

Vascular Health (Functional)

Biohacker Report

REPORT CATEGORY —



HEART & BLOOD
VESSELS

Sample Client

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omicsedge

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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

Veins and arteries are vital components of the circulatory system, forming a complex network that transports oxygen and nutrients to all body parts and removes waste products. Healthy blood vessels are essential for maintaining overall health, as they need to be strong, flexible, and functional to handle the demands of blood flow and adapt to changes in pressure.

Over time, various factors can lead to loss of vessel elasticity and function, increasing vulnerability to damage and diseases like hypertension, atherosclerosis, and thrombosis. Genetic predispositions, along with diet, lifestyle, and environmental factors, significantly influence vascular health.

Knowing these genetic influences can aid in taking preventive measures, such as dietary adjustments, exercise, and lifestyle changes, to support vessel health and reduce the risk of vascular-related conditions.

Genetics of Vascular Health

Several genetic variants are associated with vascular health, impacting factors like blood pressure regulation, lipid metabolism, inflammation, and oxidative stress, all of which contribute to blood vessel integrity.

CRP (rs1205, 2147 G>A): The CRP gene is involved in inflammation, and the rs1205 variant (2147 G>A) can influence baseline CRP levels, affecting inflammatory processes within blood vessels and influencing vascular disease risk.

NOS3 (rs1799983, Glu298Asp G>T): NOS3 plays a role in blood vessel dilation by producing nitric oxide. The rs1799983 variant (Glu298Asp G>T) can affect nitric oxide production, impacting blood pressure regulation and vascular health.

MTHFR (rs1801131, 1298 A>C): MTHFR is crucial for folate metabolism, which is involved in vascular health. The rs1801131 variant (1298 A>C) may affect homocysteine levels, with elevated levels linked to increased risk of vascular issues.

MTHFR (rs1801133, 677 C>T): Another variant in *MTHFR*, rs1801133 (677 C>T), affects homocysteine metabolism, with elevated homocysteine levels being associated with higher cardiovascular risk.

AGT (rs699, Met235Thr A>G): The *AGT* gene affects blood pressure regulation. The rs699 variant (Met235Thr A>G) can influence angiotensin production, potentially increasing hypertension risk and impacting blood vessel health.

CETP (rs708272, Taq1B G>A): CETP is involved in lipid metabolism, influencing HDL cholesterol levels. The rs708272 variant (Taq1B G>A) can affect cholesterol transport and vascular health, with higher HDL levels being protective against atherosclerosis.

HO-1 (rs2071746, -413 A>T): HO-1 is involved in protecting blood vessels from oxidative damage. The rs2071746 variant (-413 A>T) can influence antioxidant capacity within



Likely typical vascular health based on 16 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NOS3	rs1799983	TT
CRP	rs1205	CC
MTHFR	rs1801133	AA
AGT	rs699	GG
PCSK7	rs662799	AA
IL6	rs1800795	GG
ITGB3	rs5918	TC
PKDREJ	rs4253778	GC
F5	rs6025	CC
APOE	rs429358	TT
F2	rs1799963	GG
ALDH2	rs671	GG
TOM1	rs2071746	AA
VEGFA	rs2010963	GG
MTHFR	rs1801131	TT
CETP	rs708272	AA
ACE	rs4343	AA
OGG1	rs1052133	CC
LPL	rs328	CC

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

the vascular system, impacting resilience against oxidative stress.

LPL (rs328, Ser474Ter C>G): LPL regulates lipid metabolism, affecting triglyceride breakdown. The rs328 variant (Ser474Ter C>G) can influence blood lipid levels, with variations linked to cardiovascular disease risk.

ACE (rs4343, Ins/Del): The *ACE* gene plays a role in blood pressure control. The insertion/deletion variant in ACE can affect angiotensin levels, influencing blood pressure regulation and vascular health.

ALDH2 (rs671, Glu504Lys G>A): ALDH2 is involved in alcohol metabolism, which can influence vascular function. The rs671 variant (Glu504Lys G>A) affects the body's ability to process alcohol, potentially impacting vascular health in alcohol consumers.

APOA5 (rs662799, -1131 T>C): APOA5 influences triglyceride metabolism. The rs662799 variant (-1131 T>C) can affect blood lipid levels, impacting cardiovascular health and vascular disease risk.

APOE (rs429358, E2/E3/E4): The *APOE* gene variant influences cholesterol levels. Different alleles (E2, E3, E4) impact cholesterol transport and vascular health, with certain variants associated with higher cardiovascular risk.

F2 (rs1799963, 20210 G>A): The *F2* gene variant affects blood clotting factors. The rs1799963 variant (20210 G>A) can increase the risk of clot formation, impacting vascular health, particularly in those with additional risk factors.

F5 (rs6025, Arg506Gln G>A): The *F5* gene variant, also known as Factor V Leiden (rs6025, Arg506Gln G>A), affects blood clotting. This mutation increases the risk of abnormal clot formation, which can raise the likelihood of thrombosis and vascular complications.

HPA-1 (rs5918, T>C): The *HPA-1* gene variant (rs5918, T>C) influences platelet function, affecting blood clot formation. Variations in this gene can impact clotting efficiency, with potential implications for thrombosis risk and vascular health.

IL-6 (rs1800795, -174 G>C): IL-6 is involved in inflammatory processes. The rs1800795 variant (-174 G>C)

affects IL-6 levels, influencing inflammation and potentially impacting vascular disease risk.

OGG1 (rs1052133, Ser326Cys G>C): The *OGG1* gene is involved in DNA repair, protecting cells from oxidative damage. The rs1052133 variant (Ser326Cys G>C) can influence vascular cell resilience to oxidative stress, impacting overall vessel health and disease resistance.

PPARA (rs4253778, 89204 G>C): The *PPARA* gene is involved in lipid metabolism and energy regulation within cells. The rs4253778 variant (89204 G>C) can impact how efficiently fats are processed, which may influence blood lipid levels and overall vascular health.

VEGF (rs2010963, -634 G>C): VEGF plays a role in blood vessel formation. The rs2010963 variant (-634 G>C) can affect vascularization and resilience, with variations linked to cardiovascular and vascular health.

These genetic factors, in conjunction with lifestyle factors, play a significant role in vascular health, affecting everything from inflammation to lipid metabolism. Understanding these genetic predispositions can help guide preventive strategies and support long-term cardiovascular health.

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	Limit Trans Fats	2	Dietary Vitamin C
3	Choose Healthy Fats	4	Fish
5	Fruits	6	Avoid High-Fat Diets
7	Red Vine Leaf Extract	8	Compression Therapy
9	Vegetables	10	Compression Stockings
11	Whole Grains	12	Good Eating Habits
13	Horse Chestnut	14	Vitamin C
15	Dietary Vitamin K1		

1



Limit Trans Fats

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To limit trans fats, read food labels and choose products with 0 grams of trans fat. Avoid fried foods, packaged snacks, baked goods, and fast foods, which are common sources of trans fats. Aim to eliminate trans fats from your diet completely.

Description

Limiting trans fat intake is vital for heart health and reducing the risk of cardiovascular diseases. Avoiding foods high in trans fats and opting for healthier alternatives promotes better cardiovascular well-being.

Based on their structure, the fats in our diet can be broadly divided into *saturated* and *unsaturated* fat. Trans fat is a type of unsaturated fat [\[R, R, R\]](#).

In large amounts, trans fat and saturated fat may have a negative impact on your heart. Processed foods and animal products like red meat and dairy are rich in these fats [\[R, R, R\]](#).

How it helps

Limiting trans fats reduces LDL cholesterol levels and inflammation, both of which are critical factors in the development of cardiovascular diseases. This dietary change supports vascular health by improving overall heart function and circulation.

2



Dietary Vitamin C

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate foods rich in Vitamin C into your daily diet, such as oranges, strawberries, red peppers, kale, and broccoli. Aim to consume 5 servings of fruits and vegetables per day to meet the recommended dietary allowance of Vitamin C, which is 90 mg for adult men and 75 mg for adult women.

Description

Vitamin C is an antioxidant that supports the immune system, collagen production, and wound healing. It also enhances iron absorption from plant-based foods and contributes to overall health.

[Vitamin C](#) is an essential nutrient. This means that our bodies can’t produce it on their own, so we have to get it from food or supplements [\[R\]](#).

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [\[R, R\]](#).

Vitamin C deficiency is called *scurvy*. In the past, many sailors suffered from it [\[R\]](#).

How it helps

Dietary Vitamin C enhances endothelial function and promotes the synthesis of collagen, vital for maintaining vascular integrity. Its antioxidant properties reduce oxidative stress, thereby supporting overall vascular health and mitigating cardiovascular risk.

3



Choose Healthy Fats

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate sources of unsaturated fats such as olive oil, avocados, nuts, seeds, and fatty fish into your daily diet. Aim for at least two servings of fatty fish per week and use olive oil for cooking and salad dressings. Replace saturated fats found in red meat, butter, and processed foods with these healthier options whenever possible.

Description

Choosing healthy fats, such as those found in avocados, nuts, and fatty fish, can support cardiovascular health, reduce inflammation, and promote overall well-being. A diet balanced in healthy fats can help manage cholesterol levels and reduce the risk of heart disease.

Based on their structure, the fats in our diet can be broadly divided into *saturated* and *unsaturated* fat. Trans fat is a type of unsaturated fat [\[R, R, R\]](#).

In large amounts, trans fat and saturated fat may have a negative impact on your heart and reproductive health. Processed foods and animal products like red meat and dairy are rich in these fats [\[R, R, R, R, R\]](#).

Some types of unsaturated fat can protect your heart and support fertility. **Experts say you should add more unsaturated fats to your diet.** Some good sources include [\[R, R, R\]](#):

- Nuts
- Seeds
- Fish

Unsaturated fats include polyunsaturated fats or PUFAs (omega-3 and omega-6) and monounsaturated fats or MUFAs [\[R, R\]](#).

How it helps

Choosing healthy fats enhances vascular health by reducing inflammation and improving lipid profiles, thereby promoting better blood flow and lowering the risk of cardiovascular events. Additionally, these fats support overall endothelial function, critical for maintaining vascular integrity.

4



Fish

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate two servings of fish into your diet each week, focusing on oily fish like salmon, mackerel, or sardines for their high omega-3 fatty acid content. Each serving should be about 3.5 ounces cooked, or about ¾ cup of flaked fish.

Description

Fish, particularly fatty fish like salmon and mackerel, is an excellent source of omega-3 fatty acids, which support cardiovascular health, brain function, and inflammation management. Regular consumption of fish can promote heart health and overall well-being.

Fish is a great source of [omega-3s](#), protein, and other essential nutrients. Omega-3s from fish (EPA and DHA) are some of the healthiest fats we can eat. They help reduce inflammation and **protect the heart, brain, and eyes** [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

Regular consumption of fatty fish provides omega-3 fatty acids, which help reduce triglycerides and lower blood pressure, thereby improving overall vascular function and decreasing the risk of cardiovascular diseases.

5



Fruits

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least two servings of fresh, frozen, or canned fruits into your daily diet, aiming for a variety of colors and types to ensure a broad intake of vitamins, minerals, and antioxidants. One serving is equivalent to one medium-sized fruit, such as an apple or banana, or one-half cup of chopped fruit.

Description

Fruits are rich in vitamins, minerals, fiber, and antioxidants, making them essential for a balanced diet. Regular fruit consumption is associated with various health benefits, including better heart health, improved digestion, and reduced risk of chronic diseases.

Fruits are tasty and healthy foods high in vitamins, minerals, and antioxidants. They help reduce inflammation and support health in different ways.

Common examples include:

- Apples
- Oranges
- Bananas
- Grapes
- Watermelons

How it helps

Fruits enhance vascular health by providing essential vitamins, antioxidants, and fiber that support endothelial function and reduce oxidative stress, thereby improving blood vessel elasticity and lowering the risk of cardiovascular diseases.

6



Avoid High-Fat Diets

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Choose foods low in saturated and trans fats, such as lean meats, fish, nuts, and low-fat dairy. Opt for cooking methods like grilling, steaming, or baking rather than frying. Incorporate this practice into every meal and snack, aiming to consistently maintain a diet low in high fat foods each day.

Description

Reducing the consumption of high-fat foods, especially those rich in unhealthy saturated and trans fats, can lower the risk of heart disease, obesity, and related health issues. Opting for a balanced and heart-healthy diet promotes better cardiovascular health and overall wellness.

How it helps

Avoiding high-fat diets helps maintain optimal vascular health by reducing levels of unhealthy cholesterol, thereby decreasing the risk of arterial plaque buildup. This dietary strategy supports healthier blood flow and lowers the likelihood of cardiovascular disease.

7



Red Vine Leaf Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a red vine leaf extract supplement, usually available in capsule or tablet form, at a dose of 360-720 mg daily. This can be divided into two doses taken with meals to improve absorption. Continue this regimen for a period of 3-12 weeks to observe benefits, especially for chronic venous insufficiency symptoms.

TYPICAL STARTING DOSE

360 mg

Description

Red vine (*Vitis vinifera*) leaf extract is derived from the leaves of the red vine. It has been traditionally used in herbal medicine, particularly in Europe, for its potential benefits in improving circulation and reducing symptoms associated with chronic venous insufficiency (CVI), such as leg swelling and pain. Red vine leaf extract is rich in various bioactive compounds, including flavonoids and polyphenols.

Red vine leaf extract is made from the leaves of the red grape vine plant. It has anti-inflammatory and antioxidant properties [\[R\]](#).

People use it to potentially improve circulation and blood vessel health [\[R\]](#).

How it helps

Red vine leaf extract aids vascular health by enhancing blood circulation and reducing symptoms of chronic venous insufficiency through its rich content of flavonoids and polyphenols, which promote blood vessel elasticity and improve overall venous function.

8



Compression Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Wear compression stockings or sleeves daily, especially during long periods of standing or sitting. Choose a compression level appropriate for your condition (mild, moderate, or high), as advised by a healthcare professional. Start wearing them in the morning before swelling occurs and keep them on until bedtime.

Description

Compression therapy involves wearing specialized garments that apply pressure to the limbs, promoting better circulation and reducing swelling. It is commonly used to manage conditions like venous disorders and can help alleviate symptoms, improve vascular health, and enhance overall well-being.

In compression therapy, different methods are used to apply pressure to the legs. These methods include [\[R\]](#):

- Bandages
- Wraps
- Compression stockings
- Pneumatic pressure devices

Compression therapy supports blood flow. It may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Prevent blood clots and deep vein thrombosis (DVT)
- Reduce some kinds of swelling
- Reduce symptoms of restless legs syndrome

How it helps

Compression therapy enhances vascular health by applying pressure to the limbs, which improves blood flow, reduces edema, and mitigates symptoms of venous insufficiency. This therapeutic approach decreases the risk of blood clots and supports overall circulatory function.

9



Vegetables

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least 2-3 cups of various vegetables into your daily diet, ensuring a mix of colors like greens, reds, and yellows to maximize nutrient intake. Aim to include vegetables in most meals, either as a side, part of the main dish, or snacks.

Description

Vegetables are edible parts of plants that offer various health benefits due to their rich nutrient content, including vitamins, minerals, fiber, and antioxidants. They are essential components of a balanced diet and contribute to overall health, supporting various bodily functions.

How it helps

Consuming a variety of vegetables enhances vascular health by supplying essential vitamins, minerals, and antioxidants, which help reduce inflammation and improve endothelial function. Their high fiber content also aids in cholesterol management, promoting overall cardiovascular health.

10



Compression Stockings

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Wear compression stockings during the day, especially when you expect to be sitting or standing for long periods. They should be put on before getting out of bed in the morning and removed before going to bed at night. Ensure they are the correct size and compression level as advised by a healthcare professional.

Description

Compression stockings are often worn to improve blood circulation in the legs and reduce the risk of conditions like varicose veins and deep vein thrombosis. They can be beneficial for individuals who spend long periods sitting or standing and those with certain medical conditions that affect blood flow.

How it helps

Compression stockings enhance venous return by applying graduated pressure, which helps to reduce stagnant blood flow and swelling in the legs. This improved circulation minimizes the risk of developing varicose veins and deep vein thrombosis, thus supporting overall vascular health.

11



Whole Grains

IMPACT

1 / 5

EVIDENCE

1 / 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

Incorporating whole grains into the diet enhances vascular health by improving lipid profiles and reducing inflammation, thanks to their high fiber content. This mechanism decreases the risk of atherosclerosis and promotes overall cardiovascular function.

12



Good Eating Habits

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate a variety of fruits, vegetables, whole grains, lean proteins, and healthy fats into your meals daily. Aim to eat at regular intervals, ideally three meals and one to two healthy snacks per day, to maintain energy levels and avoid overeating. Reduce consumption of processed foods, sugary snacks, and beverages.

Description

Practicing good eating habits, such as balanced and portion-controlled meals, can help maintain a healthy weight, support proper nutrition, and reduce the risk of chronic diseases.

Eating habits involve the how, what, when, and where of your diet. Some eating habits can be good for your health, but others... not so much.

Good eating habits include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Planning and preparing most of your meals
- Eating mindfully and slowly
- Only eating when hungry
- Not skipping meals

Developing good eating habits takes attention, practice, and effort [\[R\]](#).

How it helps

Maintaining good eating habits enhances vascular health by promoting optimal nutrition, which supports endothelial function and reduces inflammation. This, in turn, helps lower blood pressure and cholesterol levels, mitigating the risk of cardiovascular diseases.

13



Horse Chestnut

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate horse chestnut supplements into your lifestyle by taking one 300mg capsule of horse chestnut seed extract daily, ideally with meals to improve absorption. This regimen is recommended for managing symptoms of chronic venous insufficiency, such as varicose veins, for a period of up to 12 weeks.

Description

Horse chestnut extract is sometimes used as a natural remedy for improving venous circulation and reducing symptoms of conditions like varicose veins and chronic venous insufficiency. Its active compounds may help strengthen blood vessel walls and reduce swelling.

Horse chestnut extracts are made from the leaves or seeds of the horse chestnut tree (*Aesculus hippocastanum*). This tree is native to parts of southeastern Europe [\[R, R\]](#).

Escin is an anti-inflammatory compound found in horse chestnut extracts. These extracts may help with [\[R, R\]](#):

- Circulation in the legs
- Irritable bowel syndrome (IBS)
- Male infertility

How it helps

Horse chestnut extract helps improve vascular health by strengthening blood vessel walls and enhancing venous circulation, thereby alleviating symptoms associated with varicose veins and chronic venous insufficiency.

14



Vitamin C

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500-2000 mg of vitamin C supplement daily. It can be taken at any time of the day, with or without food, according to personal preference or tolerance.

TYPICAL STARTING DOSE

2000 mg

Description

[Vitamin C](#) is an essential nutrient. This means that our bodies can’t produce it on their own, so we have to get it from food or supplements [\[R\]](#).

Foods rich in Vitamin C include: [\[R\]](#)

- Citrus Fruits
- Peppers
- Brussel sprouts
- Kiwi
- Broccoli
- Tomato
- Cantaloupe
- Cauliflower
- Spinach

Vitamin C has antioxidant properties. It supports immunity, heart health, and wound healing [\[R\]](#), [\[R\]](#).

Vitamin C deficiency is called *scurvy*. In the past, many sailors suffered from it [\[R\]](#).

How it helps

Vitamin C aids vascular health by facilitating collagen synthesis, essential for maintaining the structural integrity of blood vessels. Its antioxidant properties further protect the cardiovascular system from oxidative stress, promoting better overall vascular function.

15



Dietary Vitamin K1

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate foods rich in Vitamin K1 into your daily diet. Include green leafy vegetables like kale, spinach, and broccoli, as well as other sources like soybeans and carrots. Aim for at least one serving of these foods per day to meet the recommended dietary allowance for Vitamin K1.

Description

Vitamin K1, primarily found in leafy green vegetables, is essential for blood clotting and supports overall cardiovascular health. It plays a crucial role in maintaining healthy blood vessels.

How it helps

Dietary Vitamin K1 supports vascular health by promoting proper blood clotting and preventing calcification of blood vessels, thereby enhancing circulation and reducing the risk of cardiovascular diseases.