

VLDL Cholesterol

Biohacker Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

10 Your recommendations

22 Next Steps

- 22 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

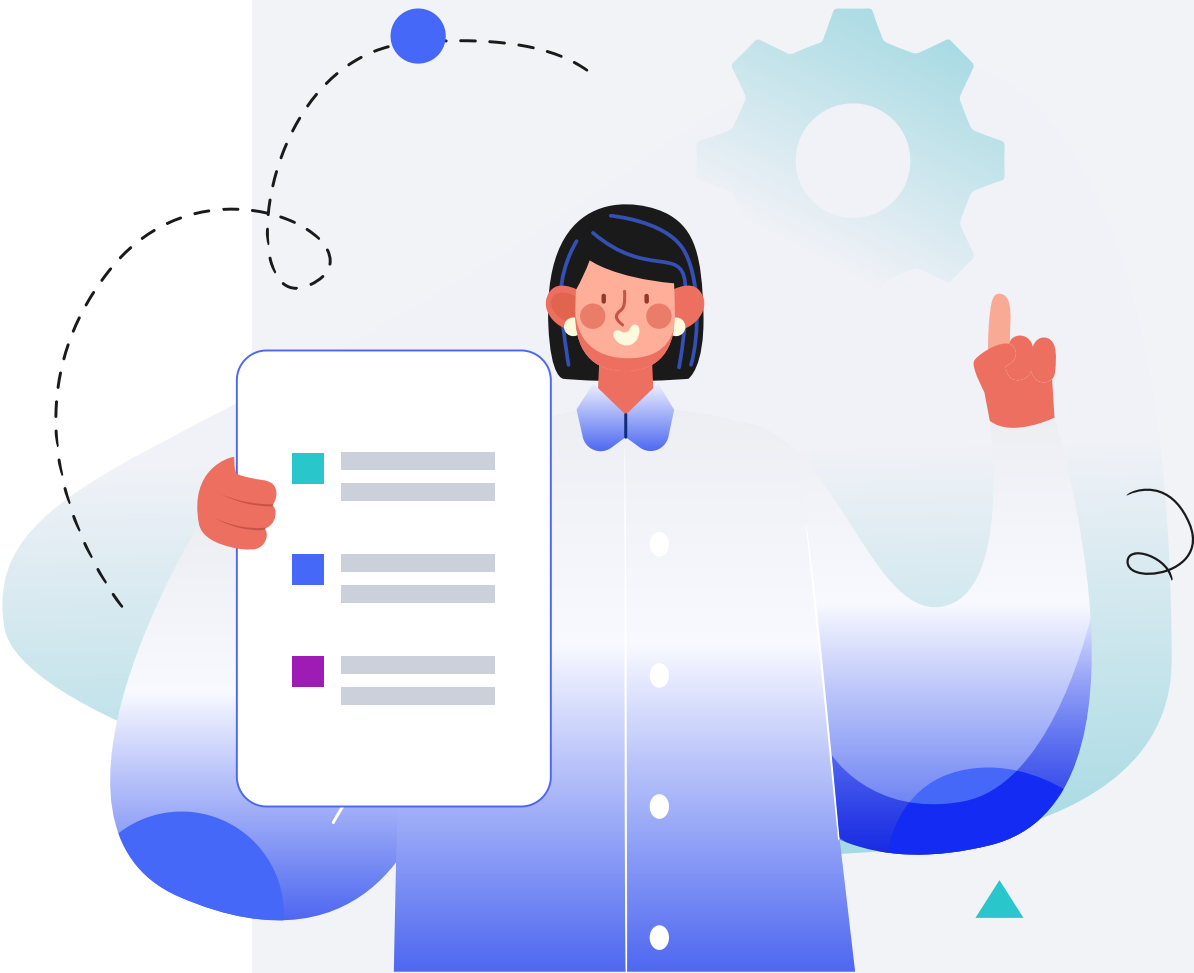
Male

HEIGHT

5ft 5" 165cm

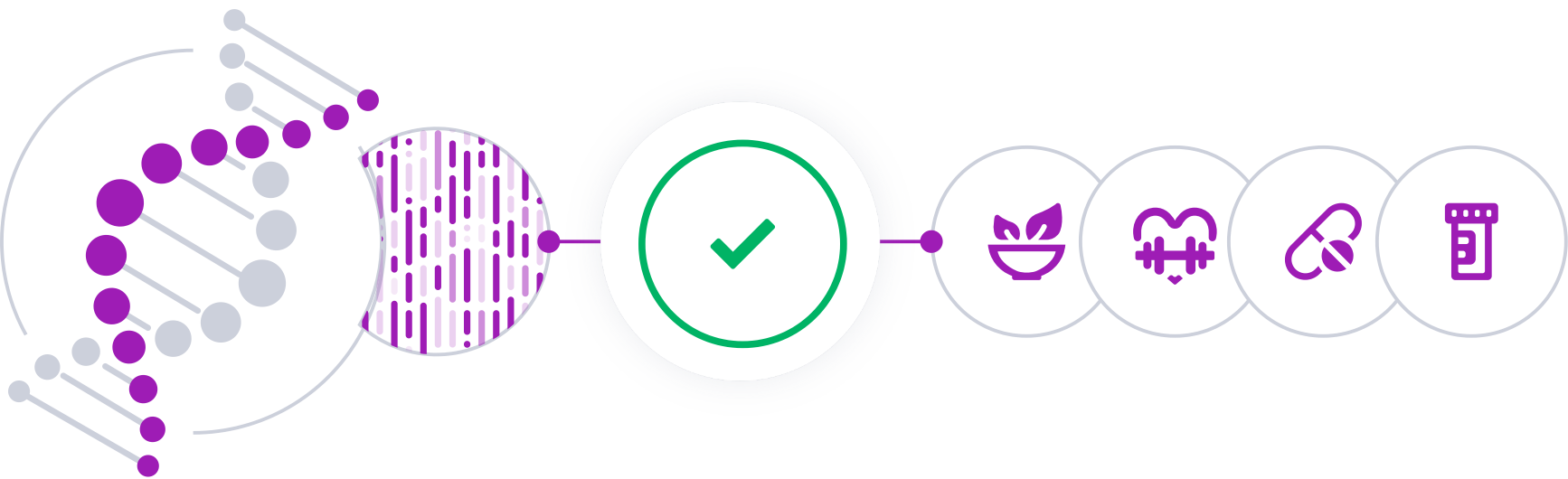
WEIGHT

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.

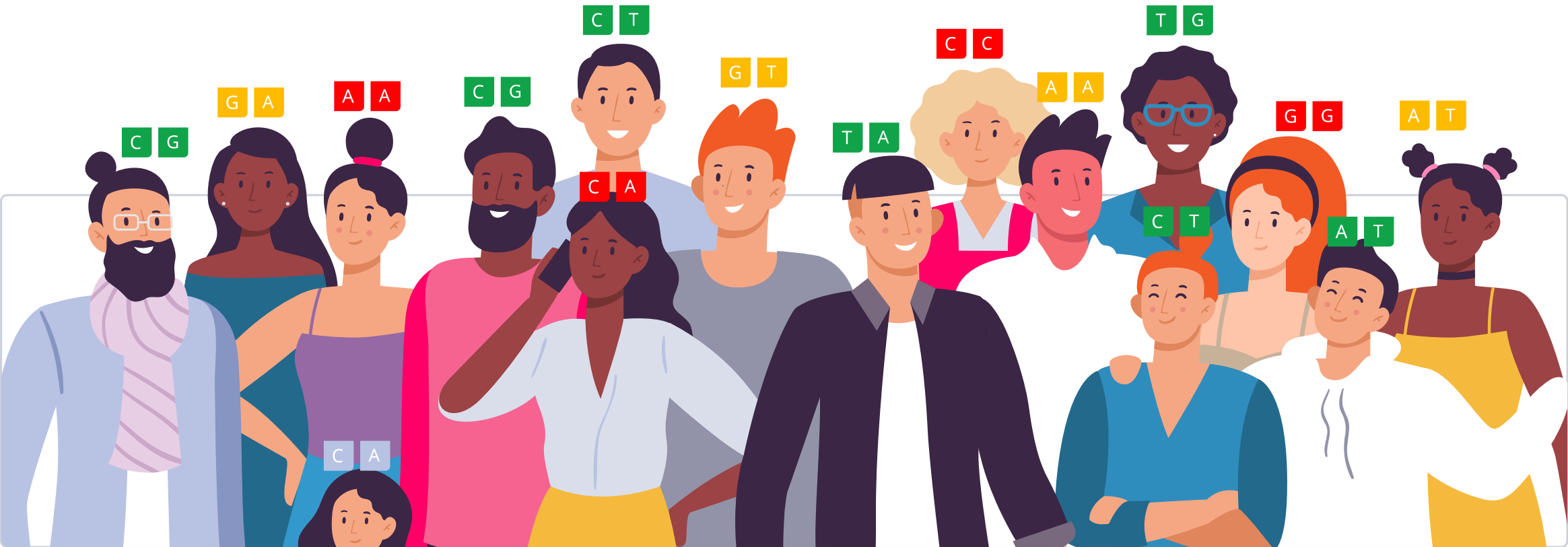


Similarly, our Trait Reports look at how your DNA influences your traits.



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

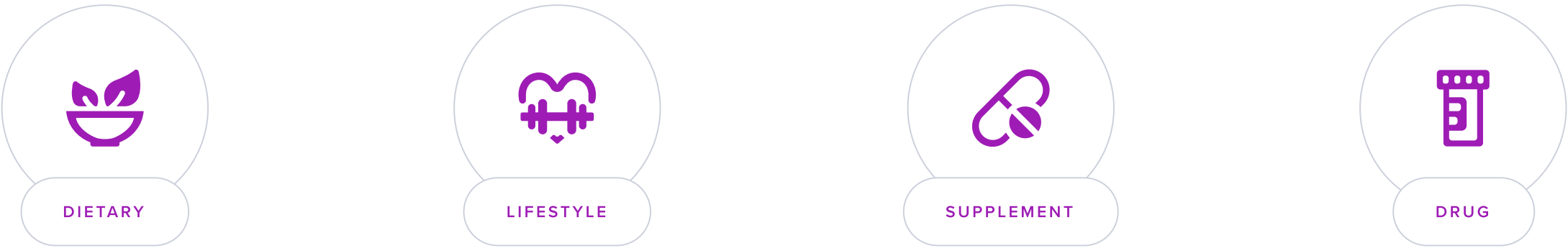
You have 2 risk alleles

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

VLDL stands for Very Low-Density Lipoprotein, a type of lipoprotein responsible for transporting fat (triglycerides) from the liver to various tissues. Once VLDL delivers fat, it is converted into LDL, often referred to as "bad cholesterol."

High levels of VLDL and triglycerides can increase the risk of heart disease and metabolic syndrome.

Monitoring VLDL, along with other cholesterol levels, is crucial for assessing cardiovascular risk. If concerns arise regarding cholesterol or other blood lipids, it's essential to consult a healthcare professional for comprehensive evaluation and guidance.

Factors Influencing VLDL Levels

About 35% of the differences in people’s VLDL levels may be due to genetics [\[R\]](#).

Other factors that can impact VLDL levels include:

- **Diet:** Diets high in refined sugars and saturated fats can lead to increased production of VLDL in the liver.
- **Physical Activity:** Regular exercise can help lower VLDL levels by burning triglycerides as energy.
- **Alcohol:** While moderate alcohol consumption might lower VLDL, excessive drinking can increase its levels.
- **Medications:** Some medications, like steroids, can elevate VLDL levels.
- **Health Conditions:** Conditions such as hypothyroidism, kidney disease, or poorly controlled diabetes can increase VLDL.
- **Obesity:** Carrying excess weight, especially around the abdomen, can lead to increased VLDL production.



TYPICAL LEVELS

Predisposed to typical VLDL levels based on 508 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LPA	rs140570886	TT
PCSK9	rs11591147	GG
APOE	rs1065853	GG
/	rs555766713	CC
LPA	rs142231215	GG
SLC16A11	rs186021206	GG
ANGPTL4	rs116843064	GG
MAU2	rs58542926	CC
BORCS8	rs150057262	CC
LPA	rs147555597	GG
LPA	rs76735376	GG
LPL	rs10096633	CC
TRIB1	rs112875651	GG
SORT1	rs12740374	GG
DOCK7	rs12239736	TT
ALDH1A2	rs261290	TT
PCCB	rs34894639	CC
ITIH4	rs13059141	GG
ADAM10	rs261342	CG
GCKR	rs1260326	TC
ALDH1A2	rs1973688	CC
CCDC92	rs11057397	CC
CYP26C1	rs2478236	GG
SLC38A11	rs13389219	CT

GENE	SNP	GENOTYPE
GLI1	rs10649122	INS(TCTC)A
HP	rs7202323	GT
DOK7	rs13108218	AG
CITED2	rs632057	GT
TTC32	rs907866	AG
SIK3	rs45611741	CC
SIDT2	rs964184	CC
MLXIPL	rs55747707	AA
ABCG8	rs4299376	TT
NSMAF	rs10504255	AA
NCOR2	rs11057601	GG

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	Royal Jelly	300 mg	2	Rutin	
3	Shilajit	500 mg	4	Banaba	32 mg
5	Niacin Supplements	20 mg	6	Whole Grains	
7	Legumes		8	Mediterranean Diet	
9	Barley		10	Plant Sterols & Stanols	300 mg
11	Oats		12	Aerobic Exercise (Cardio)	1 hour
13	Eat Fiber-Rich Foods		14	Red Yeast Rice	500 mg
15	Omega-3 (Fish Oil)	2000 mg			

1



Royal Jelly

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a royal jelly supplement daily, starting with a dose of approximately 300 mg to 500 mg. It can be consumed either in capsule form or directly, depending on your preference, for a period ranging from 3 to 6 months to observe the potential health benefits.

TYPICAL STARTING DOSE

300 mg

Description

Royal jelly is a nutrient-rich substance secreted by worker bees to feed bee larvae and the queen bee. Royal jelly contains protein B-vitamins, calcium and iron. It is taken as a supplement for it's potential energy-boosting and immune-supporting properties.

How it helps

Royal jelly may help by inhibiting cholesterol absorption in your gut and reducing its production in your liver.

In [2 placebo-controlled trials of 55 participants with mild hypercholesterolemia](#), taking royal jelly capsules (3.15-6 g/day) for 1-3 months **lowered total, LDL, and VLDL cholesterol** [\[R\]](#).

2



Rutin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500mg of rutin supplement daily, preferably with a meal to enhance absorption. Continue this supplementation regularly for at least 4 weeks to evaluate its benefits on your health, as effects may take some time to become noticeable.

Description

Rutin is a flavonoid found primarily in citrus fruits, buckwheat, and tea, and is known for its antioxidant and anti-inflammatory properties. It may support cardiovascular health and promote strong blood vessels.

How it helps

A double-blind, placebo-controlled trial with 50 type 2 diabetes mellitus patients found that rutin (500 mg/day for 3 months) decreased fasting blood glucose, insulin, HbA1c, HOMO-IR, LDL-c, TG, VLDL, total cholesterol, LDL-c:HDL-c ratio, atherogenic index of plasma (AIP), IL-6, and malondialdehyde (MDA), while increasing HDL-c, quantitative insulin sensitivity check index (QUICKI), BDNF, and total antioxidant capacity (TAC). Hence rutin may improve metabolic parameters, BDNF, and inflammatory and oxidative stress factors in T2DM patients [\[R\]](#).

In a prospective, randomized, controlled study conducted on 53 type 2 diabetes patients. rutin with vitamin C and vitamin C only reduced fasting blood glucose and LDL- and total cholesterol [\[R\]](#).

Please note: *rutin may inhibit the production of the thyroid hormone T4 (thyroxine). Individuals with thyroid disorders, particularly hypothyroidism or low T4 levels, should exercise caution when using rutin and always consult with a healthcare provider before taking this supplement* [\[R\]](#).

3



Shilajit

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a pea-sized portion (approximately 500mg) of purified shilajit resin and dissolve it in warm water, tea, or milk. Consume this once daily, ideally in the morning on an empty stomach for best absorption. Continue this routine daily for 6 to 8 weeks to observe benefits.

TYPICAL STARTING DOSE
500 mg

Description

[Shilajit](#), also known as shilaras or bitumen, is a tar-like substance that oozes from sedimentary rocks worldwide, especially in the Himalayas. It is made of rock humus, minerals, and organic substances (e.g., marine organisms) decomposed by microbes and compressed by layers of rock [\[R\]](#).

Shilajit is called a rasayana (rejuvenator) and a maharasa (super-vitalizer) in Ayurveda (indigenous Indian medicine). It is traditionally used to [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Boost energy levels
- Improve memory and focus
- Fight stress
- Manage male reproductive disorders

Shilajit is sold as capsules or powder [\[R\]](#).

How it helps

In a placebo-controlled trial of 30 medical students, supplementation with shilajit (2 g) for 45 days lowered VLDL-cholesterol levels (by 4.8 mg/dL) [\[R\]](#).

4



Banaba

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 32-48 mg of a standardized banaba extract containing 1% corosolic acid, once daily with water. It is best taken with a meal for optimal absorption and effectiveness. Continue this supplementation for at least 2 weeks to potentially begin observing benefits such as improved blood sugar levels.

TYPICAL STARTING DOSE
32 mg

Description

Banaba, a plant traditionally used in herbal medicine, is believed to have potential benefits for blood sugar management and weight control. It is used in various dietary supplements and herbal remedies.

How it helps

In a placebo-controlled trial of 24 patients with metabolic syndrome, supplementation with banaba (500 mg, 2x/day) for 12 weeks lowered systolic blood pressure (by 5.2 mmHg), fasting glucose (by 0.2 mmol/L), VLDL-C (by 0.2 mmol/L), AUC insulin, and insulinogenic index [\[R\]](#).

5



Niacin Supplements

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a 20 mg niacin supplement daily, preferably with a meal to aid in absorption and minimize potential stomach upset.

TYPICAL STARTING DOSE

20 mg

Description

Niacin is an essential B vitamin that plays a vital role in metabolism, supporting heart health, maintaining healthy cholesterol levels, and promoting overall cellular function when included in a balanced diet or as a supplement.

[Niacin](#) (vitamin B3) is found in many foods. It supports your nervous system, skin, gut, and more [\[R\]](#).

Adults should get **16 mg** of niacin a day, and most people get enough from their diets [\[R\]](#).

Experts recommend getting niacin from food rather than supplements [\[R, R\]](#).

How it helps

Niacin has been shown to lower VLDL levels by reducing the liver's production of VLDL cholesterol, which can help improve overall lipid profiles.

6



Whole Grains

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least three servings of whole grains into your daily diet. This can include consuming foods such as whole grain bread, brown rice, whole grain pasta, and oats. Aim to replace refined grains with whole grains at each meal for optimal benefits.

Description

Whole grains encompass a variety of grains like wheat, oats, and quinoa, where the entire grain kernel is intact. They are rich in fiber, vitamins, minerals, and antioxidants, supporting heart health and reducing the risk of chronic diseases.

Unlike refined grains, whole grains contain nutritious parts of the grain like bran and germ.

Whole grains provide many crucial nutrients, including:

- Fiber
- B-vitamins
- Iron
- Magnesium
- Phosphorus

Due to their high fiber content, whole grains don't tend to spike blood sugar like refined grains do.

How it helps

Whole grains like brown rice and quinoa are rich in fiber which helps lower VLDL cholesterol by improving lipid metabolism.

7



Legumes

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate a serving of legumes, such as beans, lentils, chickpeas, or peas, into your diet at least four times a week. A serving size is approximately half a cup cooked. Ensure to prepare them properly by soaking and rinsing beans, if applicable, to reduce anti-nutrients and improve digestibility.

Description

Legumes, such as beans, lentils, and chickpeas, are excellent sources of plant-based protein, fiber, and various vitamins and minerals. Including legumes in your diet can promote satiety and support digestive health.

Legumes are plants from the *Fabaceae* family. Their edible seeds are called **pulses**. Legumes are important food staples and sources of carbohydrates, fiber, protein, iron, and other key nutrients.

Common legumes include:

- Peanuts
- Beans
- Chickpeas
- Peas
- Lentils

How it helps

Legumes like beans, lentils, and chickpeas are high in soluble fiber which helps reduce VLDL cholesterol by increasing the rate at which cholesterol is excreted from the body.

8



Mediterranean Diet

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It’s rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

How it helps

The Mediterranean Diet is rich in healthy fats, fiber, and antioxidants, which help lower VLDL cholesterol levels by promoting overall heart health and reducing cholesterol absorption.

9



Barley

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Include barley in your diet by adding it to soups, stews, or salads. You can also replace rice or other grains with cooked barley. Aim to consume barley-based meals 2-3 times a week for ongoing dietary benefits.

Description

Barley is a whole grain rich in fiber, vitamins, and minerals. Incorporating barley into your diet can support digestive health, provide sustained energy, and contribute to overall nutritional wellness.

How it helps

Barley is rich in beta-glucan, a type of soluble fiber that helps lower VLDL cholesterol by binding to cholesterol in the gut and preventing its absorption.

10



Plant Sterols & Stanols

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Consume a total of 300 mg of plant sterols and stanols per day. This can be achieved by incorporating foods fortified with these compounds, such as certain margarines, orange juice, and yogurt drinks, into your daily diet or by taking a specific supplement that meets this dosage requirement.

TYPICAL STARTING DOSE

300 mg

Description

Plant sterols and stanols are plant compounds found in foods like fruits, vegetables, and whole grains. They are known for their cholesterol-lowering properties and can be beneficial when included in a diet aimed at reducing LDL cholesterol levels and promoting heart health.

Sterols and stanols are compounds in plants that are similar to cholesterol [\[R\]](#), [\[R\]](#).

They are naturally found in foods like **nuts, vegetable oils, and fruits**. However, people usually don’t eat enough of these [\[R\]](#).

Some companies add sterols and stanols to foods like **orange juice and margarine** [\[R\]](#), [\[R\]](#).

How it helps

Plant sterols and stanols can help lower VLDL cholesterol by blocking the absorption of cholesterol in the intestines, which reduces overall blood cholesterol levels.

11



Oats

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate oats into your diet daily by having them for breakfast as oatmeal, or adding them to smoothies, baking recipes, or overnight oats. Aim for at least a half-cup (40 grams) of dry oats to reap the health benefits.

Description

Oats are a whole grain known for their high fiber content and nutritional value, like zinc, iron, and manganese. Including oats in one's diet can promote heart health, stabilize blood sugar levels, and provide sustained energy.

Oats are a good source for manganese, zinc, iron, magnesium, and vitamins B1 and B5. A ½ cup serving provides 0.7 mg of manganese or 30%DV.

How it helps

Oats are high in soluble fiber, which helps reduce cholesterol levels, including VLDL cholesterol, by blocking its absorption.

12



Aerobic Exercise (Cardio)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

Interval training is a type of cardio that combines periods of high-intensity training with brief rest periods.

How it helps

Aerobic exercise, such as jogging, swimming, or cycling, helps lower VLDL cholesterol levels by increasing metabolism and the body's ability to burn fats.

13



Eat Fiber-Rich Foods

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate foods high in fiber, such as fruits, vegetables, whole grains, and legumes, into your daily meals. Aim for a total dietary fiber intake of 25 to 30 grams per day, spread out over all meals.

Description

Fiber is a type of carb that your body can’t digest which supports digestion, heart health, and blood sugar control. You can get fiber by eating things like whole grains, fruits, nuts, seeds, and leafy greens.

Fiber is a type of carb that your body can’t digest. It supports digestion, heart health, blood sugar control, and more [\[R, R\]](#).

Adults should get 28 g of fiber every day. Most people in the US don’t get enough fiber [\[R, R\]](#).

You can get more fiber by eating [\[R, R\]](#):

- Whole grains
- Fruits
- Leafy greens
- Nuts and seeds
- Beans
- Broccoli

Fiber supplements, such as [psyllium husk](#), are available for people who don’t get enough fiber from their diets [\[R, R\]](#).

How it helps

Foods high in fiber help reduce VLDL cholesterol levels by binding to the cholesterol in the digestive tract and preventing its absorption into the bloodstream.

How to implement

TYPICAL STARTING DOSE

500 mg

Description

[Red yeast rice](#) is made when a type of fungus grows on rice. As the fungus ferments the rice, it produces a chemical called *monacolin K*. This chemical is very similar to a cholesterol-lowering drug [\[R\]](#).

- Inflammation
- High blood pressure
- High blood sugar

How it helps

Red Yeast Rice contains compounds that can inhibit cholesterol synthesis in the liver, leading to a reduction in VLDL cholesterol levels.

How to implement

TYPICAL STARTING DOSE

2000 mg

Description

[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](#)].

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, commonly found in fish oil, have been demonstrated to reduce VLDL cholesterol by decreasing the production of triglycerides in the liver.

Next Steps

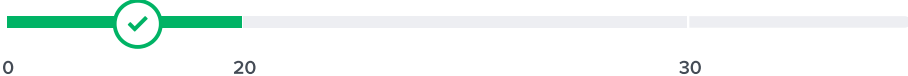
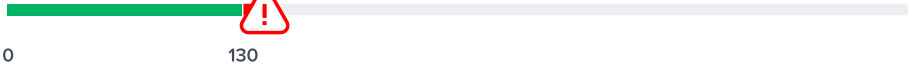
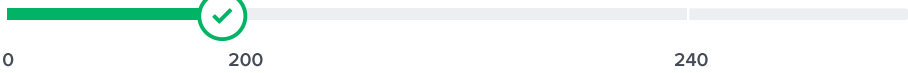
Remember, your genes only tell one important part of your health story!

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.

	VLDL Cholesterol	11 mg/dL		9 Nov 2025
	Non-HDL Cholesterol	140 mg/dL		9 Nov 2025
	Cholesterol, Total	182 mg/dL		9 Nov 2025
	ApoB	108 mg/dL		9 Nov 2025