

CETP (Cholesterol/ Longevity)

Gene Report

REPORT CATEGORIES —



HEART & BLOOD
VESSELS



LONGEVITY

Sample Client

Report date: 15 January 2026

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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

The *CETP* (short for cholesteryl ester transfer protein) encodes a protein that helps balance [cholesterol](#) and [triglyceride](#) levels in the blood. Its main job is to transfer cholesterol and triglycerides between [HDL](#) and [LDL](#) cholesterol, helping to remove excess fats from the bloodstream. This gene is best known for specifically affecting levels of the “good” HDL cholesterol [\[R\]](#), [\[R\]](#).

CETP helps swap a cholesteryl ester that is attached to HDL with triglycerides that are attached to LDL. This LDL that is newly-bound to cholesteryl ester can then move to the liver, where it is eliminated from the body. By eliminating excess cholesterol, CETP activity may help prevent atherosclerosis [\[R\]](#), [\[R\]](#), [\[R\]](#).

However, studies show that *reducing* CETP activity may increase HDL and lower LDL, which are commonly regarded as ways to prevent atherosclerosis development. Reduced CETP activity may also increase the particle size of both HDL and LDL. Larger particle sizes are linked to lower rates of cardiovascular disease because they may not be able to penetrate the arterial tissue and form plaque as effectively as smaller particles [\[R\]](#), [\[R\]](#), [\[R\]](#).

CETP Genetics, Longevity, and Weight Loss

Certain variants in *CETP* are associated with longevity in some studies. According to researchers, this life-extending effect may be due to improved cholesterol levels, which may help prevent a number of heart conditions [R].

Longevity research has focused on two particular variants. The ‘GG’ genotype in [rs5882](#) (also known as the “I405V” polymorphism) and the ‘AA’ genotype in [rs708272](#) (also called the “TaqIB” polymorphism) have each been associated with lower CETP activity and longer lifespan [R].

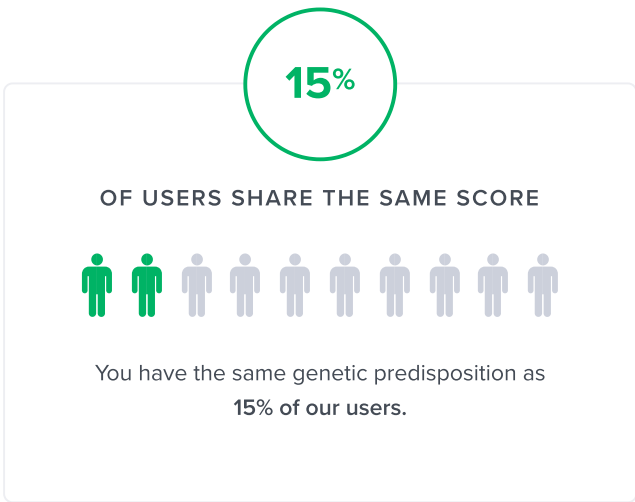
These variants have also been associated with a more favorable blood lipid profile characterized by [R, R, R, R, R, R]:

- Higher HDL
- Larger HDL and LDL particle size
- Higher apolipoprotein A-I
- Lower triglycerides



LOWER ACTIVITY

Likely lower CETP activity based on the genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CETP	rs5882	AG
CETP	rs708272	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	Exercise At Least One Hour a Day	1 hour	
2	Keto Diet		
3	Low-Carbohydrate Diet		
4	Hibiscus	250 mg	
5	Extra Virgin Olive Oil (EVOO)		

1



Exercise At Least One Hour a Day

IMPACT

3 / 5

EVIDENCE

5 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

Description

[Exercise](#) can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [\[R\]](#).

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal.**

How it helps

Exercise is an easy and effective way to raise HDL cholesterol. Experts recommend getting 30 minutes of exercise 5 times a week for optimal results [\[R\]](#), [\[R\]](#).

Cardio, strength training, and aquatic exercise may all help raise HDL cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Not all studies found this benefit [\[R\]](#), [\[R\]](#), [\[R\]](#).

2



Keto Diet

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Adopt a diet that consists of about 70-80% fat, 10-20% protein, and 5-10% carbohydrates. Eliminate or significantly reduce the intake of sugar and starches like bread, pasta, rice, and potatoes, focusing instead on high-fat foods like meats, fatty fish, eggs, butter, and healthy oils, as well as low-carb vegetables like leafy greens. This dietary pattern should be maintained consistently for a period of at least 3-4 weeks to achieve ketosis, after which it can be adjusted based on individual goals and responses.

Description

The keto diet is a high-fat, low-carbohydrate eating plan designed to induce a state of ketosis in the body, where it primarily burns fat for energy. It is often used for weight loss and managing certain medical conditions.

The ketogenic diet, or the ‘keto’ diet, is rich in fat and restricts carb intake [\[R, R\]](#).

On the ketogenic diet, 50 g of carbs or less are consumed per day. Around 55-80% of the calories come from fat [\[R\]](#).

The ketogenic diet depletes the body of sugars like glucose. When people fast or eat very little carbs, the body makes less insulin. In response, the body starts using fat for energy.

When the body only uses fat for energy, molecules called ketones are formed. This state is called *ketosis*.

The ketogenic diet may help with:

- Seizures [\[R\]](#)
- Excess weight [\[R\]](#)
- Diabetes [\[R, R\]](#)

How it helps

A meta-analysis of 13 studies concluded that eating a very low-cabohydrate ketogenic diet increases HDL cholesterol (by 0.09 mmol/L). According to 3 meta-analyses (the largest one with 14 studies), ketogenic diets increase HDL cholesterol by 0.04-0.14 mmol/L in people with type 2 diabetes. Interestingly, a meta-analysis of 14 studies found that ketogenic diets only raise HDL cholesterol in obese participants if they have type 2 diabetes. However, a meta-analysis of 12 studies found no effects of very low-carbohydrate ketogenic on HDL cholesterol levels [\[R, R, R, R, R, R\]](#).

Multiple meta-analyses (the largest one with 18 studies) concluded that eating a very low-carbohydrate ketogenic diet lowers body weight (by 2.87-15.6 kg), BMI (by 1.44-5.3 kg/m2), waist circumference (by 3.23-12.6 cm), fat mass (by 1.40 kg), fat-free mass (by 0.81 kg), lean body mass (by 0.63 kg), and body fat percentage (by 2.81%). This diet may be more effective than other weight-loss interventions [\[R, R, R, R\]](#).

The combination of exercise and low-carbohydrate ketogenic diets decreases waist circumference according to a meta-analysis of 7 trials and 278 overweight and obese participants. Similarly, a meta-analysis of 13 trials and 244 participants found that combining strength training with a ketogenic diet decreases body mass (by 3.67 kg), fat mass (by 2.21 kg), fat-free mass (by 1.26 kg), BMI (by 1.37 kg/m2), and body fat percentage (by 2.27%) [\[R, R\]](#).

A meta-analysis of 14 studies concluded that eating a ketogenic diet lowers fasting glucose weight (by 8.66 kg), waist circumference (by 9.17 cm), and BMI (by 3.13 kg/m2) in patients with type 2 diabetes. Another meta-analysis (8 studies and 648 patients) found that very low-carbohydrate ketogenic diets decrease weight at 3 months (by 2.91 kg) and 6 months (by 2.84 kg) in people with this condition. In overweight patients with type 2 diabetes, ketogenic diets significantly decrease body weight and waist circumference according to a meta-analysis of 8 studies. A meta-analysis of 14 studies found that ketogenic diets lower weight in diabetic patients regardless of diabetic status [\[R, R, R, R\]](#).

Ketogenic diets also lower body fat percentage in athletes according to a meta-analysis of 8 studies [\[R\]](#).

In cancer patients, ketogenic diets reduce body weight (by 2.99-3.992 kg), fat mass (by 1.48 kg), and BMI (by 1.08 kg/m2) according to 3 meta-analyses (the largest one with 10 trials) [\[R, R, R\]](#).

3



Low-Carbohydrate Diet

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Limit your daily intake of carbohydrates to less than 26% of your total daily calories. For a standard 2000-calorie diet, this means consuming no more than 130 grams of carbohydrates per day. Focus on including non-starchy vegetables, lean proteins, and healthy fats in your meals while minimizing the intake of sugars, bread, pasta, and other high-carb foods.

Description

Low-carbohydrate diets can promote weight loss, improve blood sugar control, and support heart health. They may also be beneficial for individuals with certain medical conditions, such as epilepsy or metabolic syndrome.

How it helps

A meta-analysis of 12 studies associated low-carb diets with higher HDL-c (by 0.1 mmol/L) [\[R\]](#).

Compared to low-fat diets, low-carb diets are associated with greater increases in HDL-c (by 3.3 mg/dL or 0.05-0.82 mmol/L) but lower reductions in TC (by 2.7 mg/dL or 0.10-0.63 mmol/L) and LDL-c (by 3.7 mg/dL or 0.07-0.59 mmol/L) according to 4 meta-analyses (the largest one with 38 studies [\[R, R, R, R\]](#).

In overweight and obese participants, eating low-carb diets for 12 months increases HDL-c (by 0.13 mmol/L) better than a low-fat diet, especially in those eating less than 50 g/day carbohydrates, according to a meta-analysis of 8 trials and 2448 participants [\[R\]](#).

Four meta-analyses (the largest one with 17 trials concluded that low-carb diets decrease body weight, fat mass, BMI, and waist circumference. Very low-carbohydrate diets may be the most effective [\[R, R, R, R\]](#).

A meta-analysis of 32 studies found that the short-term effects of low-carb diets on weight parameters persist in the long term, but to a small degree. Another meta-analysis (25 trials) found significant effects of low-carb diets on body weight at 3-8 months, but not at 10-30 months, and on BMI at 3-4 months but not at other time points [\[R, R\]](#).

Low-carb diets help in part with weight loss by **increasing energy expenditure** according to a meta-analysis of 29 trials [\[R\]](#).

The combination of low-carb diets with exercise further decreases waist circumference, body weight, and BMI according to 2 meta-analyses. However, a meta-analysis of 8 studies found no added benefits in trained individuals [\[R, R, R\]](#).

Six meta-analyses (the largest one with 38 trials found low-carb diets more effective than low-fat diets for reducing weight. In line with this, a meta-analysis of 48 trials comparing different diets found the low-carb diet had the largest effect on weight loss. However, 3 meta-analyses found both diets similarly effective at reducing body weight and waist circumference [\[R, R, R, R, R, R, R, R, R, R\]](#)

In patients with type 2 diabetes, the low-carb dietary pattern is the most effective one at lowering body weight according to 2 meta-analyses [\[R, R\]](#).

4



Hibiscus

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Take 250 mg of hibiscus supplement daily, either in the form of a capsule or powder. It can be taken at any time of day, with or without food.

TYPICAL STARTING DOSE
250 mg

Description

Hibiscus is a flower known for its potential to lower blood pressure, boost antioxidant levels, and support heart health. Consuming hibiscus tea or incorporating hibiscus into your diet may provide these health benefits.

[Hibiscus](#) (*Hibiscus sabdariffa*), also known as roselle or sorrel, is a flowering plant. It is traditionally brewed as a tea of a distinctive, bright pink color [\[R\]](#), [\[R\]](#).

For hundreds of years, people from all over the world have taken hibiscus for its potential health benefits [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Hibiscus can interact with "water pills" (diuretics) like hydrochlorothiazide. If you are using "water pills", consult your doctor before taking hibiscus.*

How it helps

A systematic review and meta-analysis of 9 trials (503 patients with metabolic syndrome) found Hibiscus sabdariffa (Roselle) beneficial for blood lipids. It reduced total cholesterol and LDL cholesterol but not triglycerides. More high-quality trials are needed for confirmation [\[R\]](#).

In a systematic review and meta-analysis of 8 clinical trials, Hibiscus sabdariffa reduced fasting plasma glucose and LDL, especially at doses of 500 mg/kg and above, but had no significant effect on total cholesterol, HDL, or triglycerides [\[R\]](#).

In a small study, a hibiscus beverage (ABHS) outperformed 40 mg simvastatin in reducing total cholesterol, but it also significantly lowered simvastatin exposure by 44.6%, suggesting a notable herb-drug interaction. Co-administration is discouraged without more clinical data. [\[R\]](#).

Please note: *Hibiscus may interact with painkillers and anti-inflammatory drugs such as diclofenac and drugs for high cholesterol such as simvastatin. Make sure to consult your doctor before consuming hibiscus* [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Drinking hibiscus tea may lower blood triglycerides more in people with your [CETP](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
CETP	rs708272	AA	

5



Extra Virgin Olive Oil (EVOO)

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Incorporate 1-2 tablespoons of extra virgin olive oil into your daily diet. Use it as a dressing for salads, vegetables, or incorporate it into cooking, but avoid using it at high temperatures to preserve its health benefits.

Description

Extra virgin olive oil is a high-quality olive oil obtained from the first pressing of olives. It is rich in monounsaturated fats and antioxidants, like polyphenols, and is associated with various health benefits, including heart health and anti-inflammatory properties.

[Olive oil](#) is fat from the olive, a traditional tree of the Mediterranean Basin [\[R\]](#).

Olive oil has anti-inflammatory and antioxidant properties. It may also reduce the risk of [\[R\]](#), [\[R\]](#):

- Heart disease
- Diabetes
- Cancer

Olive oil is also the primary fat source in the [Mediterranean diet](#), which may improve brain and heart health [\[R\]](#).

How it helps

Taking virgin olive oil enriched with thyme polyphenols (25 mL/day) for 3 weeks decreased the LDL:HDL and small HDL:large HDL ratios while increasing HDL antioxidants and functionality in a placebo-controlled trial of 33 patients with hypercholesterolemia [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Extra virgin olive oil (EVOO) is rich in monounsaturated fats that raise HDL. Adding thyme, an antioxidant-rich herb, may strengthen the immune system and further help prevent heart diseases.

Next Steps

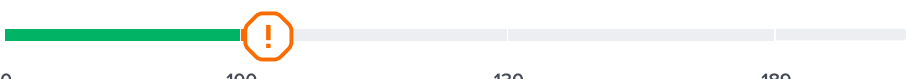
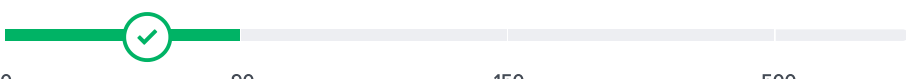
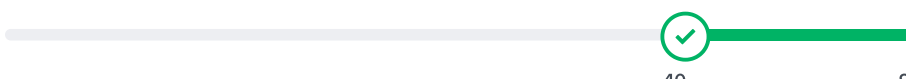
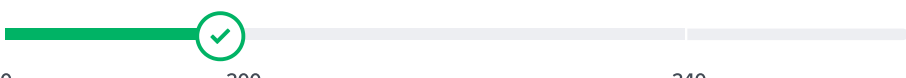
Remember, your genes only tell one important part of your health story!

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.

	Apolipoprotein A1	119.5 mg/dL		9 Nov 2025
	LDL Cholesterol	103 mg/dL		9 Nov 2025
	Triglycerides	54 mg/dL		9 Nov 2025
	HDL Cholesterol	42 mg/dL		9 Nov 2025
	Cholesterol, Total	182 mg/dL		9 Nov 2025