

ACE (Fitness/ Cardiovascular)

Gene Report

REPORT CATEGORIES —



HEART & BLOOD
VESSELS



FITNESS

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

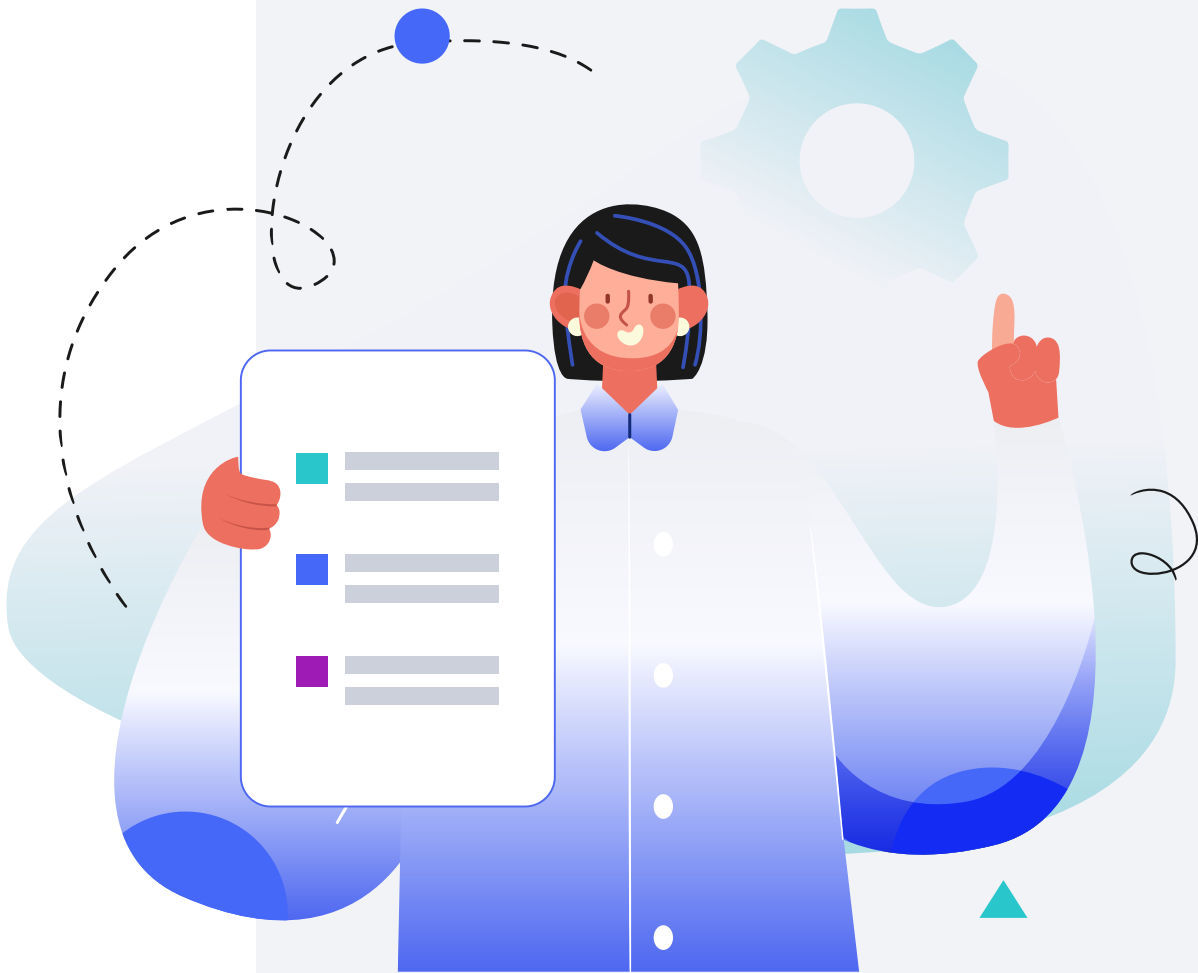
Male

HEIGHT

5ft 5" 165cm

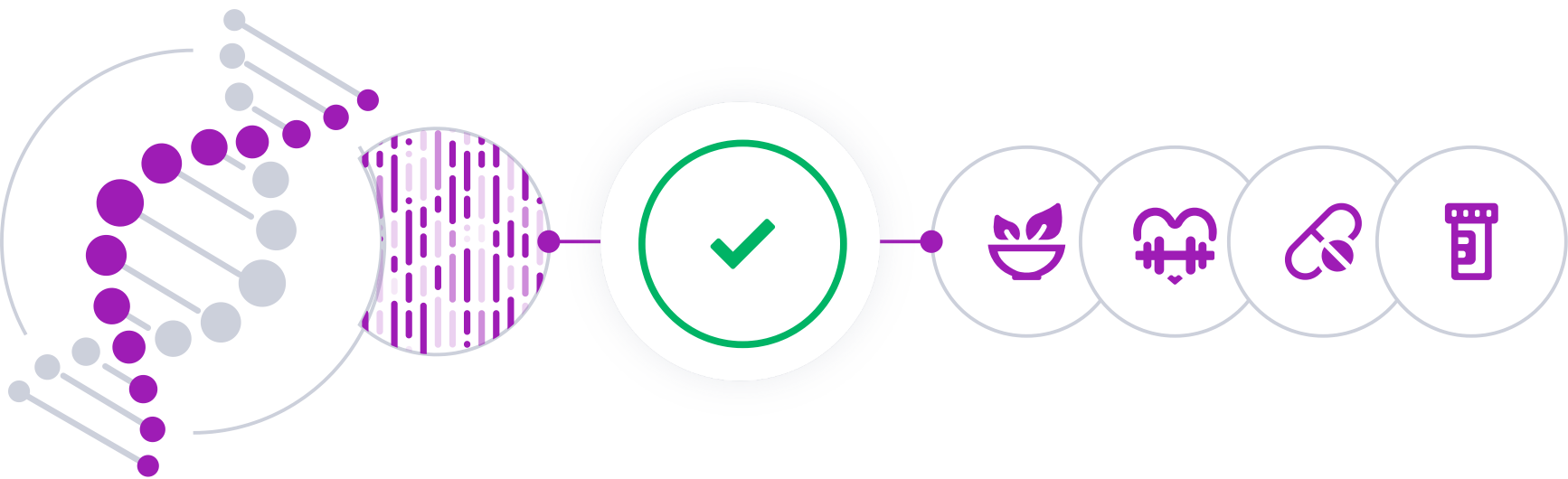
WEIGHT

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.

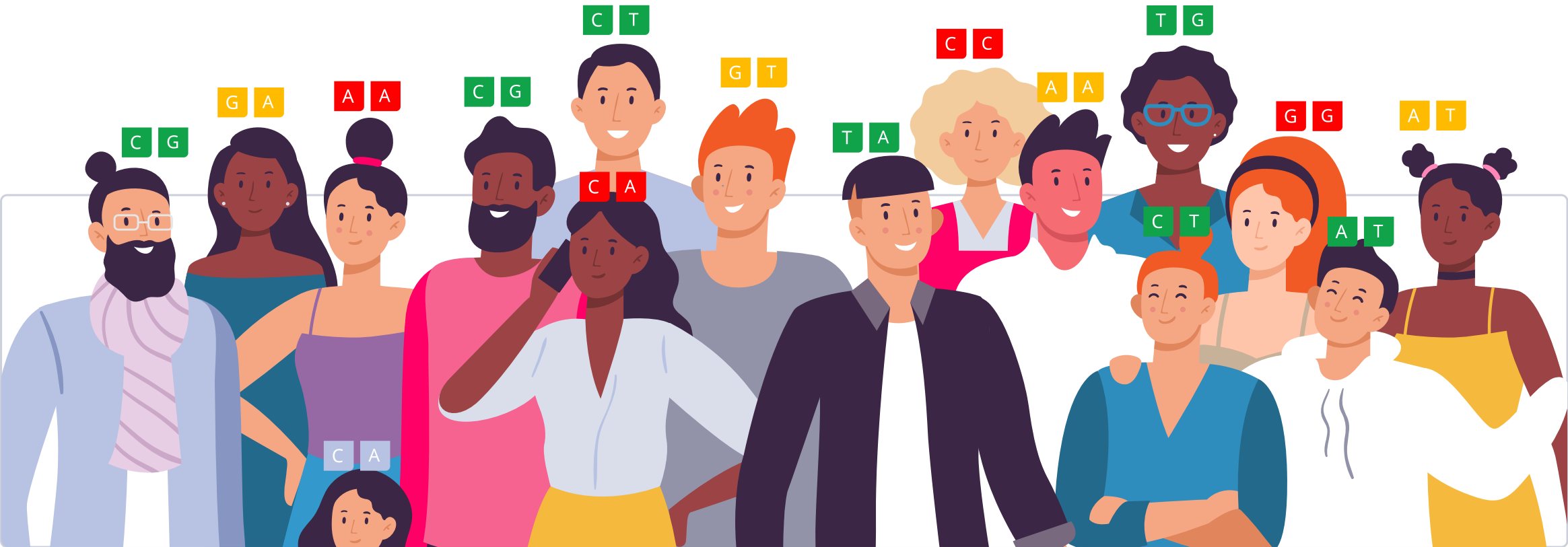


Similarly, our Trait Reports look at how your DNA influences your traits.



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

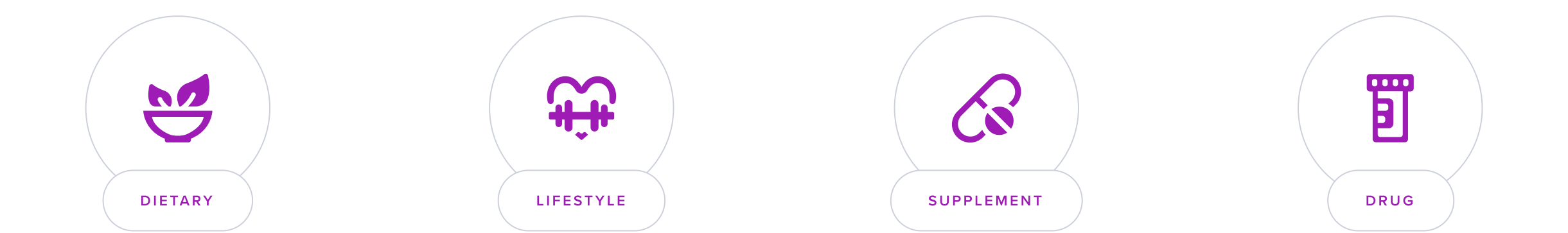
You have 2 risk alleles

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 [ACE](#) gene encodes an enzyme called angiotensin I converting enzyme. ACE narrows blood vessels and increases blood pressure as part of the fight or flight response [\[R\]](#).

Specifically, ACE converts angiotensin I to angiotensin II, a potent vasoconstrictor involved in blood pressure regulation and fluid balance. This enzyme also degrades bradykinin, a vasodilator, thus balancing vasoconstriction and vasodilation [\[R\]](#).

Variants in the *ACE* gene have been linked to [\[R\]](#):

- Heart disease
- Psoriasis
- Kidney disease
- Stroke
- Alzheimer’s

This gene has been extensively studied for its significant role in cardiovascular health and athletic performance. Variations within this gene influence the functioning of the enzyme it encodes, thereby affecting blood pressure regulation, cardiovascular function, and physical endurance.

ACE Variants, Cardiovascular Health & Fitness

The two main ACE gene variants, [rs4341](#) and [rs4343](#), influence gene and enzyme activity. Their “G” alleles may increase ACE activity and levels. In line with this, they are linked to **high blood pressure and heart disease** [\[R, R, R, R\]](#).

Regarding athletic performance, higher ACE activity may favor short, high-intensity bursts of activity. This makes it advantageous for **power-based sports** [\[R, R, R\]](#).

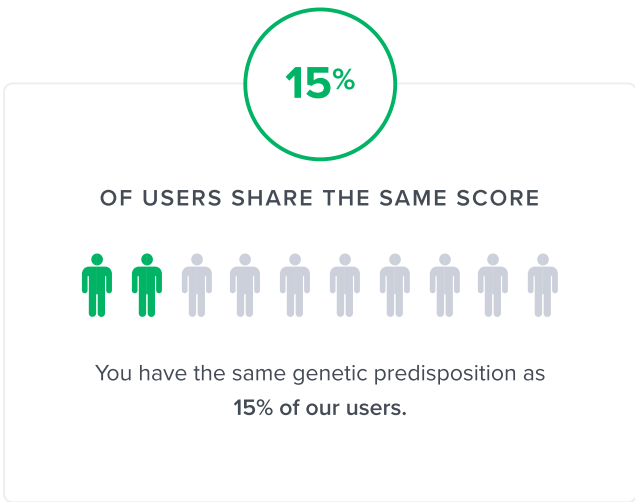
Conversely, **rs4341-C and rs4343-A** are linked to lower ACE activity, which may offer some protection against hypertension and cardiovascular conditions. Lower ACE activity can enhance **endurance** by improving blood flow and oxygen delivery to muscles during prolonged physical activity [\[R, R, R, R\]](#).

Please note: Some people's genetic files don't contain the rs4341 variant, so we didn't include it in the model. However, this variant is almost always inherited with rs4343, so one of them is sufficient to estimate your ACE genetics.



LOWER ACTIVITY

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



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ACE	rs4343	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	Aerobic Exercise (Cardio)	1 hour	2	Exercise At Least One Hour a Day	1 hour
3	Hibiscus	250 mg	4	Green Tea	400 mg
5	Curcumin	500 mg			

1

Aerobic Exercise (Cardio)

IMPACT

5 / 5

EVIDENCE

5 / 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

In a randomized controlled trial, moderate-intensity aerobic exercise was found to reduce blood pressure by lowering levels of both ACE and angiotensin II [\[R\]](#).

Meta-analyses estimated blood pressure reductions of 12.26 mmHg (systolic) and 6.12 mmHg (diastolic) from aerobic exercise. The combination of moderate- with high-intensity aerobic exercise (interval training) further enhanced the blood pressure-lowering effects of exercise training [\[R, R, R\]](#).

Aerobic exercise may help by making your heart stronger. A stronger heart can pump more blood with less effort, reducing the force on your arteries and subsequently decreasing your blood pressure.

2



Exercise At Least One Hour a Day

IMPACT

5 / 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

In a randomized controlled trial, moderate-intensity aerobic exercise was found to reduce blood pressure by lowering levels of both ACE and angiotensin II [\[R\]](#).

[Exercise](#) is a great way to lower your blood pressure. A single exercise session can lower your blood pressure for up to 24 hours. These benefits also add up over time [\[R\]](#).

The type of exercise is less important. Aquatic exercise, stretching, brisk walking, tai chi, etc. are all effective [\[R, R, R, R, R\]](#). **In general, choose something that you like, because you'll be more likely to stick to it!**

3



Hibiscus

IMPACT

4 / 5

EVIDENCE

3 / 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

Hibiscus helps relax the blood vessels by inhibiting ACE [\[R\]](#).

Many studies have shown that hibiscus extracts can help reduce blood pressure. These extracts contain about 4-10 mg of active components called *anthocyanins* [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Hibiscus tea (4-10 g/day) may also reduce blood pressure, but has a weaker effect compared to hibiscus extracts [\[R\]](#), [\[R\]](#), [\[R\]](#).

How to implement

TYPICAL STARTING DOSE

400 mg

Description

- Heart disease
- Cancer
- Diabetes

How it helps

Please note: polyphenols from green tea may bind to iron and form insoluble complexes, which reduces iron absorption in the gut. If you have anemia, consult your healthcare provider before using green tea [R].

5



Curcumin

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Take a 500 mg curcumin supplement daily with food. To enhance absorption, take it with a meal that contains fats or oils since curcumin is fat-soluble.

TYPICAL STARTING DOSE
500 mg

Description

Curcumin is a compound found in turmeric known for its anti-inflammatory and antioxidant properties. It has been studied for its potential to reduce inflammation, support joint health, and contribute to overall well-being.

[Turmeric](#) is a yellow spice from India. It may reduce inflammation and [oxidative stress](#) [\[R\]](#).

The most important active compound in turmeric is **curcumin**. People use curcumin for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Joint pain
- Hay fever
- Mood
- High blood sugar
- Gut health
- Liver health

How it helps

In two animal studies, curcumin was observed to significantly decrease the production of ACE [\[R\]](#), [\[R\]](#).

A meta-analysis of 11 studies and 734 participants found no significant effect of curcumin/turmeric on systolic or diastolic blood pressure. However, supplementation for over 12 weeks slightly reduced systolic blood pressure (by 1.24 mmHg) [\[R\]](#).

Please note: curcumin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using curcumin or turmeric supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

Next Steps

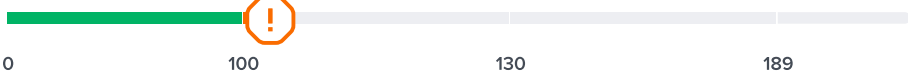
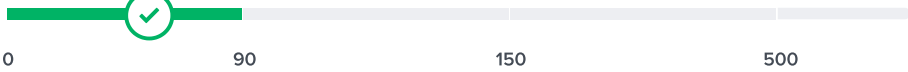
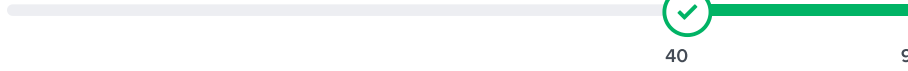
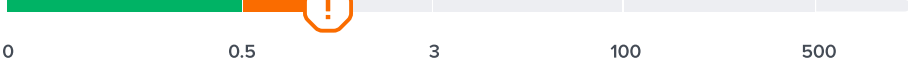
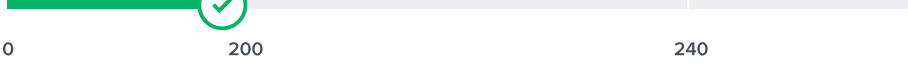
Remember, your genes only tell one important part of your health story!

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.

	LDL Cholesterol	103 mg/dL		9 Nov 2025
	Triglycerides	54 mg/dL		9 Nov 2025
	HDL Cholesterol	42 mg/dL		9 Nov 2025
	hs-CRP	1.6 mg/L		9 Nov 2025
	Cholesterol, Total	182 mg/dL		9 Nov 2025