

Effects of Omega-3s on Triglycerides

DNA Health Report

REPORT CATEGORIES —



NUTRITION



HEART & BLOOD
VESSELS

Sample Client

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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

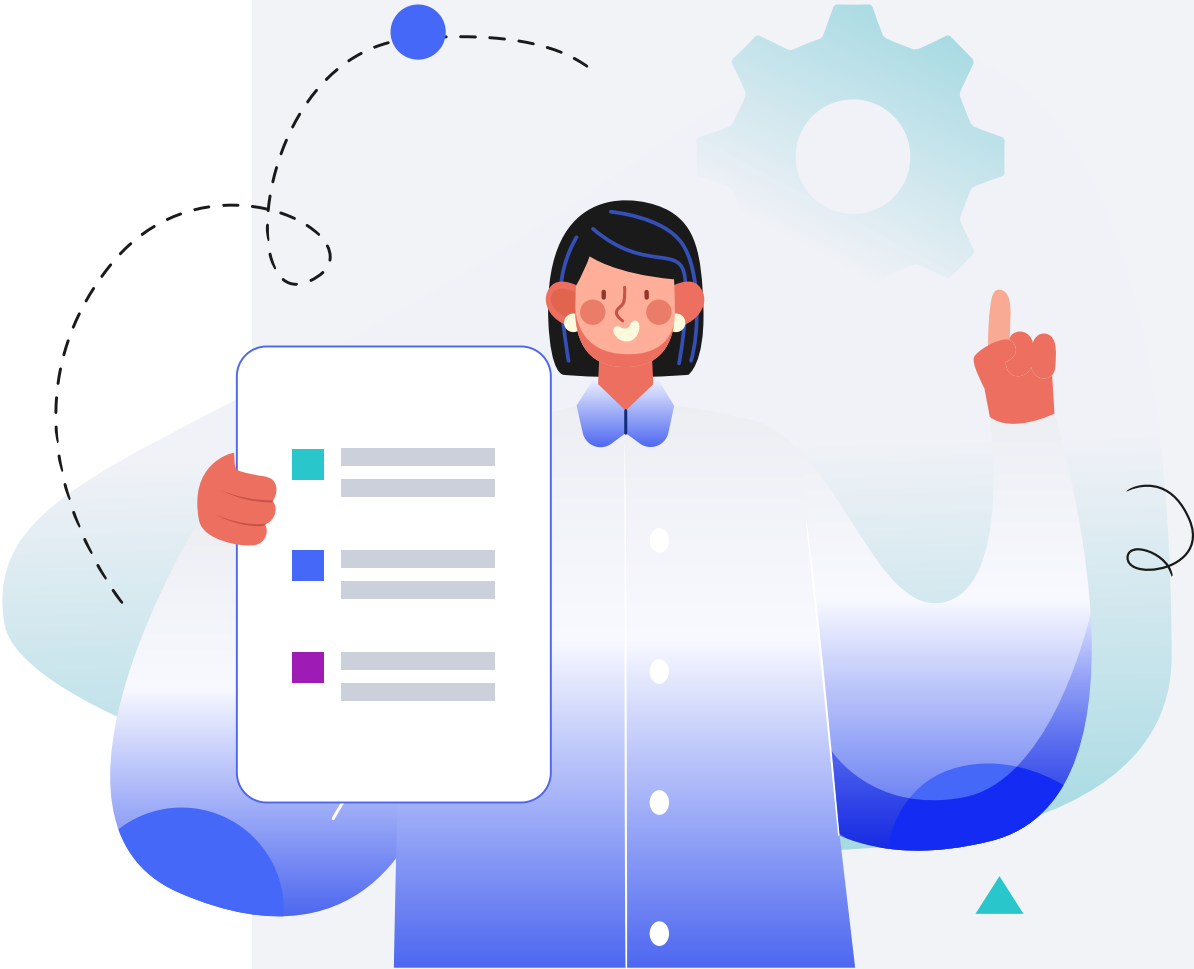
Male

HEIGHT

5ft 5" 165cm

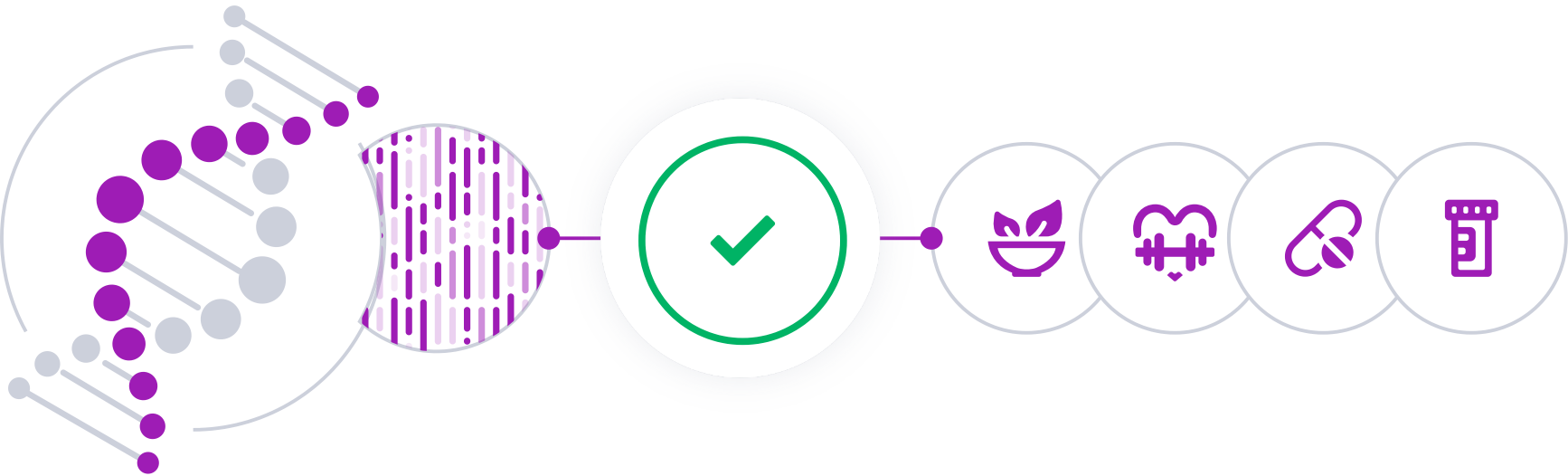
WEIGHT

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.

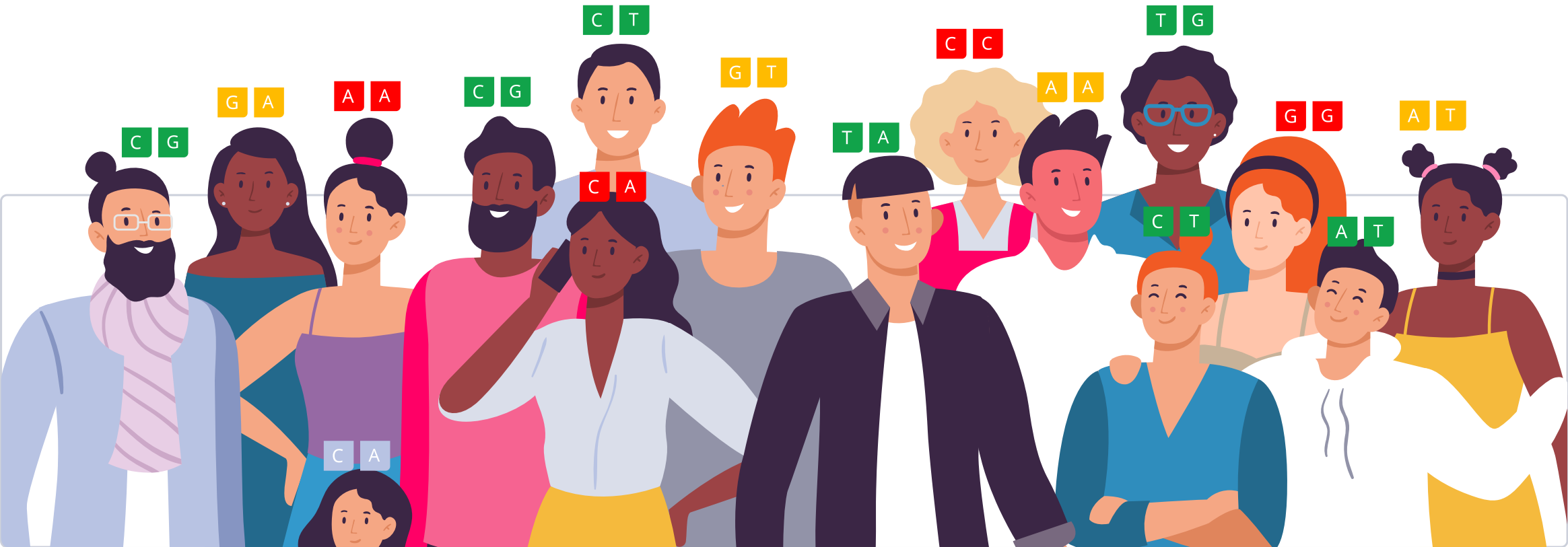


Similarly, our Trait Reports look at how your DNA influences your traits.



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

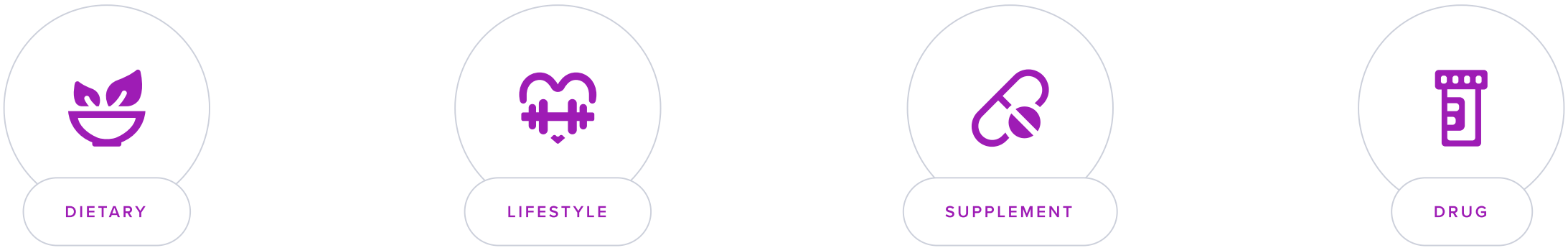
You have 2 risk alleles

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

Omega-3 fatty acids may help lower triglyceride levels. They may help both healthy people and those with chronic health conditions. Helpful omega-3 sources include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fish oil
- Krill oil
- Algal oil

Omega-3 supplements may also help when combined with other supplements, such as vitamin D [\[R\]](#), [\[R\]](#), [\[R\]](#).

Prescription omega-3s are recommended for people with very high triglyceride levels [\[R\]](#), [\[R\]](#), [\[R\]](#).

Omega-3s may support healthy triglyceride levels by helping the body break them down [\[R\]](#), [\[R\]](#).

Not all people respond equally well to omega-3 supplementation for high triglyceride levels. Part of the reason is genetic predisposition.

Genetics

Genetic studies revealed why omega-3 supplements may work better for some people than others. They identified key genetic variants influencing individuals' response to fish oil supplementation [R, R, R, R].

The studies found that variants in several genes - particularly GJB2, SLC12A3, ABCA6, MLXIPL, and APOE - affect how blood lipid levels change in response to fish oil [R, R, R].

Additionally, researchers developed a genetic risk score based on multiple variants that could partly predict **which individuals would respond positively to fish oil supplementation**. This suggests that genetic testing could help determine whether omega-3 supplements benefit a given individual [R].

These findings point toward more personalized approaches to nutrition, where genetic profiles could guide supplementation recommendations. However, the researchers note that additional studies are needed to fully validate these genetic markers across different populations and dosing protocols.



TYPICAL EFFECTS

Predisposed to typical effects of omega-3s on triglycerides based on 25 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SIK3	rs144018203	GG
SLIT2	rs2952724	CC
TADA2A	rs1714987	CC
APOE	rs7412	CC
ALDH8A1	rs6920829	CT
IQCJ	rs61332355	CA
GJB2	rs112803755	AA
IQCJ	rs2621308	GT
JADE1	rs1216352	TC
IQCJ	rs1449009	AG
NELL1	rs752088	AG
PLA2G4A	rs1569480	AG
CD36	rs1761667	AG
CD36	rs1984112	AG
JADE1	rs931681	GA
JADE1	rs1216365	GT
MAU2	rs141844019	CC
BAZ1B	rs117788606	TT
LPL	rs142084074	GG
NXPH1	rs6463808	GG
MAP1A	rs55707100	CC
DDX39B	rs909253	AA
NT5C3B	rs8071753	GG
NOS3	rs1799983	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	
1	Omega-3 (Fish Oil) 2000 mg

1



Omega-3 (Fish Oil)

IMPACT

5 / 5

EVIDENCE

4 / 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

2000 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 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 [\[R\]](#), [\[R\]](#), [\[R\]](#).

One of the major health benefits of omega-3s is triglyceride reduction, which has beneficial effects on heart health. However, not everyone experiences the benefits to the same extent, and the reason behind this is partly in genetics.