

Heart Health

DNA Health Report

REPORT CATEGORY —



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

We all love a chocolate treat, whether it's a big slice of chocolate cake or a cup of hot chocolate huddled around the campfire. But what if we told you that a particular cup of cocoa a day might actually save your life?

The love affair between humans and chocolate is steeped in history. Cacao, the bean which is roasted to make cocoa, has been used in traditional medicine across the Americas for more than 5,000 years [R].

Explorers brought cacao to Europe around the 1500s, and we've been discovering the many delicious uses and benefits of this wonder bean ever since [R].

When most people think of eating chocolate, they don't immediately think "*healthy*."

That's because a lot of cocoa products like milk chocolate often contain high amounts of sugar and fat. **But processed correctly, chocolate may actually be a health-boosting superfood, as shown by the Guna.**

The Guna are an indigenous people that live on the San Blas islands of Panama. If you didn't know better, you'd think these islands have magical health-boosting properties.

This is because, compared to the mainland, the residents of these islands have much lower blood pressure regardless of their age. They also have lower rates of type 2 diabetes, heart attacks, stroke, and cancer.

Adding more to the mythical properties of the islands, islanders who move to the mainland are over 8% more likely to have high blood pressure, and this risk increases by 35% after age 60 [R].

But are the San Blas islands really magical? Scientists researching why the Guna are blessed with good heart health think they may have identified the culprit: **a 10 oz. cocoa drink consumed 3 times a day!** They actually consume 10 times more cocoa on these islands than their Panamanian mainland counterparts [R].

But how would cocoa confer these benefits?

Well, the main benefits of cocoa stem from the fact that it contains antioxidants called flavonoids. Flavonoids are potentially great for your heart, as they lower your blood pressure, improve blood flow, and balance your cholesterol [R, R, R, R].

In fact, **eating 30 g of chocolate products 3 times per week may reduce your risk of heart disease by as much as 10%** [R]. That's huge!

Now, is cocoa the only secret of Guna? Probably not. Eating a diet low in fat and having an active lifestyle probably plays an even larger role [R]. But these aren't the only ways to optimize your heart health.

Sadly we can't all move to the tropical San Blas islands for our heart health. But don't worry, because you might already have the secret to the benefits of this tropical paradise hidden within your genetic code!

The people of the San Blas islands have spent thousands of years perfecting their heart health-boosting diet and lifestyle. We don't have time for that. Thanks to science, you can take a shortcut to optimal heart health by revealing the secrets hidden in your genes.

This report focuses on the genetics of CAD. Read more to find out:

- How your genetics play a role in heart health
- Your genetic risk score based on over 11,000 genetic variants
- Personalized recommendations based on your genetics

About

Key Takeaways:

- Over **18 million** people have heart disease in the U.S. A third of deaths from heart disease are preventable.
- Up to **40%** of differences in people's chances of getting coronary artery disease may be due to genetics.
- Other risk factors include excess weight, stress, sedentary lifestyle, smoking, and more.
- If you have a high genetic risk, take action on modifiable risk factors. Even with a low genetic risk, having other risk factors will still make you prone to heart disease.
- Click the **next steps** tab for relevant labs and lifestyle factors.

In the US, 1 in 3 deaths from heart disease could be prevented. That's about 92,000 deaths each year. Imagine if we could save all those lives by striving to prevent heart disease [\[R\]](#)!

Coronary artery disease is the most common type of heart disease. It affects the coronary arteries -- the large blood vessels that feed the heart. When these vessels become narrowed or blocked, they can't deliver as much oxygen to the heart. Because of this, heart muscle tissue can start to die off [\[R\]](#), [\[R\]](#).

If a coronary artery is blocked suddenly, it can cause a heart attack. If the artery narrows slowly over a long period of time, it can cause chest pain and other problems [\[R\]](#).

Many factors can increase your risk of heart disease. These include [\[R\]](#), [\[R\]](#):

- Excess weight
- Unhealthy diet
- Stress
- Lack of exercise
- Smoking
- Air pollution
- Age



Predisposed to typical heart health based on 1,049,366 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NOS3	rs1799983	TT
CDKN2B	rs10757278	GG
CDKN2A	rs4977574	GG
COMT	rs4680	AG
NOS3	rs2070744	TC
PEMT	rs12936587	GA
ICAM1	rs5498	AG
CETP	rs5882	AG
PCSK9	rs28362286	CC
NOS3	rs1800783	AA
CDKN2A	rs10757274	GG
CDKN2B	rs1333049	CC
CDKN2B	rs2383206	GG
SORT1	rs599839	AA
PLPP3	rs17114036	AA
APOB	rs515135	CC
GUCY1A1	rs7692387	GG
MTHFR	rs1801133	AA
KCNK5	rs10947789	TT
GGCX	rs1561198	TT
LPL	rs264	GG
ABO	rs579459	CC
PCSK9	rs11591147	GG
PCSK9	rs562556	AA
ATG16L1	rs10210302	TT
USF1	rs2073658	TC
NOS3	rs1800779	AG
NKX2-3	rs10883365	GG
PON1	rs662	TT
FHL3	rs190569784	GG
SERPINA1	rs112635299	GG
ANGPTL4	rs116843064	GG

- High blood pressure
- High cholesterol
- Diabetes
- Genetics

According to the CDC, **over 18 million adults in the US have coronary artery disease**, and the rates keep increasing. However, death rates have been going down. This is likely due to improved diagnosis and treatment [\[R\]](#), [\[R\]](#), [\[R\]](#)!

Medications that doctors often prescribe for coronary artery disease include [\[R\]](#):

- Low doses of aspirin, to help prevent blood clots
- Statins, to reduce cholesterol and slow down fat buildup in blood vessels
- Beta-blockers, to lower blood pressure and relax the heart

It's much easier to prevent heart disease than to treat it. To avoid heart disease, experts recommend a "heart-healthy" lifestyle, which includes [\[R\]](#):

- Not smoking cigarettes
- Eating a healthy diet
- Staying physically fit
- Getting good-quality sleep

Up to 40% of differences in people's chances of getting coronary artery disease may be attributed to genetics.

Genes that may contribute to coronary artery disease influence [\[R\]](#):

- Fat metabolism
- Inflammation
- Blood clotting
- Blood vessel function

Genetically higher levels of the following markers are causally associated with a higher risk of heart disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- White blood cells
- Fasting insulin
- IGF-1
- ApoB
- Neutrophils
- L-carnitine

In contrast, genetically high total testosterone and EPA may be causally associated with a lower risk of coronary heart

GENE	SNP	GENOTYPE
APOE	rs7412	CC
KIF6	rs20455	GA
PITX2	rs2200733	CT
SMARCA4	rs1122608	TG
MRPS6	rs9982601	TC
ZC3HC1	rs11556924	TC
/	rs2252641	CT
PLG	rs4252120	TC
SLC22A4	rs273909	AG
FES	rs17514846	AC
IRGM	rs1000113	TC
LDLR	rs6511720	GG
IL23R	rs11805303	CT
/	rs72711827	GG
SORT1	rs12740374	GG
PHACTR1	rs9349379	GG
FBXL20	rs72823390	CC
PLPP3	rs17114046	AA

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

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

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.

- 1

Dietary Pentadecanoic Acid
- 2

Emoxypine

1



Dietary Pentadecanoic Acid

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

While there is no officially recommended daily intake for pentadecanoic acid, research suggests that **20–50 mg per day** may support health benefits such as improved metabolism, reduced inflammation, and enhanced cellular health. You can achieve this through a balanced diet rich in full-fat dairy and fatty fish or by taking supplements as directed. Always consult with a healthcare professional before starting supplementation, especially if you have specific health conditions or dietary restrictions.

Description

Pentadecanoic acid, also known as C15:0, is a 15-carbon saturated fatty acid that belongs to the group of odd-chain fatty acids. It is naturally found in [\[R\]](#):

- Full-fat dairy products (e.g., milk, butter, and cheese)
- Fatty fish (salmon, herring, mackerel, sardines, anchovies, tuna)
- Whole grains
- Seed oils (flaxseed, chia, hemp)
- Legumes (lentils, chickpeas)

Unlike even-chain fatty acids, pentadecanoic acid has unique biological properties that are being increasingly studied for its potential health benefits.

Supplementation with pentadecanoic acid has shown promise in supporting metabolic health by improving cholesterol levels, enhancing insulin sensitivity, and reducing inflammation. It may also promote cellular health by stabilizing cell membranes and improving mitochondrial function. Additionally, C15:0 has been linked to better immune system regulation, neuroprotection, and potentially reducing the risk of chronic diseases like diabetes and cardiovascular conditions. As an emerging "essential fatty acid," it is gaining attention for its role in promoting long-term health and wellness.

How it helps

High dietary intake of pentadecanoic acid is not associated with an increased overall risk of cardiovascular disease. On the contrary, it has even been associated with a decreased risk of heart failure. A meta-analysis of 18 studies found an inverse relationship between blood pentadecanoic acid levels and cardiovascular disease [\[R, R\]](#).

2



Emoxypine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Emoxypine is typically available in oral capsules, tablets, or injectable forms, with the dosage depending on the condition being treated. For general antioxidant or neuroprotective purposes, the oral dose ranges from 125–250 mg taken 2–3 times daily, while more intensive treatments may require higher doses or injectable administration under medical supervision. It is usually recommended to take Emoxypine with meals to minimize gastrointestinal discomfort. Treatment duration can vary from a few weeks to several months, depending on the therapeutic goal.

Description

Emoxypine (2-ethyl-6-methyl-3-hydroxypyridine succinate) is a synthetic antioxidant and nootropic compound primarily used in Russia and some Eastern European countries. It is derived from pyridoxine (vitamin B6) and known for its neuroprotective, anti-stress, and anti-inflammatory properties.

Emoxypine can reduce anxiety, stress, and symptoms of depression by normalizing neurotransmitter levels and protecting brain cells from oxidative stress. Additionally, it has applications in managing cognitive impairment, improving memory, and protecting against age-related neurodegeneration. Emoxypine is also used for cardiovascular health, as it can improve blood flow and protect tissues from ischemia-reperfusion injuries.

Emoxypine works by scavenging free radicals, enhancing membrane fluidity, and improving the body's antioxidant defenses.

How it helps

Adding Emoxypine to conventional treatment improved their clinical course, reduced oxidative stress, sped up recovery of cardiac contractility and left ventricular diastolic function, and normalized central hemodynamics in a trial of 338 patients with acute forms of ischemic heart disease and arterial hypertension [\[R\]](#).

Both Emoxypine and histochrome inhibited lipid peroxidation and reduced the reperfusion damage to the myocardium in a trial on ischemic heart disease patients [\[R\]](#).