

ALA (Omega-3)

DNA Health Report

REPORT CATEGORY —



Sample Client

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

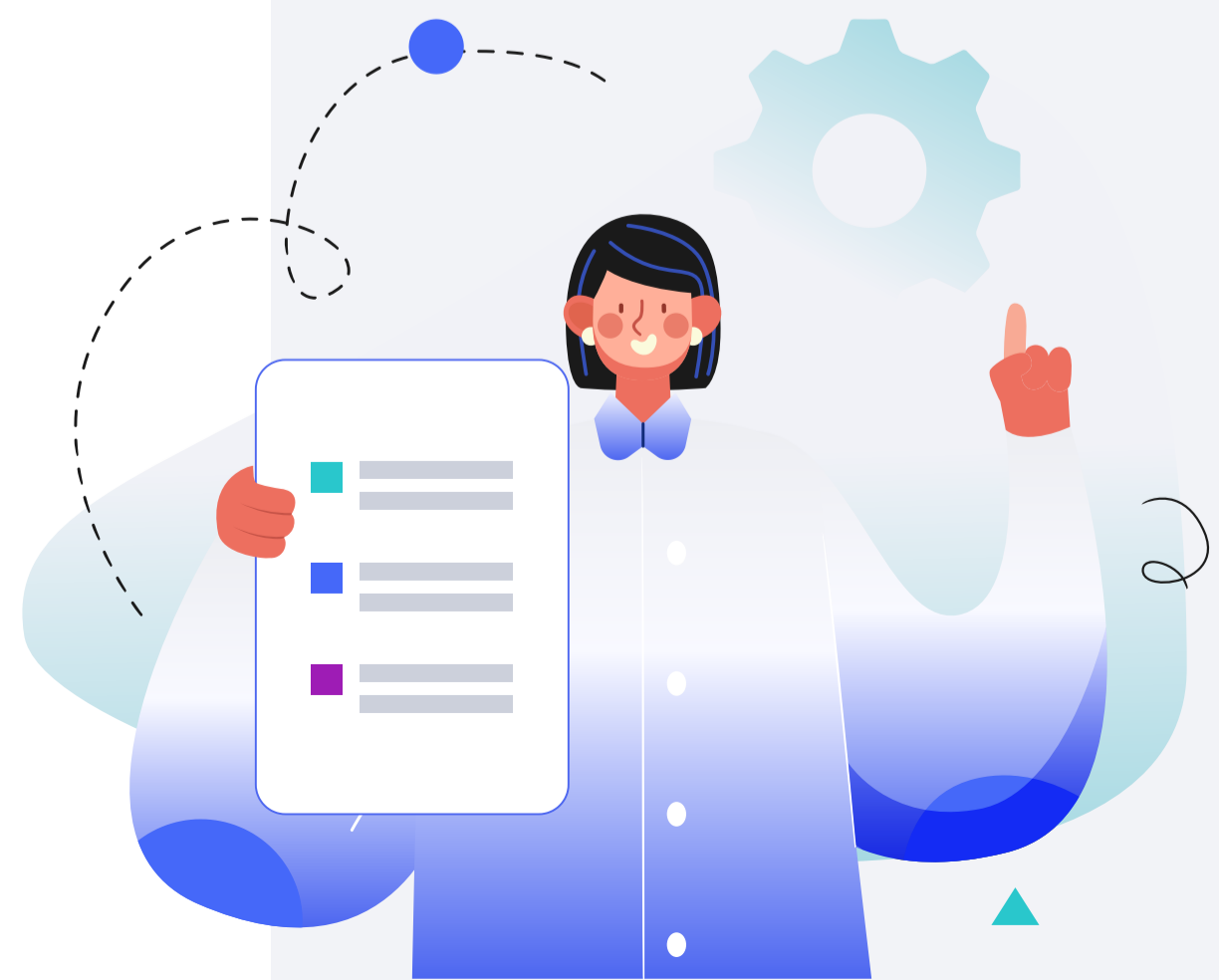
5ft 5" 165cm

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.



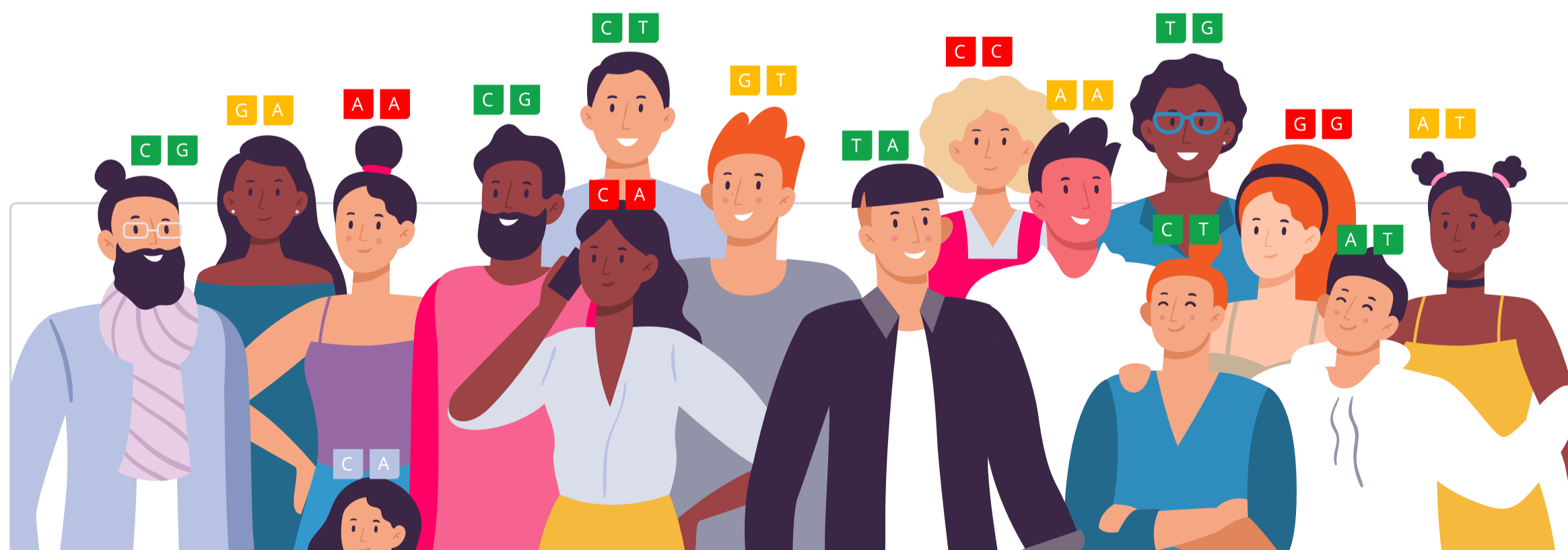
Similarly, our Trait Reports look at how your DNA influences your traits.



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

[Alpha-linolenic acid](#) (ALA) is an essential omega-3 fatty acid. It is necessary for our health, but our bodies can't produce it. We need to get it from food [\[R\]](#).

Natural sources of ALA include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Flaxseed and flaxseed oil
- Chia and hemp seeds
- Plant oils (e.g., canola and soybean oils)
- Nuts, especially walnuts

ALA deficiency is rare, but it may contribute to:

- Skin problems [\[R\]](#), [\[R\]](#)
- High cholesterol [\[R\]](#)
- Vision problems [\[R\]](#), [\[R\]](#), [\[R\]](#)

ALA helps make fatty acids such as [eicosapentaenoic acid \(EPA\)](#), and [docosahexaenoic acid \(DHA\)](#). EPA and DHA play important roles in [\[R\]](#), [\[R\]](#):

- Inflammation reduction
- Eye and brain health
- Nervous system development

Genetics of ALA Levels

Up to **30%** of differences in people’s ALA levels are due to genetics [\[R\]](#).

The genes involved may influence the conversion of ALA into other fatty acids. Certain gene variants may lower the conversion of ALA into EPA. People with such variants may have high levels of ALA [\[R\]](#), [\[R\]](#).

Keep in mind that your diet and environment also influence your ALA levels.

Genetically higher ALA levels may play a role in:

- Bone Health. [\[R\]](#)
- Deep Vein Thrombosis. [\[R\]](#)
- Heart Health. [\[R\]](#)
- Stroke. [\[R\]](#), [\[R\]](#)



TYPICAL NEED

Likely typical need for ALA based on 796 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FADS2	rs4246215	GG
TMEM258	rs102275	TT
FADS1	rs174536	AA
FADS2	rs1535	AA
FADS2	rs174547	TT
NPIPA1	rs4985167	CC
BEST1	rs174468	AG
DAGLA	rs1692120	GA
MCM6	rs16832011	AA
HTR3E	rs4912523	GG
KLK10	rs3745536	GG
EGFR	rs884420	CC
MPDZ	rs16923093	GG
/	rs11163101	CC
EFNA5	rs624548	CC
RASA1	rs7712940	CC
CBX3	rs6960012	CC
HACE1	rs156217	TT
SV2B	rs8024092	GG
TRPM8	rs17862939	AA
TXN2	rs6000268	CC
ECE1	rs4654909	GG
PTCHD4	rs17556966	CC
RFLNA	rs7956827	CC
GADD45G	rs11265949	AA
CCND2	rs12317697	AA
/	rs16914464	TT
KCNJ2	rs12949270	CC
MARCO	rs6754877	CC
/	rs9510266	CC
CASZ1	rs4427409	CC
BHLHE41	rs11048518	GG

GENE	SNP	GENOTYPE
EIF3H	rs16888329	TT
UBE3A	rs11635669	CC
WDFY3	rs17368018	TT
THRB	rs1505303	AA
SLC9A9	rs9877770	AA
STEAP4	rs7804886	GG
GRM8	rs17864085	GG
FNBP1	rs10988538	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	English walnuts	2	Black walnuts
3	Hemp Seed Oil	4	Edamame
5	Chia Seeds	6	Canola Oil
7	Refried Beans	8	Flaxseed 2 tbsp

1



English walnuts

IMPACT
EVIDENCE

1 / 5

1 / 5

How to implement

Incorporate a handful of English walnuts, approximately 1 ounce or 28 grams, into your daily diet. You can eat them as a snack, add them to salads, or use them as a topping for yogurt or cereal.

Description

English walnuts are a nutritious nut variety rich in omega-3 fatty acids, antioxidants, and vitamins. Consuming them as part of a balanced diet may support heart health, cognitive function, and overall nutritional well-being.

English Walnuts are the only nut high in ALA, and also contain vitamin B6 and E, copper, manganese, and phosphorus. A 1-ounce serving contains 2.57g of ALA. Black walnuts are also good, but only have 0.76g of ALA.

How it helps

English walnuts are rich in Alpha-Linolenic Acid (ALA), a type of Omega-3 fatty acid. Eating these walnuts can help increase your levels of ALA, thereby promoting heart health, reducing inflammation, and helping to prevent the onset of chronic diseases related to Omega-3 deficiencies.

2



Black walnuts

IMPACT
EVIDENCE

1 / 5

1 / 5

How to implement

Incorporate black walnuts into your diet by adding a small handful (about 1 ounce or 28 grams) to your daily meals, such as in salads, oatmeal, or baking recipes. Do this regularly as part of your daily diet.

Description


Black walnuts are a nutrient-dense nut variety that offers healthy fats, protein, and essential minerals. They can be part of a nutritious diet and provide potential benefits for brain health and overall nutrition.

Black walnuts are a good source of ALA, as well as iron and potassium. A 1-ounce serving contains .76 g of ALA.

How it helps


Black walnuts are packed with ALA, a type of omega-3 fatty acid. Regular consumption can help lower inflammation, reduce heart disease risk, and promote brain health.


3



Hemp Seed Oil

IMPACT
EVIDENCE





How to implement

Incorporate hemp seed oil into your diet by adding 1-2 tablespoons to salads, smoothies, or yogurt daily. Ensure the oil is cold-pressed and unrefined for maximum health benefits. This can be a regular part of your diet indefinitely.

Description

Hemp seed oil is derived from hemp seeds and is known for its nutritional value, including a balanced ratio of omega-3 and omega-6 fatty acids. It may support skin health, reduce inflammation, and provide a source of essential nutrients.

Hemp seed oil contains vitamin E, magnesium, calcium, sulfur, phosphorus, iron, and zinc. Hemp oil contains about 30 mg of GLA per gram.

How it helps

Hemp seed oil contains a beneficial ratio of omega-6 to omega-3 fatty acids, including ALA, which supports overall cardiovascular health.

4



Edamame

IMPACT
EVIDENCE





How to implement

Incorporate shelled or whole edamame into your diet by boiling, steaming, or pan-frying them for about 5 to 10 minutes until tender. Eat them as a snack, add to salads, or include in main dishes. Aim for a serving size of about 1 cup (155 grams) a few times a week to benefit from their nutritional value.

Description


Edamame, young soybeans, is a nutritious snack rich in protein, fiber, and essential nutrients like folate and vitamin K. Including edamame in your diet can help promote heart health, bone health, and overall nutritional balance.

Edamame is a good source of vitamin K, protein, fiber, and minerals like magnesium, iron, potassium, and folate. A ½ cup serving provides 21 mcg of vitamin K or 18%DV.

How it helps

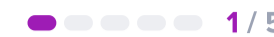
Edamame is rich in Omega-3 fatty acids, particularly ALA, which supports heart health by decreasing inflammation and reducing the risk of heart disease. Its regular intake can therefore contribute to an increased intake of these beneficial fats, supporting overall health and preventing deficiencies.

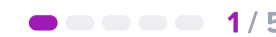
5



Chia Seeds

IMPACT
EVIDENCE





How to implement

Incorporate 1 to 2 tablespoons of chia seeds into your daily diet. You can add them to yogurt, smoothies, oatmeal, or salads. Do this regularly as part of your daily meals.

Description

Chia seeds are high in fiber, omega-3 fatty acids, and various vitamins and minerals. Adding chia seeds to your diet can support digestive health, provide essential nutrients, and contribute to overall nutritional wellness.

Chia seeds are a healthy source of omega-3s, calcium, as well as fiber, iron, magnesium phosphorus, and vitamins B1 and B3. A 1-ounce serving provides 5.06 g of ALA.

How it helps

Chia seeds are a great source of Alpha-Linolenic Acid (ALA), a type of Omega-3 fatty acid, which is essential for your brain and heart health. Regular inclusion in your diet can increase ALA levels, aiding in the prevention of heart disease and inflammation.

6



Canola Oil

IMPACT
EVIDENCE





How to implement


Incorporate canola oil into your diet as a cooking oil or a salad dressing base. Use it in place of other fats such as butter or margarine when baking, frying, or preparing meals to help lower bad cholesterol levels. Aim for using canola oil in 1-2 meals per day, everyday, for consistent dietary benefits.


Description


Canola oil is a heart-healthy cooking oil rich in unsaturated fats and low in saturated fats. Incorporating canola oil into your diet can help lower cholesterol levels and reduce the risk of cardiovascular disease.

How it helps

Canola oil is low in saturated fat and contains ALA, an essential omega-3 fatty acid that contributes to the protection of blood vessels from inflammatory and thrombotic effects.

7  **Refried Beans**

IMPACT  1/5

EVIDENCE  1/5

How to implement

Incorporate refried beans into your diet at least 2-3 times per week. Serve them as a side dish or use them as a filling in tacos and burritos. Each serving should amount to approximately half a cup.


Description

Refried beans are a popular Mexican dish made from cooked and mashed beans, typically pinto or black beans, seasoned with spices. They are a good source of ALA, protein, fiber, iron, and magnesium, providing sustained energy and supporting digestive health.

Refried beans are a good source of ALA, protein, fiber, iron, and magnesium. A ½ cup serving contains .21 g of ALA.

How it helps

Refried beans can help provide Alpha-Linolenic Acid (ALA), a type of omega-3 fatty acid, which is vital for heart health and reducing inflammation. Consumption of such can help prevent ALA deficiency, potentially warding off related heart conditions.

8  **Flaxseed**

IMPACT  1/5

EVIDENCE  1/5

How to implement

Consume 2 tablespoons of ground flaxseed daily. You can add it to your breakfast cereal, smoothies, or salads.

TYPICAL STARTING DOSE

2 tbsp

Description

Flaxseed is a nutrient-dense food that's high in fiber and omega-3 fatty acids. It may contribute to heart health, promote digestive regularity, and help manage cholesterol levels when included in a balanced diet.

[Flaxseed](#) is a common ingredient in bakery products. Some people also use it as a health food to support digestion [\[R\]](#).

Flaxseed is rich in many compounds, including [\[R\]](#):

- Vitamins and minerals
- Protein
- Fiber
- Omega-3 fatty acids ([ALA](#))

How it helps

Flaxseed is rich in Alpha-Linolenic Acid (ALA), a type of Omega-3 fatty acid, which is beneficial to our bodies by reducing inflammation and protecting the heart. Eating flaxseed can increase ALA levels and help prevent related health issues such as heart disease.

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.