

Peripheral Vascular Disease

Disease Report

REPORT CATEGORY —



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

Peripheral vascular disease (PVD) encompasses any disorder that affects the blood vessels outside of the heart and the diseases affecting the lymph vessels—essentially, any vessels that are not part of the systemic venous or pulmonary circulation. This includes peripheral artery disease (PAD), but also diseases of the venous and lymphatic systems.

Examples of conditions under the PVD umbrella include:

- Venous diseases like deep vein thrombosis (DVT) or chronic venous insufficiency
- Lymphatic diseases such as lymphedema
- Vasculitis, or inflammation of blood vessels
- Raynaud's disease

Many people with PVD do not experience any symptoms. Some may have typical symptoms such as:

- Claudication: Muscle pain or cramping in your legs or arms that is triggered by activity, such as walking, but disappears after a few minutes of rest.
- Numbness, weakness, or heaviness in muscles when moving.
- Coldness in the lower leg or foot, especially when compared with the other side.
- Sores on toes, feet, or legs that won't heal.
- Change in the color of the legs.
- Hair loss or slower hair growth on the feet and legs.
- Slower growth of the toenails.
- Shiny skin on the legs.

Risk Factors and Treatment

Factors that can increase your risk of developing PVD include:

- Age, especially after 50.
- Smoking
- Diabetes
- Obesity
- High blood pressure
- High cholesterol
- Physical inactivity
- Family history

Treatment for PVD involves lifestyle changes, medications, and sometimes surgery. Key aspects include:

- Smoking cessation
- Exercise
- Healthy diet
- Medications (cholesterol-lowering drugs, high blood pressure medications, medications to control blood sugar, and medications to prevent blood clots)
- Compression therapy
- Surgical treatments: angioplasty or surgery to bypass or open blocked arteries, or correct valve dysfunctions.



TYPICAL LIKELIHOOD

Typical likelihood of peripheral vascular disease based on 791,959 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CDKN2B	rs1537372	TT
SMARCA4	rs138294113	CC
SORT1	rs7528419	AA
ABO	rs505922	CC
TWIST1	rs2107595	AG
TCF7L2	rs7903146	CT
ALDH2	rs11066301	GA
PAWR	rs4842266	GA
SMOC1	rs55784307	AC
IREB2	rs10851907	GA
LPL	rs322	AC
COL4A1	rs1975514	TC
LPA	rs118039278	GG
F5	rs6025	CC
STEAP1B	rs4722172	AA
MICB	rs3130968	CC
BPTF	rs62084752	GG
MMP3	rs566125	CC
PHF21A	rs7476	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	Walking	30 minutes	2	Exercise At Least One Hour a Day	1 hour
3	Aerobic Exercise (Cardio)	1 hour	4	Strength Training	1 hour
5	Compression Stockings		6	Dietary Nitrates	
7	Limit Saturated Fat		8	Cycling	
9	Low-Intensity Exercise	1 hour	10	Avoid Refined Sugar	
11	Mediterranean Diet		12	Fruits And Vegetables	
13	Propionyl-L-Carnitine	500 mg	14	Pycnogenol	100 mg
15	Methylfolate	400 mcg	16	Avoid Cadmium Exposure	
17	Dietary Omega-3 Fatty Acids		18	Eat Fiber-Rich Foods	
19	Maintain Optimal Vitamin D Levels	1000 iu	20	Ginkgo	120 mg
21	Gotu Kola		22	DASH Diet	
23	Dietary Vitamin E		24	Flaxseed	2 tbsp
25	Policosanol	5 mg	26	Stress Management Therapy	1 hour
27	Drink at Least 8 Glasses of Water a Day		28	Limit Salt Intake	
29	Omega-3 (Fish Oil)	2000 mg	30	Vitamin E	200 iu
31	Limit Meat Intake		32	Mesoglycan	

33	Anti-Inflammatory Diet		34	Vitamin B12	100 mcg
35	Dietary Vitamin C		36	Avoid PAHs Exposure	
37	Avoid Arsenic Exposure		38	Avoid Organochlorine Pesticide Exposure	
39	Alpha-Lipoic Acid	600 mg	40	Avoid Lead Exposure	
41	Panax Notoginseng				

1



Walking

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Incorporate at least 30 minutes of brisk walking into your daily routine, aiming for a minimum of five days a week. This can be done in one continuous session or broken into shorter periods, such as three 10-minute walks throughout the day.

TYPICAL STARTING DOSE

30 minutes

Description

Walking is a low-impact form of exercise that can contribute to cardiovascular fitness, weight management, and improved overall health. It is used to support physical activity goals, enhance mood, and promote better cardiovascular health.

How it helps

Physical training, especially walking, is crucial for patients with generalized atherosclerosis, including those with peripheral vascular disease. Structured programs significantly improve functional capacity, while home-based training shows inconsistent results [\[R\]](#).

Interventions that may help include:

- Treadmill walking [\[R\]](#)
- Nordic walking [\[R\]](#)

Compared to light-to-moderate aerobic exercise, vigorous exercise may be less effective at improving walking performance but more at improving aerobic capacity [\[R\]](#).

Walking breaks during prolonged periods of inactivity, such as gaming, significantly improve blood flow and blood velocity, reducing the risk of DVT [\[R\]](#).

Early ambulation is recommended for post-surgical patients to prevent DVT, although it is often supplemented with other methods like compression stockings or anticoagulants [\[R\]](#), [\[R\]](#).

Combining walking with compression therapy may lead to a faster reduction of pain and swelling, reduce the incidence of post-thrombotic syndrome, and improve the quality of life for DVT patients [\[R\]](#).

Walking activates leg muscles, which helps improve blood circulation, potentially dissolving the clot and reducing the risk of forming new ones in deep veins. It also alleviates swelling and discomfort in the legs associated with this condition [\[R\]](#).

2



Exercise At Least One Hour a Day

IMPACT

4 / 5

EVIDENCE

4 / 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

Experts recommend regular exercise to help prevent peripheral vascular disease. Those who already have the condition should also engage in regular exercise and supervised exercise therapy to **increase blood flow to the arms and legs and increase pain-free walking distance** [\[R\]](#).

In people with peripheral vascular disease, aerobic exercise interventions may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Aerobic capacity (6-minute walking distance)
- Pain-free walking
- Physical fitness
- Cardiometabolic risk factors

Types of aerobic exercise that may help include:

- Treadmill walking [\[R\]](#)
- Nordic walking [\[R\]](#)

Compared to light-to-moderate aerobic exercise, vigorous exercise may be less effective at improving walking performance but more at improving aerobic capacity [\[R\]](#).

A meta-analysis of 7 studies concluded that short-term resistance training benefits functional capacity in middle-aged to elderly individuals with peripheral vascular disease, especially over 24 weeks. Strength training was most effective for initial claudication distance [\[R\]](#).

Regular exercise helps lower the risk of blood clots. Experts recommend at least **30 minutes of moderate physical activity daily** [\[R\]](#).

Exercise may also improve the symptoms and reduce complications in people with DVT. It may help by strengthening the calf muscles and boosting blood flow [\[R\]](#), [\[R\]](#).

3



Aerobic Exercise (Cardio)

IMPACT

4 / 5

EVIDENCE

4 / 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

Experts recommend regular exercise to help prevent peripheral vascular disease. Those who already have the condition should also engage in regular exercise and supervised exercise therapy to **increase blood flow to the arms and legs and increase pain-free walking distance** [\[R\]](#).

In people with peripheral vascular disease, aerobic exercise interventions may improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Aerobic capacity (6-minute walking distance)
- Pain-free walking
- Physical fitness
- Cardiometabolic risk factors

Types of aerobic exercise that may help include:

- Treadmill walking [\[R\]](#)
- Nordic walking [\[R\]](#)

Compared to light-to-moderate aerobic exercise, vigorous exercise may be less effective at improving walking performance but more at improving aerobic capacity [\[R\]](#).

Regular exercise (including cardio) helps lower the risk of blood clots. Experts recommend at least **30 minutes of moderate physical activity daily** [\[R\]](#).

Exercise may also improve the symptoms and reduce complications in people with DVT. It may help by strengthening the calf muscles and boosting blood flow [\[R\]](#), [\[R\]](#).

4



Strength Training

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

Description

Strength training, also called resistance or *anaerobic* training, contracts the muscles against an external resistance for short periods of time. This helps gain muscle strength, tone, and mass. This can include activities like weight lifting, pushups, and crunches.

Strength training, also known as resistance training, is a type of physical exercise that uses resistance to build strength, anaerobic endurance, and size [R]. Some of the most common strength training methods include [R]:

- Weight lifting
- Bodyweight exercises like push-ups, pull-ups, squats, and lunges.
- Resistance bands
- Plyometrics or explosive force exercises

The benefits of strength training are numerous, and include [R]:

- Increased muscle strength
- Improved bone health
- Reduced risk of injury
- Improved balance and coordination
- Enhanced mood
- Boost metabolism

Consult with a doctor before starting any new exercise program, especially if you have any health conditions.

How it helps

Experts recommend regular exercise to help prevent peripheral vascular disease. Those who already have the condition should also engage in regular exercise and supervised exercise therapy to **increase blood flow to the arms and legs and increase pain-free walking distance** [R].

A meta-analysis of 7 studies concluded that short-term resistance training benefits functional capacity in middle-aged to elderly individuals with peripheral vascular disease, especially over 24 weeks. Strength training was most effective for initial claudication distance [R].

5



Compression Stockings

IMPACT3 / 5

EVIDENCE4 / 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 apply pressure to your legs to help your blood vessels work better, which aids in preventing blood clots from forming in the deeper veins.

Experts recommend wearing **compression stockings** to people at risk and those who already have DVT. They may help **lower the risk of DVT and reduce symptoms** by improving blood flow [\[R, R\]](#).

Compression stockings may reduce the risk of venous thrombosis in:

- **Air travellers** (by 2 times) [\[R, R, R\]](#)
- **Hospitalized patients** (by 3 times) [\[R, R, R\]](#)

GCS are more effective when used in combination with other DVT prophylactic methods [\[R, R\]](#).

GCS likely reduce the risk of proximal DVT and may reduce the risk of pulmonary embolism (PE), although the evidence for PE is of lower quality [\[R, R\]](#).

However, the use of compression stockings does not significantly reduce the development of post-thrombotic syndrome in patients with DVT, according to recent meta-analyses [\[R, R\]](#).

There is insufficient evidence to support the routine use of compression stockings for preventing DVT in acute stroke patients [\[R\]](#).

6



Dietary Nitrates

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate foods high in dietary nitrates, such as beets, spinach, arugula, and celery, into your daily meals. Aim for about 300-400 mg of dietary nitrates daily, which equates to roughly 2 cups of nitrate-rich vegetables.

Description

Nitrates found in foods like leafy greens and beets can convert into nitric oxide in the body, which may help dilate blood vessels, lower blood pressure, and enhance exercise performance.

How it helps

A study of 53,150 participants associated a high dietary intake of vegetable nitrates with a 26% lower risk of peripheral artery disease [\[R\]](#).

In 2 placebo-controlled trials of 22 patients with peripheral artery disease, consuming dietary nitrates improved blood pressure, endothelial function, blood flow, and walking capacity [\[R, R\]](#).

Foods that contain nitrates can potentially increase NO and thus lower blood pressure. Vegetables are rich in nitrates and roughly supply 80% of these compounds [\[R\]](#).

Beetroot is the most famous nitrate-rich food. Some other foods rich in nitrates include [\[R\]](#):

- Leafy greens
- Celery
- Broccoli
- Chinese cabbage
- Turnips
- Cucumbers
- Carrots
- Cauliflower
- [Pomegranate](#) juice

7

Limit Saturated Fat

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Reduce your intake of saturated fats by choosing lean cuts of meat, opting for low-fat or fat-free dairy products, and using cooking oils high in unsaturated fats (like olive or canola oil) instead of butter or lard. Aim to keep saturated fat to less than 10% of your total daily calories. For someone consuming 2000 calories a day, this means 20 grams or less of saturated fat per day.

Description

Limiting saturated fat intake is crucial for managing cholesterol levels and reducing the risk of heart disease. Choosing lean protein sources and incorporating unsaturated fats into the diet supports cardiovascular health and overall well-being.

How it helps

Diets rich in saturated and trans fat were associated with peripheral artery disease in 6 studies of 11,430 people. The buildup of these fats in the walls of the arteries supplying blood to the limbs ends up clogging these blood vessels, which is the most common cause of peripheral artery disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Experts recommend limiting dietary saturated and trans fats to both prevent and manage peripheral artery disease [\[R\]](#).

8



Cycling

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Begin cycling with moderate rides to build up your stamina, targeting 2 to 4 times a week for 30 to 60 minutes per session. Ensure your bicycle is the right size and properly adjusted for your comfort. Safety gear, including helmets, is essential. Mix up your routes for interest and challenge, and consider joining a cycling group for social and motivational benefits. Maintenance of your bicycle will ensure a smooth ride and prolong its life.

Description

Cycling is a low-impact, environmentally friendly exercise that offers significant cardiovascular benefits, muscle strengthening, and flexibility improvement. It's suitable for all fitness levels and can be enjoyed both recreationally and competitively. Cycling promotes weight loss, decreases stress levels, and improves joint mobility. It's also a convenient mode of transportation that encourages outdoor exploration and reduces air pollution.

How it helps

Experts recommend regular exercise to help prevent peripheral vascular disease. Those who already have the condition should also engage in regular exercise and supervised exercise therapy to **increase blood flow to the arms and legs and increase pain-free walking distance** [R].

In people with peripheral artery disease, aerobic exercise interventions may improve [R, R, R, R, R]:

- Aerobic capacity (6-minute walking distance)
- Pain-free walking
- Physical fitness
- Cardiometabolic risk factors

Cycling is a low-impact aerobic exercise that helps enhance blood circulation, improve cardiovascular health, and reduce symptoms associated with peripheral artery disease.

9



Low-Intensity Exercise

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Incorporate 60 minutes of low-intensity activities, such as walking or gentle yoga, into your daily routine. Aim to do this 5 days a week to achieve the best results.

TYPICAL STARTING DOSE

1 hour

Description

Low-intensity exercise, such as walking or gentle yoga, provides numerous health benefits, including improved cardiovascular health, stress reduction, and enhanced overall fitness without the strain of high-intensity workouts.

How it helps

Experts recommend regular exercise to help prevent peripheral artery disease. Those who already have the condition should also engage in regular exercise and supervised exercise therapy to **increase blood flow to the arms and legs and increase pain-free walking distance** [\[R\]](#).

Types of aerobic exercise that may help include:

- Treadmill walking [\[R\]](#)
- Nordic walking [\[R\]](#)

Compared to light-to-moderate aerobic exercise, vigorous exercise may be less effective at improving walking performance but more at improving aerobic capacity [\[R\]](#).

10



Avoid Refined Sugar

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Eliminate foods and beverages high in refined sugars, such as sodas, candies, pastries, and white bread, from your diet. Replace them with natural sugars found in fruits and whole grains. Implement this change immediately and maintain it indefinitely for long-term health benefits.

Description

Reducing the consumption of refined sugar and high-sugar foods can help prevent dental problems, manage blood sugar levels, and support weight management.

How it helps

Experts recommend limiting refined sugars to help prevent and manage peripheral artery disease [R].

People who eat more sugary foods may be more likely to develop heart disease. The risk may be higher in women than in men [R].

Eating less sugar may help by improving [R, R]:

- Insulin
- Cholesterol
- Blood pressure
- Body weight

Importantly a diet rich in refined sugars increases the risk of diabetes. This disease has been identified as one of the main risk factors for peripheral artery disease. In those with peripheral artery disease, diabetes may increase mortality risk [R, R, R].

11



Mediterranean Diet

IMPACT

3 / 5

EVIDENCE

3 / 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

People who eat a Mediterranean diet may be at decreased risk of peripheral vascular disease. Components such as nuts and fatty fish may be particularly protective [\[R, R, R, R\]](#).

Similarly, **experts recommend that patients with peripheral vascular disease eat a healthy diet** rich in fruits, vegetables, and whole grains while limiting sugar, salt, and saturated fats [\[R\]](#).

The Mediterranean may help by decreasing inflammation and oxidative stress in the blood vessels.

12



Fruits And Vegetables

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Increase your intake of fruits and vegetables to at least five servings per day, aiming for a variety of types and colors to ensure a broad range of nutrients. Each serving size should roughly be the amount you can fit in one hand. Try to incorporate at least one serving of fruits or vegetables into every meal and snack throughout the day.

Description

A diet rich in fruits and vegetables provides essential nutrients, antioxidants, and dietary fiber. This combination supports overall health, helps maintain a healthy weight, and reduces the risk of chronic diseases such as heart disease and certain cancers.

How it helps

Experts recommend eating a healthy diet rich in fruits, vegetables, and whole grains to prevent and manage peripheral artery disease [\[R\]](#).

Based on a systematic review of 13 cohort studies, vegetarian and vegan diets show a lower risk of heart disease (by 17-26%) compared to nonvegetarian diets. Similarly, a study of 3.7 million participants associated a higher dietary intake of fruits and vegetables with a decreased prevalence of peripheral artery disease [\[R\]](#), [\[R\]](#).

Moreover, a study associated a high dietary intake of fruits and vegetables with fewer symptoms in patients with peripheral artery disease [\[R\]](#).

13



Propionyl-L-Carnitine

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take 500 mg to 2 g of propionyl-L-carnitine orally with meals to enhance absorption, divided into two or three doses throughout the day. Continue this regimen daily for a minimum of several weeks to observe benefits.

TYPICAL STARTING DOSE
500 mg

Description

Propionyl-L-carnitine is a naturally occurring compound that plays a role in energy production and cardiovascular health. It is often used as a dietary supplement to support circulation and reduce symptoms of conditions like peripheral artery disease.

Propionyl-L-carnitine is a supplement that people use to improve athletic performance, heart health, and more. It provides [L-carnitine](#), a compound that helps your body get energy from fat [\[R\]](#), [\[R\]](#).

How it helps

A meta-analysis of 13 randomized controlled trials on oral propionyl-L-carnitine for claudication revealed a 16-meter improvement in peak walking distance compared to placebo. Subpopulations showed consistent benefits, with potential enhancement in those engaged in exercise programs or enrolled in Russian sites [\[R\]](#).

In a study of 48 critical limb ischemia patients, those treated with propionyl-L-carnitine showed increased endothelium-dependent dilation, post-ischemic peak flow, and improvements in transcutaneous oxygen and carbon dioxide levels. Pain perception significantly decreased [\[R\]](#).

Oral supplementation with propionyl-L-carnitine (1-2 g/day) improved walking distance (by approximately 45 meters), exercise performance, blood flow, and quality of life in 13 placebo-controlled trials of 1,353 people with peripheral artery disease experiencing pain and cramps in the legs during exercise (intermittent claudication) [\[R\]](#).

In a placebo-controlled trial of 48 people with severe artery blockage in the limbs (critical limb ischemia), intravenous propionyl-L-carnitine improved blood circulation and reduced pain perception and painkiller use [\[R\]](#).

14



Pycnogenol

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take 100 mg of pycnogenol supplement daily. This can be taken in a single dose or divided into two doses of 50 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE
100 mg

Description

Pycnogenol (pine bark extract) is derived from the bark of the maritime pine (Pinus pinaster). It has been used in traditional n European folk medicine for centuries, and more recently as a supplement. The extract contains a group of bioactive compounds known as proanthocyanidins, which may be beneficial in supporting cardiovascular health, promoting skin health, and aiding in the management of various conditions related to inflammation and oxidative stress.

Pycnogenol comes from the bark of pine trees that grow in the Mediterranean [\[R, R\]](#).

It may improve [\[R, R, R, R, R, R\]](#):

- Athletic performance
- Seasonal allergies
- Cognitive function
- Joint health
- Varicose veins

How it helps

In people taking long flights, pycnogenol supplementation (150-200 mg, before or during the flight) may help prevent DVT [\[R, R, R\]](#).

In people with a history of DVT, pycnogenol (200 mg/day) may help reduce recurrence and complications. Its combination with compression stockings may be even more effective [\[R, R\]](#).

15



Methylfolate

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Take an L-methyl folate supplement (400-800 micrograms daily), ideally with a meal, to improve absorption. This dosage is recommended for adults, including pregnant women, to support overall health, especially to reduce the risk of neural tube defects in developing fetuses. Continue daily use as part of your regular supplement routine.

TYPICAL STARTING DOSE

400 mcg

Description

Folate, a B-vitamin, is crucial for DNA synthesis, cell growth, and the formation of red blood cells. Adequate folate intake supports overall health and reduces the risk of neural tube defects during pregnancy.

Vitamin B9 (*folate*) plays an essential role in [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Making DNA
- Metabolism
- Energy production

SelfDecode recommends L-methylfolate as the preferred folate supplement for those who need one. It is superior to folic acid because it doesn't require activation, but the research is still ongoing [\[R\]](#), [\[R\]](#).

How it helps

A meta-analysis of 27 studies identified low blood folic acid levels as a risk factor for venous thrombosis [\[R\]](#).

In a non-placebo-controlled trial of 90 patients with homocysteine cerebral infarction and DVT, supplementation with folic acid and vitamin B12 reduced lower limb deep static vein thrombosis recurrence rate (6.5 times) [\[R\]](#).

Three studies of 6,880 people associated an insufficient intake of vitamin B9 with an increased incidence of peripheral artery disease (especially in men), as well as with pain and cramps in the limbs from exercise (intermittent claudication). Similarly, low blood levels of this vitamin were associated with peripheral artery disease in men but not in women [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In a small study of 48 people with this condition and intermittent claudication, reduced vitamin B9 intake was associated with a shorter 6-minute walk distance [\[R\]](#).

An adequate vitamin B9 intake may help prevent peripheral artery disease by reducing the blood levels of homocysteine, whose buildup is associated with heart disease and other health disorders. In line with this, high homocysteine levels were associated with peripheral artery disease in a large-scale study of 116,852 people [\[R\]](#).

16



Avoid Cadmium Exposure

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

To avoid cadmium exposure, refrain from smoking or exposure to secondhand smoke, reduce consumption of foods high in cadmium like shellfish, liver, kidney meats, and certain leafy vegetables, and use ceramic or glass containers instead of plastic when microwaving food. Limit intake of cadmium-contaminated workplace air by using protective gear if you work in battery manufacturing, welding, or metal refining industries.

Description

Avoiding cadmium exposure is essential to prevent potential health risks associated with this heavy metal, such as kidney damage and increased cancer risk. Reducing exposure to cadmium-containing products and contaminated foods is crucial.

Heavy metals are elements naturally found in the environment. They are also used for agricultural, industrial, and medicinal purposes. Some can even be found in small amounts in your body [\[R, R\]](#).

Long-term exposure to high amounts of heavy metals can be harmful to your health [\[R, R\]](#).

Heavy metals that are most often linked to health problems include [\[R, R\]](#):

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A meta-analysis revealed that cadmium exposure is linked to increased cardiovascular mortality and higher risk of coronary heart disease, stroke, and peripheral artery disease. Elevated cadmium levels correlate with adverse changes in lipid profiles and may promote atherosclerosis through oxidative stress and endothelial dysfunction [\[R\]](#).

17



Dietary Omega-3 Fatty Acids

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate foods high in omega-3 fatty acids into your diet daily. This includes eating fish such as salmon, mackerel, and sardines at least twice a week. Alternatively, include a tablespoon of flaxseed oil or chia seeds in your daily diet.

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

There are three major types of omega-3s: ALA, EPA, and DHA. **EPA and DHA are vital for mental and heart health** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal health, 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

Low blood levels of the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were associated with an increased incidence of peripheral artery disease, worse severity of this condition, and higher blood levels of inflammatory markers in 4 studies of 579 people [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Similarly, a study of 48 peripheral artery disease patients associated low dietary intake of these fatty acids with higher hsCRP levels [\[R\]](#).

18



Eat Fiber-Rich Foods

IMPACT2 / 5

EVIDENCE2 / 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

A healthy diet rich in fiber was associated with a reduced incidence of peripheral artery disease in 2 large-scale studies of 32,544 people. Similarly, few patients with this condition met the daily fiber requirement in 4 small studies of 213 people [\[R, R, R, R, R, R\]](#).

19



Maintain Optimal Vitamin D Levels

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE

1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs [vitamin D](#) for strong bones. Vitamin D also plays a role in [\[R\]](#):

- Mood
- Immunity
- Heart health
- Blood sugar control

[Sunlight](#) is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [\[R, R\]](#).

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [\[R\]](#).

How it helps

Vitamin D deficiency has been associated with an increased incidence and severity of peripheral artery disease. In people with this condition, a poor vitamin D status is associated with poorer physical performance and faster mobility loss [\[R, R, R, R\]](#).

20



Ginkgo

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 120 mg of Ginkgo supplement daily, preferably with meals to aid absorption. This dosage is typically split into two 60 mg doses taken in the morning and evening for best results.

TYPICAL STARTING DOSE

120 mg

Description

[Ginkgo](#) (*Ginkgo biloba*) is an ancient tree used in traditional Chinese medicine [\[R, R\]](#).

According to limited evidence, ginkgo leaf extract may help with [\[R, R, R, R\]](#):

- Anxiety
- Dementia
- Eye problems
- Blood vessel problems
- Vitiligo

How it helps

Studies on *Ginkgo biloba* for peripheral arterial disease (PAD) show mixed results. Some research found no extra benefit when combined with exercise, but higher doses improved walking distance and treadmill time. In healthy subjects, Ginkgo boosted microcirculation without changing vital signs. In a Phase III trial, a drug (SID142) matched another PAD treatment's pain relief but was safer [\[R, R, R, R, R, R\]](#).

Other trials with Ginkgo extract (EGb 761) in PAD patients showed consistent improvement in pain-free and max walking distances with good tolerability. However, a study using GB-8 found no vascular benefits but noted cognitive improvements in those with moderate arterial insufficiency [\[R, R, R, R, R, R\]](#).

Ginkgo can improve blood flow and have antioxidant properties. These effects help by dilating blood vessels and reducing the viscosity of the blood, which may assist in alleviating symptoms of peripheral artery disease.

21



Gotu Kola

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a Gotu Kola supplement, available in capsule or powder form, daily. Dosages typically range from 500mg to 2000mg daily, divided into two or three doses. It's recommended to start with the lower dose to assess tolerance and then increase if necessary. Continue for 4 to 6 weeks to evaluate the benefits.

Description

Gotu kola is an herb used in traditional medicine for its potential to improve cognitive function, reduce inflammation, and support skin health.

[Gotu kola](#) or Pennywort (*Centella asiatica*) is an herb used in Tai-Chi tradition and Ayurvedic and Chinese Traditional Medicine.

Gotu kola is used as an antioxidant and anti-inflammatory. Traditional uses include:

- Wound healing [\[R\]](#).
- Improving leg circulation [\[R\]](#)

How it helps

A meta-analysis of 8 studies concluded that gotu kola supplementation may be effective at improving blood flow and reducing swelling after 4-8 weeks in people with poor blood circulation and high blood pressure in the legs [\[R\]](#).

The terpenes in gotu kola may increase collagen production, which might lower blood pressure and help with swelling [\[R\]](#).

22



DASH Diet

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Adopt a dietary pattern that emphasizes fruits, vegetables, whole grains, lean proteins, and low-fat dairy, while reducing sodium, red meat, sweets, and sugary beverages. Aim for 4-5 servings of both fruits and vegetables per day, 6-8 servings of grains (with at least half being whole grains), and 2-3 servings of low-fat dairy. This diet should be followed daily to manage blood pressure effectively.

Description

The DASH (Dietary Approaches to Stop Hypertension) diet is a dietary plan designed to reduce high blood pressure. It emphasizes fruits, vegetables, lean proteins, and whole grains while limiting sodium intake.

Health experts developed the DASH diet to reduce blood pressure. This diet also helps support weight control while reducing inflammation and cholesterol [\[R\]](#).

It **limits salt, sweets, and saturated fat**, while promoting the intake of [\[R\]](#):

- Fruits (4-5 servings/day)
- Vegetables (4-5 servings/day)
- Whole grains (6-8 servings/day)
- Low-fat dairy (2-3 servings/day)
- Nuts, seeds, and legumes (4-5 servings/week)
- Fish and poultry (up to 6 ounces/day)

The DASH diet focuses on fresh, minimally processed food rich in nutrients. Magnesium, calcium, and potassium-rich foods are particularly important due to their beneficial effects on the heart and blood vessels [\[R\]](#).

Although similar to the [Mediterranean diet](#), DASH is lower in sodium (<2,300 mg a day) and omega-3 fatty acids. On the other hand, it’s higher in red meat and dairy [\[R\]](#).

How it helps

Following the DASH diet may help protect against heart and vascular disease [\[R\]](#), [\[R\]](#).

In line with this, **experts recommend limiting dietary salt to both prevent and manage peripheral vascular disease** [\[R\]](#).

The DASH diet may help by reducing blood pressure and inflammation [\[R\]](#), [\[R\]](#).

23



Dietary Vitamin E

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate foods high in Vitamin E into your daily diet. This includes almonds, hazelnuts, sunflower seeds, and green leafy vegetables such as spinach and broccoli. Aim for a daily intake of 15mg of Vitamin E from your diet, which is roughly a handful of almonds (about 23 almonds) or 2 tablespoons of sunflower seeds.

Description

Dietary vitamin E is a fat-soluble antioxidant vitamin found in nuts, seeds, and vegetable oils. It helps protect cells from oxidative damage and supports immune function.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

How it helps

Three studies of 6,880 people associated an insufficient intake of vitamin E with an increased incidence of peripheral artery disease, as well as with pain and cramps in the limbs from exercise (intermittent claudication). Conversely, people with a diet rich in this antioxidant vitamin were commonly free of peripheral artery disease in a study of 1,251 people [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

24



Flaxseed

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume 2 tablespoons of ground flaxseed daily. You can add it to your breakfast cereal, smoothies, or salads.

TYPICAL STARTING DOSE

2 tbsp

Description

Flaxseed is a nutrient-dense food that's high in fiber and omega-3 fatty acids. It may contribute to heart health, promote digestive regularity, and help manage cholesterol levels when included in a balanced diet.

[Flaxseed](#) is a common ingredient in bakery products. Some people also use it as a health food to support digestion [\[R\]](#).

Flaxseed is rich in many compounds, including [\[R\]](#):

- Vitamins and minerals
- Protein
- Fiber
- Omega-3 fatty acids ([ALA](#))

How it helps

In 2 placebo-controlled trials of 172 people with peripheral artery disease, adding flaxseed to the diet lowered blood pressure. Flaxseed also has well-known cholesterol-lowering effects. In a placebo-controlled trial of 110 people with peripheral artery disease, it even enhanced the effects of cholesterol-lowering medication [\[R, R, R, R\]](#).

25



Policosanol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 5 to 20 milligrams of policosanol orally, once daily in the evening with a meal. Continue this regimen for at least 2 to 3 months to evaluate its effects on cholesterol levels.

TYPICAL STARTING DOSE
5 mg

Description

Policosanol is a supplement derived from the waxy coating of sugar cane and yams. It was developed in Cuba, and is used primarily for its potential to lower cholesterol levels and improve cardiovascular health.

How it helps

Supplementation with policosanol (10-20 mg/day for up to 2 years) increased walking distance in 3 placebo-controlled trials of 146 people with peripheral artery disease experiencing pain and cramps in the legs during exercise (intermittent claudication) [\[R\]](#), [\[R\]](#), [\[R\]](#).

In 2 non-placebo controlled trials of 67 people with this condition, a 10-week treatment with policosanol (10 mg/day) was more effective than aspirin (100 mg/day) and lovastatin (20 mg/day) at improving walking distance and blood fat profile [\[R\]](#), [\[R\]](#).

Policosanol may exert its effects by lowering blood cholesterol, reducing blood pressure, and preventing the formation of blood clots [\[R\]](#), [\[R\]](#), [\[R\]](#).

Importantly, most of the trials that report benefits from policosanol were conducted by a single research group in Cuba. Trials conducted by other groups have often failed to find any benefits [\[R\]](#).

26



Stress Management Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Engage in stress management therapy sessions, such as cognitive-behavioral therapy (CBT), for at least 1 hour per week over a course of 8 to 12 weeks. Techniques can include mindfulness, deep breathing exercises, and identifying stressors to develop coping strategies.

TYPICAL STARTING DOSE

1 hour

Description

Stress management therapy refers to various techniques and approaches aimed at reducing and coping with stress. It can improve mental and physical well-being by helping individuals better manage the effects of stress on their health.

How it helps

Stress can damage blood vessels and increase the risk of heart disease. It can also make it tough to practice heart-healthy habits [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

This may be because stress increases [\[R\]](#), [\[R\]](#):

- Oxidative stress and inflammation
- Levels of cholesterol in the blood
- Blood pressure

Experts recommend controlling stress as a preventive measure for peripheral artery disease [\[R\]](#).

In people with heart disease, relaxation techniques like [yoga](#) and [meditation](#) may reduce the symptoms and prevent complications [\[R\]](#).

27



Drink at Least 8 Glasses of Water a Day

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume a total of at least 64 ounces (or approximately 1.9 liters) of water over the course of the day. This can be divided into 8 glasses, each containing 8 ounces of water. Aim to drink evenly throughout the day to avoid dehydration.

Description

Water is an essential nutrient for nearly every process in your body, helping to mainting brain and gut function, maintain a health weight, as well as energy and performance levels, among others.

Water is essential for life. It supports nearly every process in your body [\[R\]](#).

Water helps maintain [\[R\]](#):

- Energy and performance levels
- Brain function
- Gut function
- Healthy weight

Most experts recommend drinking **around 8 glasses (64 oz. or 2 L) of water daily**. You might need more or less than this, depending on how active you are, where you live, or what your overall health is like [\[R\]](#).

How it helps

In a non-placebo-controlled trial of 132 patients with peripheral artery disease, proper hydration by drinking at least 2000 mL of water daily increased skin temperature of the feet, distance to claudication, and ankle-brachial index [\[R\]](#).

Dehydration may raise the risk of blood clots by narrowing blood vessels and thickening the blood [\[R\]](#).

In a non-placebo-controlled trial of 132 patients with peripheral artery disease, proper hydration by drinking at least 2000 mL of water daily increased skin temperature of the feet, distance to claudication, and ankle-brachial index [\[R\]](#).

Research has linked dehydration with deep vein thrombosis. For this reason, some authors recommend staying hydrated to lower the risk of DVT in air travellers [\[R, R\]](#).

Most experts recommend drinking **around 8 glasses (64 oz. or 2 L) of water daily** [\[R\]](#).

28



Limit Salt Intake

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Reduce your daily salt intake to less than 2,300 milligrams (mg), equivalent to about one teaspoon of table salt. This includes all salt consumed, whether added during cooking, at the table, or present in processed and ready-to-eat foods.

Description

Limiting salt intake involves lowering the amount of sodium in the diet, which can help lower blood pressure and reduce the risk of heart disease. It often involves avoiding processed and other high-sodium foods such as cured meats, soups and sauces, and various pickled foods.

Your body needs a certain amount of sodium to function. For example, it helps support your blood pressure. This sodium usually comes from [salt](#). However, eating too much salt is linked to an increased risk of stroke and heart disease [\[R\]](#), [\[R\]](#).

Foods higher in salt include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Prepared soups, broths, gravies, and sauces
- Fermented or pickled foods (such as pickles, soy sauce, olives, and [capers](#))
- Cured meats and sausages (such as bacon, salt pork, and salami)
- Cheese (such as Roquefort and Parmesan)

Try to limit your daily intake to 1 teaspoon of salt (2,400 mg of sodium) [\[R\]](#).

How it helps

A low-salt diet may help protect against heart and vascular disease [\[R\]](#), [\[R\]](#).

In line with this, **experts recommend limiting dietary salt to both prevent and manage peripheral vascular disease** [\[R\]](#).

The DASH diet may help by reducing blood pressure and inflammation [\[R\]](#), [\[R\]](#).

29



Omega-3 (Fish Oil)

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 1-2 g of omega-3 (fish oil) supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

2000 mg

Description

Omega-3 fatty acids are essential fats found in fatty fish like salmon, flaxseeds, and walnuts. They are known for their potential cardiovascular and brain health benefits, including reducing the risk of heart disease and supporting cognitive function.

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

There are three major types of omega-3s: ALA, EPA, and DHA [\[R\]](#), [\[R\]](#).

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

Low blood levels of the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were associated with an increased incidence of peripheral artery disease, worse severity of this condition, and higher blood levels of inflammatory markers in 4 studies of 579 people [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Supplementation with fish oil restored omega-3 fatty acid levels, increased the levels of enzymes that reduce inflammation and damage in the blood vessels, and lowered triglycerides in 3 placebo-controlled trials of 114 people with peripheral artery disease. Fish oil may be most effective in those with a lower BMI and higher total and LDL cholesterol levels [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In a placebo-controlled trial of 11,119 people, supplementation with omega-3 fatty acids reduced the incidence and progression of peripheral artery disease [\[R\]](#).

30



Vitamin E

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 200 IU of Vitamin E daily as a supplement, preferably with a meal that contains fat to enhance absorption.

TYPICAL STARTING DOSE

200 iu

Description

Vitamin E is a fat-soluble antioxidant found in various foods, such as nuts and seeds. It is known for its ability to protect cells from oxidative damage, support immune function, and may play a role in skin health. Vitamin E supplements are used to bolster antioxidant defenses and may be beneficial for conditions related to oxidative stress.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

How it helps

Three studies of 6,880 people associated an insufficient intake of vitamin E with an increased incidence of peripheral artery disease, as well as with pain and cramps in the limbs from exercise (intermittent claudication). Conversely, people with a diet rich in this antioxidant vitamin were commonly free of peripheral artery disease in a study of 1,251 people [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

A meta-analysis of 5 clinical trials involving 265 peripheral artery disease patients found that vitamin E supplementation may improve leg pain and cramps (intermittent claudication) without causing any serious adverse effects. However, the authors found the evidence insufficient due to the generally small size and poor quality of the studies [\[R\]](#).

31



Limit Meat Intake

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Substitute red and processed meats with plant-based proteins, such as beans, lentils, and tofu, for at least two meals per week. Gradually increase the number of meat-free meals by incorporating more fruits, vegetables, and whole grains into your diet daily.

Description

Limiting meat intake involves consuming fewer animal-based products, often as part of a plant-based diet. This dietary choice can provide health benefits such as lower cholesterol levels, reduced risk of certain chronic diseases, and a decreased environmental footprint.

Proteins, fats, and carbs are macronutrients. You need these nutrients in large (‘macro’) amounts. They provide your body with the energy it needs to function properly [\[R\]](#).

You should choose high-quality foods that give you the “best” version of each macronutrient. For example, too much saturated fat and protein from certain animal sources may increase the risk of heart disease and infertility [\[R, R, R\]](#).

Consider replacing red meat with other high-protein foods, such as [\[R, R\]](#):

- Eggs
- Fish
- Soy
- Beans

How it helps

A study of 82,295 participants associated a low intake of processed red meats and organ meats with a decreased risk of peripheral artery disease [\[R\]](#).

32



Mesoglycan

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take mesoglycan orally at a dose of 50-100 mg daily. It can be taken with or without food. Continue this regimen for a period as prescribed by your healthcare provider, usually for several months to assess its effectiveness for the intended treatment.

Description

Mesoglycan is a naturally occurring substance often used as a dietary supplement for its potential to support vascular health and circulation. It may help improve blood vessel elasticity and reduce the risk of certain cardiovascular issues.

Mesoglycan is a natural substance obtained from pig intestines or cow blood vessels. It is used for blood vessel health and wound healing [\[R, R, R\]](#).

How it helps

In an uncontrolled trial of 540 people with peripheral artery disease, treatment with oral mesoglycan (50 mg, 2x/day) for 2 months improved blood vessel function. This treatment also improved walking distance and pain in a placebo-controlled trial of 64 diabetic patients with this condition [\[R, R\]](#).

Injected mesoglycan also improved walking distance and pain, while preventing the formation of blood clots, in 2 studies (one of them placebo-controlled) of 273 people with severe peripheral artery disease [\[R, R\]](#).

33



Anti-Inflammatory Diet

IMPACT2 / 5

EVIDENCE1 / 5

How to implement

Incorporate foods rich in omega-3 fatty acids, such as salmon and flaxseeds, fruits, vegetables, nuts, and whole grains into your daily meals. Avoid processed foods, red meats, and refined sugars. Aim for a balanced diet consisting mostly of plant-based foods and lean protein sources, adjusting portions sizes to meet your individual nutritional needs and health goals.

Description

An anti-inflammatory diet focuses on reducing inflammation in the body by emphasizing foods rich in anti-inflammatory compounds, such as fruits, vegetables, fatty fish, nuts, and seeds, while minimizing processed foods and those high in added sugars and trans fats.

Anti-inflammatory diets use healthy foods to reduce inflammation. These diets are generally high in [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Colorful fruits and vegetables
- Nuts and seeds
- Fish
- Olive oil
- Tea

They also tend to restrict [\[R\]](#), [\[R\]](#):

- Processed food
- Sugar and refined carbs
- Red meat

The [Mediterranean diet](#) and the DASH diet are good examples of anti-inflammatory diets [\[R\]](#), [\[R\]](#).

How it helps

A study of 82,295 participants associated an anti-inflammatory diet rich in chocolate, red wine, and olive/canola oil and low in processed red meat and organ meats with a decreased risk of peripheral artery disease [\[R\]](#).

34



Vitamin B12

IMPACT1 / 5

EVIDENCE3 / 5

How to implement

Take a 50 mcg vitamin B12 supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

100 mcg

Description

Vitamin B12 is a water-soluble vitamin primarily found in animal-based foods like meat, fish, and dairy products. It plays a crucial role in maintaining healthy nerve cells, DNA synthesis, and red blood cell formation. Vitamin B12 deficiency can lead to anemia, neurological issues, and fatigue.

[Vitamin B12](#) is important for [\[R\]](#), [\[R\]](#):

- Building DNA
- Nervous system function
- Energy production

You can get vitamin B12 from [\[R\]](#):

- Animal products (meat, fish, eggs, and dairy)
- Fortified foods
- Supplements

Adults should be getting **2.4 micrograms** of vitamin B12 every day [\[R\]](#).

How it helps

A meta-analysis of 27 studies identified low vitamin B12 levels as a risk factor for venous thrombosis [\[R\]](#).

In a non-placebo-controlled trial of 90 patients with homocysteine cerebral infarction and DVT, supplementation with folic acid and vitamin B12 reduced lower limb deep static vein thrombosis recurrence rate (6.5 times) [\[R\]](#).

How to implement

Description

How it helps

How to implement

Description

How it helps

[SKIP TO NEXT SECTION](#) 

37



Avoid Arsenic Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Use a water filter certified to remove arsenic if you rely on well water, opt for arsenic-tested rice or rice products, and avoid using contaminated pesticides or herbicides in gardening or farming. Test your home for arsenic if you live in an area known for high levels of arsenic in soil or water. Limit consumption of foods known to accumulate arsenic such as rice and rice-based products, especially if you are pregnant, nursing, or preparing meals for young children.

Description

Avoiding arsenic exposure is essential for preventing potential health risks associated with arsenic contamination in drinking water and foods. Chronic exposure to arsenic has been linked to various health issues, including cancer and cardiovascular problems.

Arsenic is a [heavy metal](#) naturally found in the environment. It is used for mining, fracking, and industrial applications, such as the production of pesticides and wood preservatives, and the use of fossil fuels [\[R\]](#).

The main sources of exposure to arsenic are contaminated [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Drinking water**
- **Rice** and fish
- Air

Long-term exposure to high amounts of arsenic may be linked to health problems, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Skin disorders
- Heart disease
- High blood pressure
- Stroke
- Diabetes
- Cancer

Please note: *Soaking, washing until clear, and cooking rice with a high (1:6) water-to-rice ratio may help reduce rice’s arsenic content* [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

A study associated high arsenic exposure with an increased risk of cardiovascular, coronary heart, and peripheral arterial diseases [\[R\]](#).

38



Avoid Organochlorine Pesticide Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Minimize exposure by choosing organic fruits and vegetables, thoroughly washing produce before consumption, and avoiding areas where organochlorine pesticides are applied. Consider using air purifiers in homes close to agricultural areas to reduce indoor pesticide levels.

Description

Reducing organochlorine pesticide exposure involves minimizing contact with pesticides like DDT, which can accumulate in the body and potentially lead to adverse health effects, including disruption of hormonal functions and carcinogenicity.

How it helps

A study of 2032 participants found that organochlorine pesticides were a significant risk factor for peripheral artery disease, particularly in obese individuals [\[R\]](#).

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Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 600-1800 mg of alpha-lipoic acid daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

600 mg

Description

[Alpha-lipoic acid](#) is a natural antioxidant found in almost every cell in your body. People use alpha-lipoic acid to help with issues like skin aging, weight loss, and high blood sugar [\[R\]](#), [\[R\]](#), [\[R\]](#).

People use alpha-lipoic acid to help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Complications of high blood sugar
- Skin aging
- Weight loss
- Carpal tunnel syndrome

How it helps

In a small placebo-controlled trial of 28 people with peripheral artery disease, supplementation with alpha-lipoic acid for 3 months reduced pain and improved walking distance [\[R\]](#).

Alpha lipoic acid also improved blood vessel function and microcirculation in 3 placebo-controlled trials of 107 people with diabetes or at risk of developing it [\[R\]](#), [\[R\]](#), [\[R\]](#).

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Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Prevent lead exposure by using cold water for drinking and cooking, regularly cleaning dust from windowsills and floors, and ensuring that your home's paint is not chipping if it was built before 1978. For occupations involving potential lead exposure, use protective gear and follow safety protocols. Test your home for lead if it's old or you're concerned about contamination.

Description

Lead is a heavy metal. It is naturally found in the environment in small amounts [\[R\]](#), [\[R\]](#).

Exposure to lead can cause it to build up in the body. A buildup of lead can contribute to oxidative stress and cell damage. This is called **lead poisoning** [\[R\]](#), [\[R\]](#).

Lead is no longer used in the manufacturing of some products like gasoline and paint. However, it can still be found in some pipes, batteries, and the wall paint of older homes [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a study of 31,081 subjects from the NHANES database, high blood lead was associated with an increased risk of deep vein thrombosis [\[R\]](#).

Lead toxicity can harm the inner lining of blood vessels (endothelium), potentially increasing the risk of blood clots.

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Panax Notoginseng

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 200-400mg of Panax notoginseng extract daily, preferably with food to enhance absorption. This can be done indefinitely for general health benefits or specifically for certain conditions as directed by a healthcare provider.

Description

Panax notoginseng (Sanqi) is a plant native to China and other parts of Asia. It has been utilized in traditional Chinese medicine for centuries and in recent decades as a supplement, to promote cardiovascular health, reduce bleeding, and alleviate pain. The primary active compounds are saponins called notoginsenosides, and it is commonly consumed in the form of herbal teas, capsules, or powders.

[Ginseng](#) is a plant people use to improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Sexual function
- Immunity
- Fatigue
- Attention

There are many different types of ginseng. The most common ones are [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Korean red ginseng, also called Asian ginseng (*Panax ginseng*)
- [American ginseng](#) (*Panax quinquefolius*)
- Chinese notoginseng, also called Sanchi (*Panax notoginseng*)

How it helps

According to a single study, Chinese ginseng saponins (100 mg, 3x/day) may reduce the risk of deep vein thrombosis in people undergoing surgery. Ginseng may help by improving blood flow [\[R\]](#).

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

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.



Your Lifestyle Assessments

Ever heard of the term Nature vs. Nurture?

The thing is, both DNA and environment play a role in determining your health risks. The following assessments shows how much of an impact your lifestyle, environment and medical history are having on your health risks.



LIFESTYLE

You have an **average risk** of peripheral artery disease based on the answers you provided.

Your Lifestyle Risk

Low

Decreased

Average

Increased

High

Factors impacting your risk:

Have you been diagnosed with gum (periodontal) disease? Yes	Increasing Risk 
Have you recurrently been diagnosed with high cholesterol? Yes	Increasing Risk 
Do you have a parent or sibling who has been diagnosed with peripheral artery disease? Yes	Increasing Risk 
Have you ever been diagnosed with diabetes? No	Decreasing Risk 
In a typical week, how many times do you participate in any physical activities or exercise for 30 minutes at a time? (such as walking, running, bike riding, weight training, yoga, etc.) *Note: longer exercise equals more sessions (e.g., 1 hour = 2 sessions) 8 or more	Decreasing Risk 
Do you smoke tobacco? No, never	Decreasing Risk 
What is your age? 41	Decreasing Risk 
How much sleep do you get in a typical night? 7-8 hours	Decreasing Risk 
Have you ever been diagnosed with high blood pressure (hypertension)? No	Decreasing Risk 
Have you had obstructive sleep apnea symptoms in the last year? No	Decreasing Risk 
Your BMI: 22.77	Decreasing Risk 

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What is your height?

165 cm

Decreasing Risk 

What is your current weight?

62.0 kg

Decreasing Risk 