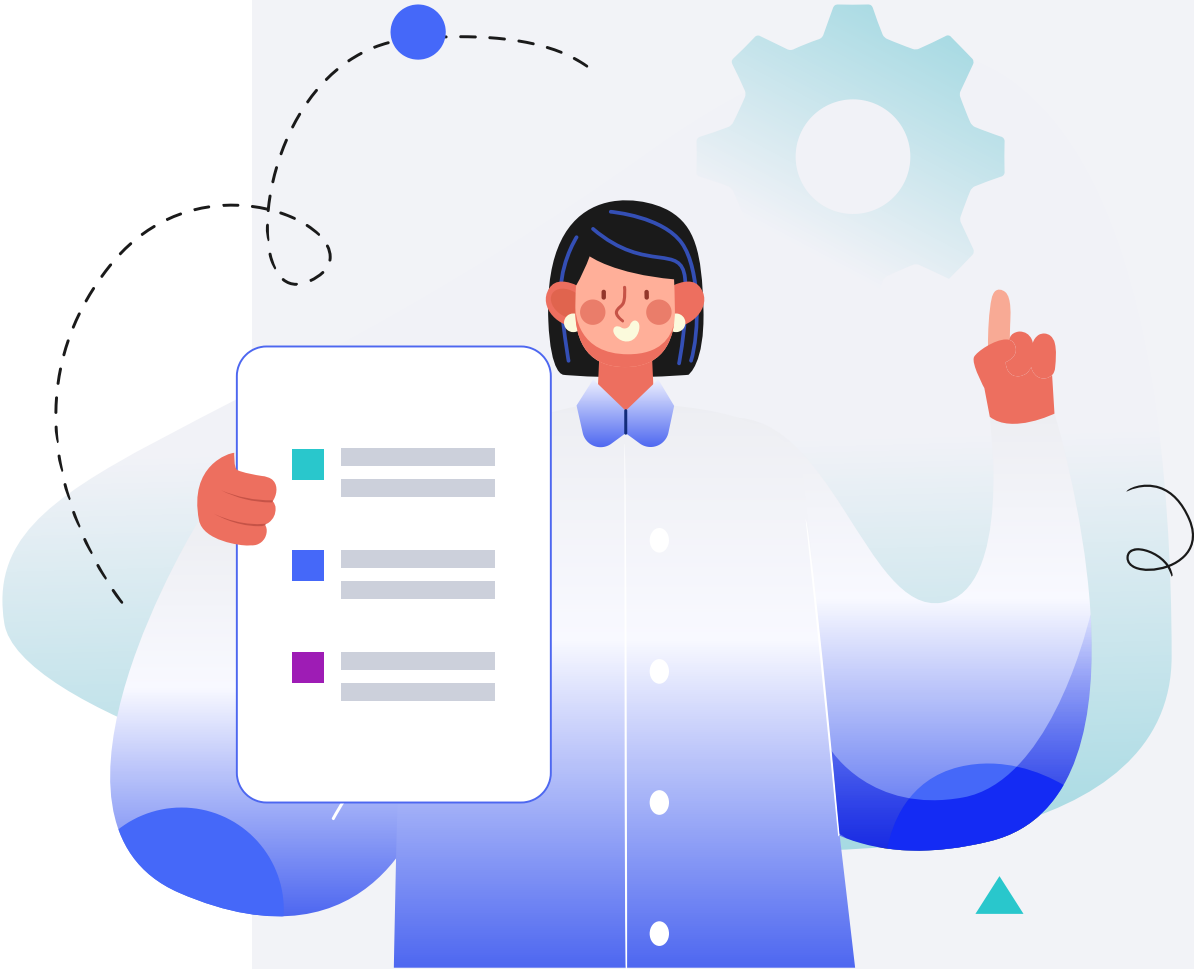
Male

HEIGHT

5ft 5" 165cm

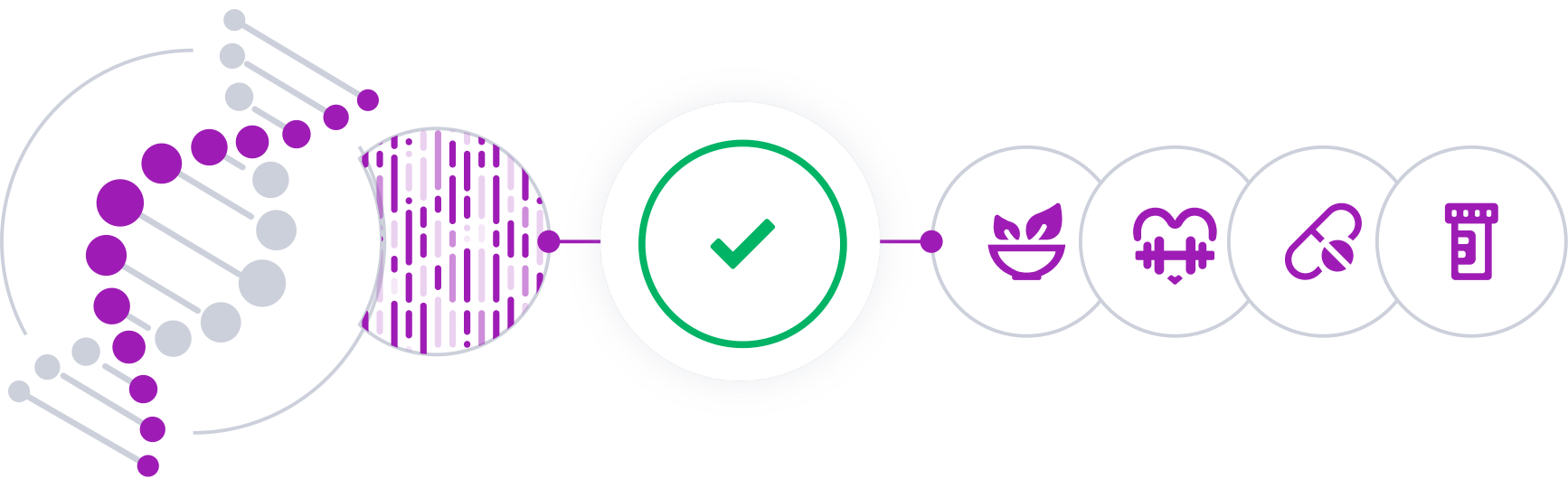
WEIGHT

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.

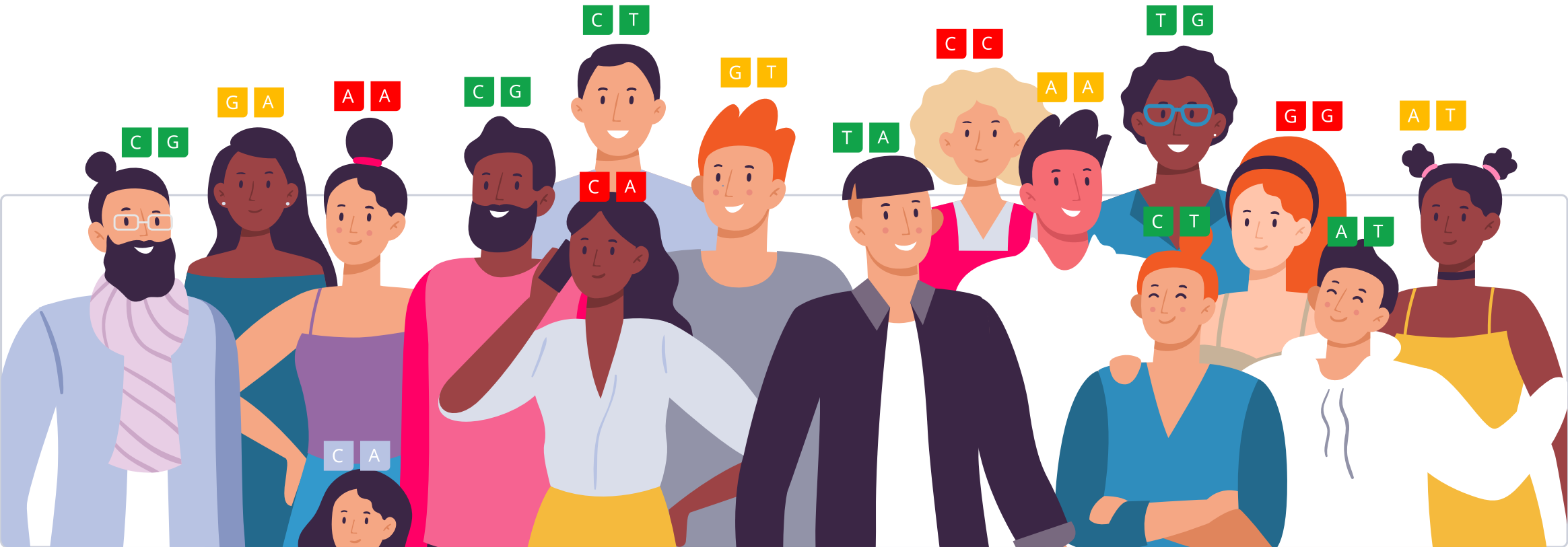


Similarly, our Trait Reports look at how your DNA influences your traits.



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

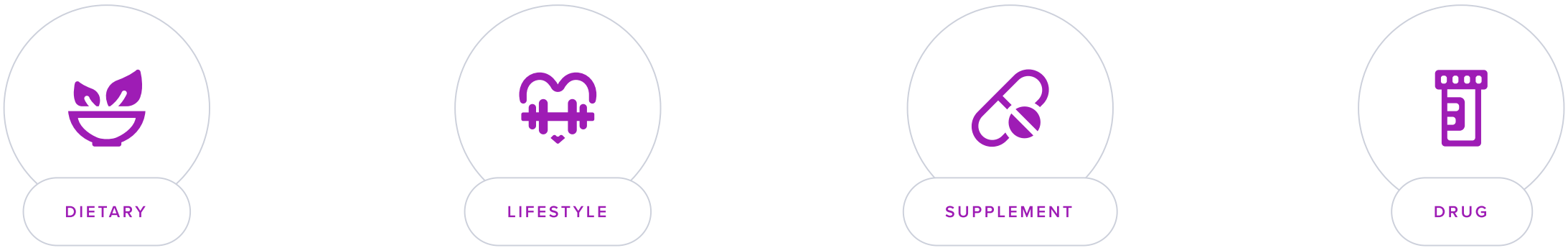
You have 2 risk alleles

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

[Biotin](#) (vitamin B7) helps break down substances like fats and carbs. It helps support hair, nail, and skin health [\[R\]](#), [\[R\]](#).

Rich sources of biotin include [\[R\]](#), [\[R\]](#):

- Eggs
- Meat and fish (e.g., beef liver, salmon, pork)
- Sunflower seeds
- Sweet potatoes
- Almonds

Adults should get **30 micrograms of biotin per day** [\[R\]](#).

Although biotin deficiency is rare, it can be dangerous if left untreated. Suboptimal levels, which are a lot more common, may contribute to [\[R\]](#), [\[R\]](#):

- Nerve problems
- Hair loss
- Skin rash
- Candida infection
- Muscle [pain](#)

Groups at risk for biotin deficiency include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Smokers
- People who drink a lot of alcohol
- Pregnant women
- People with [inflammatory bowel disease](#) (IBD)
- People with liver disease

People with increased biotin needs may need to take a supplement. Some symptoms of low biotin quickly improve upon supplementation [\[R\]](#).

Biotin Genetics

A crucial gene affecting biotin levels is [BTB](#). It helps make an enzyme called *biotinidase*. This enzyme helps release biotin from dietary protein and ‘recycle’ it from proteins in our body [\[R\]](#).

One *BTB* variant, [rs13078881-C](#), may reduce enzyme activity by up to 50%. People with this variant might need more dietary biotin to compensate [\[R\]](#).

Important: this variant may be detrimental only when combined with other rare variants, such as [rs71627145-G](#) and [rs34885143-A](#). People carrying single copies of these variants may have higher biotin needs, but they are **not likely to have biotinidase deficiency** [\[R\]](#).

Please also note that other factors, especially your diet, can greatly affect your biotin needs.



TYPICAL NEED

Likely typical need for biotin based on 3 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
BTB	rs34885143	GG
BTB	rs13078881	GG
ANKRD28	rs71627145	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	Beef	2	Spinach
3	Beef liver	4	Sweet Potatoes
5	Biotin	6	Pork
30 mcg		8	Salmon
7	Almonds	10	Sunflower Seeds
9	Eggs		

1



Beef

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Incorporate lean beef into your diet 2-3 times per week, with a serving size of about 3-4 ounces (85-113 grams) per meal. Choose cuts like sirloin or round to minimize saturated fat intake.

Description

Beef is a rich source of high-quality protein, essential vitamins, and minerals like iron and zinc. Incorporating lean cuts of beef into a balanced diet can support muscle growth, overall nutrition, and iron intake.

Beef is an excellent source of many B-vitamins, protein, proline, and minerals like zinc and iron. Grass-fed uncharred beef is healthiest. Beef contains 34.82 mg of proline per gram.

How it helps

Beef is a good source of biotin, a vital nutrient that aids in cellular growth and the metabolism of fats, proteins, and carbohydrates. Having a biotin-rich diet, like incorporating beef, can prevent a deficiency, thus keeping your body functions running smoothly.

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 is a green leafy vegetable that contains biotin, contributing to the maintenance of normal metabolic functions.

3



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

Eating beef liver can help prevent a biotin deficiency because it's a rich source of this essential vitamin. Regular intake fortifies your body's stores, promoting healthier skin, hair, eyes, and liver function.

4



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 high in biotin, a nutrient that helps your body convert food into energy. By including sweet potatoes in your diet, you could potentially avoid a biotin deficiency, which is known to cause hair loss, skin problems, and neurological issues.

5



Biotin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

For adults, take a biotin supplement of 30 to 100 micrograms daily. This can be consumed in a single dose with a meal to improve absorption. It is recommended to continue daily for optimal benefits on hair, skin, and nail health.

TYPICAL STARTING DOSE

30 mcg

Description

Biotin, also known as vitamin B7, is an essential nutrient that plays a key role in metabolizing carbohydrates, fats, and proteins. It is important for maintaining healthy hair, skin, and nails and supporting overall metabolic function.

A **biotin supplement** of up to 30 micrograms per day can be taken to meet needs not achieved through diet.

How it helps

Biotin supplement aids in metabolizing carbohydrates, fats, and proteins, which contributes to overall body functions, including skin, hair, and nail health. Regular intake may prevent a biotin deficiency that could lead to symptoms like hair loss, skin rash, or brittle nails.

6



Pork

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate lean cuts of pork, such as tenderloin or loin chop, into your diet 2-3 times per week, aiming for a portion size of about 3-4 ounces (85-113 grams) per meal. Cook it using healthy methods like grilling, baking, or broiling to minimize added fats.

Description

Pork is a meat obtained from pigs, and is a great source of zinc, protein, and iron, as well as leucine, selenium, phosphorus, and B-vitamins.

Pork is a good source of protein, chromium, selenium, phosphorus, zinc, and potassium. A 3-ounce serving provides 3.6 mcg of chromium or 10%DV.

How it helps

Eating pork helps in the condition Biotin as pork is a rich source of this B vitamin, which is essential for the body to convert food into energy. Regular consumption can thus prevent Biotin deficiency, supporting metabolic function and promoting healthy skin, hair, and nails.

7



Almonds

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a handful of almonds (about 23 kernels) into your daily diet. You can eat them as a snack, add them to your breakfast cereals or yogurt, or include them in salads and other dishes. Do this consistently for ongoing health benefits.

Description

Almonds are a good source of omega-6s, protein and vitamins, making for a great snack food. A 1-ounce serving provides 3700 mg of omega-6.

Almonds are nutritious tree nuts that originate from the *Prunus dulcis* tree. They are packed with essential nutrients, including healthy fats, fiber, vitamin E, and magnesium, which collectively contribute to heart health, support weight management, and may help regulate blood sugar levels.

How it helps

Almonds are high in biotin, a B vitamin that helps the body convert food into energy. Regularly consuming almonds can boost your biotin levels and potentially help prevent a biotin deficiency, which can lead to hair loss, skin rashes, and neurological symptoms.

8



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 biotin, a vitamin necessary for healthy skin, hair, eyes, and liver functionality. By including salmon in your diet, you're providing your body with the biotin it needs to perform these functions effectively.

9



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, especially the yolk, are a good source of biotin, an essential nutrient. Regular consumption can help restore biotin levels, preventing biotin deficiency which could lead to skin rashes, hair loss, and neurological issues.

10



Sunflower Seeds

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a small handful of sunflower seeds (about 1 ounce or 28 grams) into your daily diet. You can eat them alone as a snack, sprinkle them on salads, or add them to homemade bread or muffins. Ensure they are unsalted to keep your sodium intake in check.

Description

Sunflower seeds are nutrient-dense plant-based snacks high in protein, healthy fats, fiber, and essential minerals like magnesium and selenium. They are associated with promoting heart health, supporting digestion, and providing energy.

Sunflower seeds are a great source of biotin, protein and antioxidants, minerals like zinc and selenium, and vitamins E and B6. A ¼ cup serving provides 2.6 mcg of biotin or 9%DV.

How it helps

Sunflower seeds are high in biotin, a type of B vitamin that helps convert food into energy and supports a healthy metabolism. Eating them can help prevent biotin deficiency, which can lead to hair loss, skin rashes, and neurological issues.

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.