

Cardiovascular Disease

Disease Report

REPORT CATEGORIES —



HEART & BLOOD
VESSELS



LONGEVITY

Sample Client

Report date: 15 January 2026

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DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

Personal information

NAME

Sample Client

SEX AT BIRTH

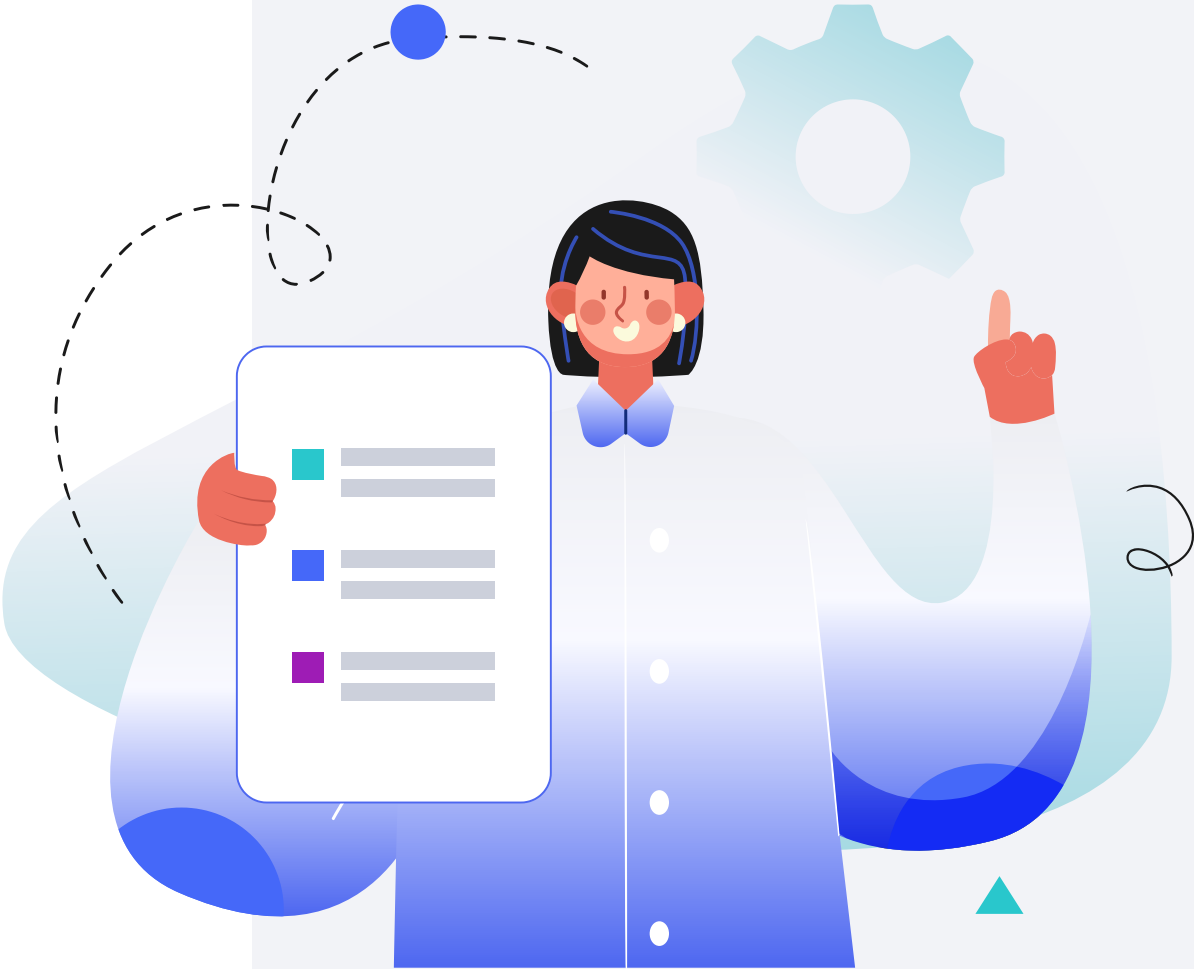
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg



How this works

Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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



Your DNA is like an instruction manual — it contains a lot of information.
You can think of it as a blueprint for your body.

Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



We use artificial intelligence and machine learning to analyze all this information.
We then summarize your results as a risk score or display it on a gauge.

In total, we analyze up to 83 million genetic variants.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

You have 2 risk alleles

Your risk is also displayed as a percentile. This will tell you how your risks compare to our sample population. The lower your percentile number, the lower your risk. The "50th percentile" would be an average risk.

Similarly, the gauge tells you your relative risk score compared to our sample population, or it indicates a specific trait or haplotype you are more likely to have based on your genetic variants.

When applicable, we also list top evidence-based recommendations that may help lower your risk. The focus is on recommendations that may be of benefit to you, based on your genetics.

Our recommendations come in four categories: lifestyle, diet, supplements and drugs. The following icons tell you which category a recommendation falls into:



Our team of scientists also ranks each recommendation.
We rank based on impact and the strength of evidence in the medical literature.

Impact shows how strongly a recommendation will affect your health in a certain area.
Evidence is how much scientific support there is for the recommendation. Rankings are from 1 to 5 (low to high):



Impact

Impact scores range from 1-5. These scores reflect how much of an effect each recommendation can have. An impact score of 5 predicts the biggest effect.

When a recommendation affects something we can measure, we use those measurements to assign the impact score. For example, a recommendation that decreases cholesterol by 20% will have a higher impact score than one that decreases it by 5%.

Some recommendations affect things that we cannot directly measure, like stress or mood. For these, the impact score is based on how well they work relative to other recommendations and standard treatments. The best ones get the highest scores.

If there is a lot of research that shows a recommendation works especially well for your genotype, the impact score gets increased.

Recommendation Evidence

- 5 / 5
- Recommendations that are considered effective and generally recommended by experts and medical bodies.
-
- 4 / 5
- Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.
-
- 3 / 5
- Recommendations that are considered possibly effective and have many studies supporting them
-
- 2 / 5
- Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.
-
- 1 / 5
- Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.
-
- 0 / 5
- No evidence in humans.

Genotype-specific Evidence

- High-quality
- Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, a few large clinical trials, or a meta-analysis).
- Medium-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).
- Low-quality
- Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).
- Indirect
- A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).
- In theory
- A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

- Genetics doesn’t play a considerable role in a condition or a trait.
- There is not enough research available to estimate a genetic predisposition.
- There are technical limitations to estimating or presenting a genetic predisposition.
- The topic is sensitive, and a genetic predisposition should only be estimated and presented by a healthcare professional.

Introduction

Cardiovascular disease (CVD) encompasses a range of conditions affecting the heart and blood vessels, making it one of the leading causes of morbidity and mortality worldwide. The primary types of CVD include coronary artery disease, hypertension, heart failure, arrhythmias, and congenital heart defects. These conditions can lead to severe health complications, including heart attacks and strokes, which significantly impact individuals' quality of life.

Cardiovascular disease develops due to the narrowing or blockage of blood vessels, which can hinder blood flow to the heart, brain, or other vital organs. This blockage is often caused by a buildup of fatty deposits (atherosclerosis) on the arterial walls. Over time, these deposits can harden and reduce the elasticity of arteries, making it difficult for blood to circulate efficiently.

The symptoms of cardiovascular disease can vary depending on the specific condition and the severity of the disease. Common symptoms include:

- **Chest Pain or Discomfort:** Often described as pressure, tightness, or pain, especially during physical activity or stress (angina).
- **Shortness of Breath:** Difficulty breathing or feeling winded during normal activities or while at rest.
- **Fatigue:** Persistent tiredness and lack of energy.
- **Palpitations:** Irregular heartbeats or feeling like the heart is racing or pounding.
- **Swelling:** Edema in the legs, ankles, or feet due to poor circulation.
- **Dizziness or Fainting:** Feeling lightheaded or fainting, especially during exertion.

The treatment for cardiovascular disease aims to manage symptoms, improve quality of life, and reduce the risk of further complications. Treatment approaches can include:

- **Lifestyle Changes:** Adopting a heart-healthy diet, engaging in regular physical activity, quitting smoking, and reducing alcohol consumption.
- **Medications:** Prescribed to control blood pressure, cholesterol levels, and other risk factors. Common medications include statins, beta-blockers, ACE inhibitors, and antiplatelet agents.
- **Medical Procedures:** In more severe cases, procedures like angioplasty, stent placement, or coronary artery bypass surgery may be necessary to restore proper blood flow.
- **Cardiac Rehabilitation:** A structured program involving exercise, education, and counseling to support recovery and prevent future cardiovascular events.

Longevity Screener

Longevity Screener analyzes your DNA and biometric data to holistically determine your risk of developing serious medical conditions.

 Your lifetime risk is **Normal**

 Your 10-year risk is **Normal**

Summary or results

Your results are indicating a Normal risk of developing Cardiovascular Disease in your lifetime and within the next decade.

Monitor your risk by regularly checking your related labs and implementing the recommendations provided.

The risk of developing Cardiovascular disease can be influenced by non-genetic factors such as High blood pressure, elevated BMI, Type 2 diabetes, Type 1 diabetes.

What to do if you get a High risk

Analyze your labs

Analyze your lab results to establish a baseline and track any changes or improvements in your health markers over time.

Find out your out-of-optimal labs

We will pinpoint any values that fall outside the optimal range, allowing you to focus on what matters most.

Optimize labs

Aim to bring all your lab results to optimal levels through lifestyle changes, treatments, and ongoing monitoring for the best health outcomes.

Disclaimer

The Longevity Screener feature is designed to provide insights based on genetic predispositions and basic health data to help you understand factors that may influence your longevity. This tool is for informational purposes only and does not constitute medical advice, diagnosis, or treatment. Always consult with a qualified healthcare provider before making any decisions related to your health, lifestyle, or medical treatments. The information provided by the Longevity Screener is based on current scientific research and should be used as a supplementary tool in conjunction with professional medical advice.

Causes and Risk Factors

Cardiovascular disease is influenced by a combination of genetic, lifestyle, and environmental factors. Understanding these causes and risk factors is essential for prevention and effective management.

Genetic factors play a significant role in the development of cardiovascular disease. About 40-60% of differences in people's odds of heart disease may be due to genetics [R].

A family history of heart disease increases an individual's risk, as certain genetic mutations can affect cholesterol metabolism, blood pressure regulation, and the function of heart and blood vessels. For example, mutations in genes such as LDLR (low-density lipoprotein receptor) can lead to familial hypercholesterolemia, a condition characterized by high cholesterol levels and an increased risk of coronary artery disease.

Several lifestyle choices can significantly impact cardiovascular health:

- Unhealthy Diet:** Diets high in saturated fats, trans fats, salt, and sugar can contribute to the development of atherosclerosis and hypertension.
- Physical Inactivity:** A sedentary lifestyle increases the risk of obesity, hypertension, and diabetes, all of which are risk factors for CVD.
- Smoking:** Tobacco use damages blood vessels, reduces oxygen in the blood, and raises blood pressure, significantly increasing the risk of heart disease.
- Excessive Alcohol Consumption:** Drinking too much alcohol can lead to high blood pressure, heart failure, and stroke.

Other Risk Factors

- Age:** The risk of cardiovascular disease increases with age, particularly after the age of 65.
- Gender:** Men are generally at higher risk of developing CVD earlier in life compared to women, although post-menopausal women's risk increases.
- High Blood Pressure:** Hypertension is a major risk factor as it puts extra strain on the heart and blood



TYPICAL LIKELIHOOD

Typical likelihood of cardiovascular disease based on 1,049,427 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NOS3	rs2070744	TC
PEMT	rs12936587	GA
COMT	rs4680	AG
PCSK9	rs11591147	GG
ATG16L1	rs10210302	TT
NKX2-3	rs10883365	GG
NOS3	rs1799983	TT
FHL3	rs190569784	GG
SERPINA1	rs112635299	GG
ANGPTL4	rs116843064	GG
APOE	rs7412	CC
IRGM	rs1000113	TC
LDLR	rs6511720	GG
IL23R	rs11805303	CT
/	rs72711827	GG
SORT1	rs12740374	GG
PHACTR1	rs9349379	GG
FBXL20	rs72823390	CC
PLPP3	rs17114046	AA
/	rs2457480	AA
ADO	rs10761659	AG
MCTP2	rs28607113	TT
PHOSPHO1	rs191896574	TC
FAM177B	rs17465982	AA

vessels.

- **High Cholesterol:** Elevated levels of LDL cholesterol contribute to the buildup of fatty deposits in arteries.
- **Diabetes:** Diabetes significantly increases the risk of CVD as high blood glucose levels can damage blood vessels.
- **Obesity:** Excess body weight, particularly around the abdomen, is associated with higher risk factors for CVD.

GENE	SNP	GENOTYPE
NOS3	rs3918226	CT
MRPS6	rs28451064	AG
LPA	rs73596816	AG
PEMT	rs7946	CT
TWIST1	rs2107595	AG
EDNRA	rs17612693	TA
TCF21	rs1966248	AT
DDI1	rs2128739	AC
FGD5	rs148880716	GG
LPA	rs140570886	TT
LPA	rs147555597	GG
PTGER4	rs17234657	TT
LPA	rs55730499	CC
SEH1L	rs2542151	TT
NOD2	rs17221417	CC
BSN	rs9858542	GG
MAP3K4	rs145099029	AA
CDKN2B	rs145542470	GG
NBEAL1	rs72934535	TT
SCAF11	rs1291621	GG
MTRNR2L7	rs4934855	AA
LPL	rs7011846	GG
SOX11	rs79576311	GG
SMIM11A	rs149487184	CC
BMP1	rs73225842	CC
BAG2	rs223290	CC

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

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You’ll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE			DOSAGE
1	Exercise At Least One Hour a Day	1 hour	2	Aerobic Exercise (Cardio)	1 hour
3	Mediterranean Diet		4	Choose Healthy Fats	
5	Sleep for 7+ Hours		6	Practice Exercise Snacks	1 minutesute
7	Avoid Secondhand Smoke		8	Strength Training	1 hour
9	Relaxation Techniques	30 minutes	10	Omega-3 (Fish Oil)	2000 mg
11	Stair Climbing	10 minutes	12	Walking	30 minutes
13	Swimming	30 minutes	14	Avoid PAHs Exposure	
15	Avoid Vitamin E Supplements		16	Eat Fiber-Rich Foods	
17	DASH Diet		18	Cycling	
19	Avoid Noise Pollution		20	Alpha-Linolenic Acid (ALA)	
21	Almonds		22	Extra Virgin Olive Oil (EVOO)	
23	Regular Sleep Schedule		24	Fish	
25	Whole Grains		26	Dietary Magnesium	
27	Avoid Organochlorine Pesticide Exposure		28	Meditation	30 minutes
29	Tai Chi	1 hour	30	Shock Wave Therapy	
31	Green Tea	400 mg	32	Garlic Supplement	200 mg

33	Cocoa		34	Black walnuts	
35	Dietary Omega-3 Fatty Acids		36	Avoid Rapid Weight Changes	
37	Avoid Air Pollution		38	Tomato	
39	Intermittent Fasting		40	Broccoli	
41	Fermented Dairy		42	Vitamin C	2000 mg
43	Aromatherapy	30 minutes	44	Avocado	
45	Oats		46	Aquatic Exercise	1 hour
47	Spinach		48	Avoid Arsenic Exposure	
49	Methylfolate	400 mcg	50	Niacin Supplements	20 mg
51	Dietary Iron		52	Beetroot Juice	
53	Red Yeast Rice	500 mg	54	L-Carnitine	1 g
55	Tyrosol	10 mg	56	Magnesium	350 mg
57	Limit Caffeine Intake		58	Salvia Miltiorrhiza	
59	Coenzyme Q10 (CoQ10)	100 mg	60	SAM-e	400 mg
61	DHEA (Dehydroepiandrosterone)	25 mg	62	Limit Copper Intake	
63	Resveratrol	150 mg	64	Gentle Yoga	20 minutes
65	Avoid Long Naps		66	Pomegranate Juice	
67	Transcendental Meditation	20 minutes	68	Yoga	30 minutes
69	Soy		70	Avoid Asbestos	
71	Music Therapy	30 minutes	72	Strawberries	

73	Terminalia Arjuna		74	Beetroot	
75	Low-Intensity Exercise	1 hour	76	Rhodiola	500 mg
77	Zinc	15 mg	78	Cruciferous Vegetables	
79	Leafy Green Vegetables		80	Lycopene	10 mg
81	Vitamin K1	90 mcg	82	L-Citrulline	3 g
83	Pycnogenol	100 mg	84	Fruits	
85	Avoid BPA (Bisphenol A) Exposure		86	Berries	
87	Avoid Cadmium Exposure		88	Avoid BCAA Supplements	
89	Vegetables		90	Mindfulness-Based Stress Reduction (MBSR)	2 hours
91	Avoid Mercury Exposure		92	Plant Sterols & Stanols	300 mg
93	Carrots		94	Avoid Phthalate Exposure	
95	Avoid Beta-Carotene Supplements		96	Calcium Supplements	1000 mg
97	Avoid Exposure to Heavy Metals		98	Avoid Calcium Supplements	
99	Beta-Carotene	6 mg	100	Glucosamine	1500 mg
101	Policosanol	5 mg	102	Genistein	30 mg
103	Cranberry		104	Black Seed (Black Cumin)	1000 mg
105	Quercetin	250 mg	106	Blood Flow Restriction Training	15 minutes
107	Propionyl-L-Carnitine	500 mg	108	Apple Juice	
109	Avoid Acrylamide		110	Capsaicin	
111	Bananas		112	Orange Juice	

113	Bifidobacterium Animalis Subsp. Lactis	10 billion CFU	114	Green Tea Extract	250 mg
115	Ginkgo	120 mg	116	Lactobacillus Plantarum	10 billion CFU
117	Hydroxytyrosol And Extra Virgin Olive Oil (EVOO)	5 mg	118	Exercise and Sauna	
119	D-Ribose	15 g	120	Rose Hip	500 mg
121	Red Light Therapy	20 minutes	122	Baicalin	50 mg
123	Ergothioneine	5 mg	124	Black Seed Oil	2 tsp
125	Avoid Excessive Oleic Acid Consumption		126	Singing	20 minutes
127	Betaine (TMG)	500 mg	128	Avoid Betaine (TMG) Supplements	
129	Plasmalogens		130	Hydroxytyrosol	5 mg
131	Black Chokeberry		132	Acetyl-L-Carnitine	500 mg

1



Exercise At Least One Hour a Day

IMPACT

5 / 5

EVIDENCE

5 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

How it helps

Experts agree that exercising helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

Strength and endurance training may help by improving heart function. Other forms of exercise that tend to help include cycling and tai chi [\[R, R, R, R\]](#).

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [\[R, R, R, R, R\]](#).

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*

 PERSONALIZED TO YOUR GENES

Exercise may help prevent heart disease in people with your [LIPC](#) gene variant. It can reduce fat buildup in blood vessels [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
ADAM10	rs1800588	CC	

2



Aerobic Exercise (Cardio)

IMPACT

5 / 5

EVIDENCE

5 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

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

How it helps

Experts agree that exercising helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

Strength and endurance training may help by improving heart function. Other forms of exercise that tend to help include cycling and tai chi [\[R, R, R, R\]](#).

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [\[R, R, R, R, R\]](#).

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*



PERSONALIZED TO YOUR GENES

Exercise may help prevent heart disease in people with your [LIPC](#) gene variant. It can reduce fat buildup in blood vessels [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
ADAM10	rs1800588	CC	

3



Mediterranean Diet

IMPACT

5 / 5

EVIDENCE

4 / 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

European experts recommend the Mediterranean diet for heart disease [\[R\]](#).

Following the Mediterranean diet may reduce your chances of getting heart disease by **about 30%** [\[R, R, R, R, R\]](#).

The Mediterranean diet limits foods that can contribute to heart disease. Instead, it promotes the intake of healthy fats and fiber. As a result, this type of diet may **reduce inflammation and protect the heart** [\[R, R\]](#).



PERSONALIZED TO YOUR GENES

In people with your [MTHFR](#) gene variant, the Mediterranean diet may prevent fat from clogging up blood vessels [\[R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

4



Choose Healthy Fats

IMPACT

4 / 5

EVIDENCE

5 / 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

Some experts agree that eating a lot of saturated and trans fats may increase the odds of heart disease. Large amounts of these fats raise “bad” (LDL) cholesterol levels, which can damage your heart [\[R, R, R, R, R, R\]](#).

Although limiting your saturated fat intake may help reduce cholesterol, some research suggests it may not affect your risk of heart disease [\[R, R, R, R, R\]](#).

The effect of saturated fat may depend on what food you’re getting it from. For example, **eating a lot of processed meat may raise the odds of dying from heart disease** [\[R\]](#).

Eating more trans fat is linked to 21-22% higher odds of heart disease. Replacing just 2% of your calories from trans fat with healthy unsaturated fats may lower your odds by **21-24%** [\[R, R, R\]](#).

In line with this, experts recommend limiting processed food, red meat, and dairy. They also recommend eating more healthy unsaturated fats from [\[R, R, R\]](#):

- Fish
- Nuts
- Seeds

5



Sleep for 7+ Hours

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

Ensure you allocate enough time in your schedule to achieve a minimum of 7 hours of sleep each night. This might involve going to bed earlier or adjusting your evening routine to promote relaxation and make it easier to fall asleep.

Description

Optimizing sleep involves adopting healthy sleep habits and creating a sleep-conducive environment to ensure restorative and sufficient sleep duration. It supports cognitive function, mood stability, and overall physical health. Most experts recommend getting **at least 7 hours of good-quality sleep each night**.

Sleep supports your body and mind [R, R]. More precisely, sleep helps:

- Support brain health [R, R]
- Maintain a healthy weight and appetite [R, R, R]
- Regulate blood pressure [R, R]
- Balance blood sugar [R, R]

Ways to sleep better include [R]:

- Reducing your bright light exposure (screen time) in the evenings
- Sticking to a regular sleep schedule
- Avoiding hunger or large meals before bed
- Avoiding nicotine, caffeine, and alcohol before bed
- Maintaining a sleep area that’s cool, dark, and quiet

How it helps

Short sleep (less than 6-7 hours/night) and **long sleep (more than 8-9 hours/night)** are both linked to higher odds of heart disease [R, R, R, R].

In fact, your risk of the condition may increase by **7-11% for every hour of sleep you lose**. It may also increase by **5-7% for every hour of excess sleep**. Short sleep duration may also be causally associated with heart disease [R, R, R].

Poor sleep contributes to many risk factors for heart disease, including [R, R, R]:

- High blood pressure
- High blood sugar
- Obesity

Sleep apnea may be associated with heart artery calcification. People with heart disease may be more likely to have sleep disorders, such as obstructive sleep apnea [R, R, R, R].

In line with this, continuous positive airway pressure (CPAP) may lower the risk of heart-related complications [R, R].

If you have an ongoing sleep problem, it’s a good idea to discuss it with your doctor. Getting too much sleep or having trouble falling or staying asleep may be a sign of an underlying health issue.

6



Practice Exercise Snacks

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Integrate short bursts of physical activity, each lasting about 1 to 2 minutes, into your daily routine at least two to three times a day. These 'exercise snacks' can include activities like doing a set of stairs, rapid bodyweight exercises, pull-ups, push-ups, sit-ups, or brisk walking.

TYPICAL STARTING DOSE

1 minutesute

Description

Staying physically active is essential for maintaining overall health and well-being. **Exercise snacks** are brief, frequent bursts of physical activity integrated into daily routines, helping combat the health risks associated with prolonged sitting and sedentary behavior, such as obesity and cardiovascular issues. Examples include taking the stairs or doing quick exercises during work breaks.

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

Exercise snacks are short, quick bursts of physical activity performed throughout the day, designed to break up prolonged periods of sitting or inactivity. These brief bouts of exercise can be as short as a few minutes and are incorporated into daily routines to boost overall physical activity levels.

Exercise snacks are crucial for health because they combat the negative effects of sedentary behavior, such as prolonged sitting, which is associated with an increased risk of obesity, cardiovascular diseases, diabetes, and musculoskeletal issues. They help improve blood circulation, regulate blood sugar levels, and enhance mood and cognitive function.

Examples of exercise snacks include taking the stairs instead of the elevator, doing a few minutes of bodyweight exercises (e.g., squats or push-ups) during work breaks, or walking briskly for a few minutes after meals. These short, frequent bursts of activity contribute to a more active lifestyle and can significantly benefit overall health by reducing the risks associated with excessive sitting.

How it helps

Experts agree that staying physically active helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

Strength and endurance training may help by improving heart function. Other forms of exercise that tend to help include cycling and tai chi [\[R, R, R, R\]](#).

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [\[R, R, R, R, R\]](#).

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*

7



Avoid Secondhand Smoke

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Description

Avoiding secondhand smoke is crucial for maintaining good health. Exposure to secondhand smoke can lead to respiratory problems, cardiovascular disease, and an increased risk of lung cancer, even in non-smokers. Protecting oneself from secondhand smoke involves staying away from smoking areas, ensuring smoke-free environments at home and work, and advocating for smoke-free policies in public spaces.

How it helps

Experts agree that tobacco increases the risk of heart disease [\[R, R, R, R, R\]](#).

This is because nicotine and other harmful substances in tobacco [\[R, R, R\]](#):

- Damage blood vessels
- Promote blood clots
- Decrease blood flow
- Increase blood pressure

In fact, smoking as little as **1 cigarette per day** may increase the risk of heart disease by about **50%**. Secondhand smoke likely increases the risk by **up to 35%** [\[R, R, R, R, R, R\]](#).

Therefore, one of the best things you can do to prevent heart disease is to quit smoking. Once diagnosed with heart disease, quitting smoking may prevent a heart attack and early death [\[R, R, R, R, R\]](#).

Smokeless tobacco and e-cigarettes are likely bad for your heart, too. Smokeless tobacco in particular is linked to higher odds of dying from heart disease, especially in Europeans [\[R, R\]](#).

8



Strength Training

IMPACT4 / 5

EVIDENCE4 / 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 agree that exercising helps reduce the risk of heart disease [R, R, R].

It likely helps control [R, R, R, R, R, R]:

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Strength training may help by improving heart function. Experts recommend practicing it 2 times per week, in addition to cardio [R, R].

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [R, R, R, R, R].

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*

9



Relaxation Techniques

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R\]](#), [\[R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R\]](#), [\[R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R\]](#), [\[R\]](#).

How it helps

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

Stress from work may be especially harmful [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

 PERSONALIZED TO YOUR GENES

In people with your [ADRB1](#) gene variant, stress may have a worse impact on heart health [\[R\]](#). Take special care to reduce stress by practicing relaxation techniques.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
ADRB1	rs1801252	AA	

10



Omega-3 (Fish Oil)

IMPACT

4 / 5

EVIDENCE

3 / 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

Experts recommend increasing your intake of omega-3 from fatty fish to help prevent heart disease [\[R\]](#), [\[R\]](#), [\[R\]](#).

The following omega-3 sources may protect the heart:

- **At least 1 serving (100-114 g) of fatty fish per week** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- **Fish oil supplements (0.5-3 g/day)** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

Omega-3s may help by [\[R\]](#):

- Reducing triglycerides
- Lowering blood pressure
- Preventing blood clots

The FDA has even approved an omega-3-based drug for people at high risk of heart disease [\[R\]](#).

Please note: *Fish oil can interact with blood thinners (like aspirin, Plavix, Coumadin). Consult your doctor before taking fish oil* [\[R\]](#).

11



Stair Climbing

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Incorporate stair climbing into your daily routine by choosing stairs over elevators or escalators whenever possible. Aim for at least 10 minutes of continuous stair climbing or multiple shorter sessions that add up to 10 minutes per day. This practice can be continued indefinitely to maintain or improve cardiovascular health and lower body strength.

TYPICAL STARTING DOSE

10 minutes

Description

Stair climbing is a great way to get a full-body workout, improve your cardiovascular health, and burn calories. It can also help to improve your balance and coordination.

How it helps

Experts agree that exercising helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

In a 12-week trial comparing traditional and stair climbing-based cardiac rehabilitation in individuals with coronary artery disease, only cardiac apical rotation increased after 4 weeks, suggesting a need for a greater training stimulus for other cardiovascular changes [\[R\]](#).

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [\[R, R, R, R, R\]](#).

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*

12



Walking

IMPACT

4 / 5

EVIDENCE

3 / 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

A meta-analysis of 295,177 participants showed that 30 minutes of walking, five days a week, reduces coronary heart disease risk by 19%, irrespective of gender, age, or duration. Nordic walking alongside conventional cardiovascular rehab has positive impacts on coronary artery disease, peripheral artery disease, and post-stroke survivors, although outcomes for heart failure are inconclusive. Another meta-analysis with 459,833 participants found that higher levels of walking were associated with a 31% lower risk of cardiovascular disease and a 32% lower risk of all-cause mortality. Walking pace is a stronger predictor (48%) than walking volume (26%) for risk reduction. Overall, walking contributes to cardiovascular health and may reduce healthcare costs associated with CHD [\[R, R, R, R, R, R\]](#).

13



Swimming

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Incorporate swimming into your routine for at least 30 minutes, 3 times a week. Choose a pace and stroke that keeps your heart rate elevated yet allows you to breathe comfortably. Continue this practice regularly for long-term health benefits.

TYPICAL STARTING DOSE

30 minutes

Description

Swimming is a whole-body workout that engages various muscle groups, promoting strength and endurance. It helps keep the heart and lungs healthy, improves flexibility, and can even help reduce stress. Regular swimming is a great way to maintain a balanced, fit, and healthy lifestyle.

How it helps

Experts agree that exercising helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

Engaging in vigorous exercise, including activities like swimming, is associated with a decreased risk of heart disease and heart attacks [\[R\]](#).

One study suggests that swimming may also help as part of a rehabilitation program for people with chronic heart failure and stable clinical conditions, without increasing their risk of heart-related complications [\[R\]](#).

Please note: *People with heart disease and history of myocardial ischemia due to exercise, which implies reduced blood and oxygen flow to the heart, should discuss the addition of swimming to their regular physical activity with their doctor. Precautions may need to be taken to monitor and manage the risk of myocardial ischemia* [\[R\]](#).

14



Avoid PAHs Exposure

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Minimize your exposure to Polycyclic Aromatic Hydrocarbons (PAHs) by avoiding or reducing consumption of charred, grilled, or smoked foods, not smoking or avoiding secondhand smoke, and limiting time spent in areas with heavy traffic or industrial fumes. Use exhaust fans in kitchens and ensure proper ventilation when cooking at high temperatures to reduce indoor levels of PAHs.

Description

PAHs or Polycyclic Aromatic Hydrocarbons are harmful substances found in smoke and grilled foods. Try to limit exposure to them for better health. For example, avoid inhaling smoke from cigarettes or barbeques and choose alternative cooking techniques over grilling. Minimizing PAHs can reduce the risk of several health issues, particularly lung and skin diseases.

How it helps

A meta-analysis of 9 studies and 27,280 participants associated urinary PAH metabolites with a 23% higher risk of cardiovascular diseases, but not coronary artery disease [R].

Similarly, 2 systematic reviews (the largest one with 20 studies) concluded that PAHs increase the risk of cardiovascular disease and cardiovascular risk factors such as hypertension and obesity [R, R].

PAHs can increase blood pressure and cause inflammation of the blood vessels, leading to cardiovascular diseases.

 PERSONALIZED TO YOUR GENES

Exposure to PAHs may increase the risk of heart disease more in carriers of your [MTHFR](#) gene variant [R].

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

15



Avoid Vitamin E Supplements

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Do not purchase or consume vitamin E in supplement form. If you are currently taking vitamin E supplements, consider discontinuing their use.

Description

While vitamin E is an essential nutrient found naturally in various foods like nuts and seeds, supplements should possibly be avoided unless recommended by a healthcare professional, as excessive vitamin E intake can lead to potential adverse effects.

How it helps

Higher vitamin E levels may be causally associated with a higher risk of heart disease and heart attacks [\[R\]](#).

The evidence on vitamin E supplementation's effects on heart health is mixed [\[R\]](#), [\[R\]](#).

Moreover, research on over 200,000 people found that vitamin E intake above the recommended daily allowance (RDA) of 15 mg/day increased the risk of death by 3%. However, not all studies found this association [\[R\]](#), [\[R\]](#).

16



Eat Fiber-Rich Foods

IMPACT

3 / 5

EVIDENCE

4 / 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

Experts say that fiber can improve risk factors of heart disease. They recommend getting **35-45 g of fiber per day** to support heart health [\[R, R, R\]](#).

Fiber-rich foods that may be especially helpful for this condition include:

- Whole grains [\[R, R, R, R\]](#)
- Fruit [\[R, R\]](#)

The following fiber sources may protect the heart by lowering blood pressure and cholesterol [\[R, R\]](#):

- Oats
- [Psyllium](#)
- [Pectin](#)
- Guar gum



PERSONALIZED TO YOUR GENES

People with your [LEP](#) variant may see a bigger drop in cholesterol from fiber (psyllium) supplementation. High cholesterol is a major risk factor for heart disease [\[R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
LEP	rs7799039	GG	

17



DASH Diet

IMPACT

3 / 5

EVIDENCE

4 / 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 disease [\[R\]](#) [\[R\]](#).

The DASH diet limits the amount of salt and saturated fat in your diet. **Experts recommend limiting these to help prevent heart disease** [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#).

Note that just limiting the salt in your diet might not be enough to help [\[R\]](#) [\[R\]](#).



PERSONALIZED TO YOUR GENES

The DASH diet may lower blood pressure more in people with your [ADRB2](#) gene variant. High blood pressure is a major risk factor for heart disease [\[R\]](#) [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
ADRB2	rs1042713	GA	

18



Cycling

IMPACT

3 / 5

EVIDENCE

4 / 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 agree that exercising helps reduce the risk of heart disease [\[R, R, R\]](#).

It likely helps control [\[R, R, R, R, R, R\]](#):

- Weight
- [Blood sugar](#)
- [Cholesterol](#)
- Blood pressure
- Inflammation

Guidelines recommend a combination of [\[R, R, R\]](#):

- **Cardio:** at least 150 min/week of moderate activity or 75 min/week of intense activity
- **Strength training:** 2 times/week

Strength and endurance training may help by improving heart function. Other forms of exercise that tend to help include cycling and tai chi [\[R, R, R, R\]](#).

In people who already have heart disease, exercise may prevent complications and hospital visits. It may even boost the quality of life [\[R, R, R, R, R\]](#).

Please note: *If you have heart disease, speak to your doctor before changing your exercise regimen.*

19



Avoid Noise Pollution

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Minimize exposure to loud environments by using noise-cancelling headphones or earplugs, especially in areas known for high noise levels such as construction sites, concerts, and busy urban streets. Aim to keep the volume of personal audio devices below 60% of their maximum. At home, use carpets, curtains, and wall fabrics to reduce indoor noise, and prefer quieter appliances. Try to dedicate at least one hour of quiet time before bed to aid in relaxation and improve sleep quality.

Description

Noise pollution refers to the presence of excessive, disruptive, or unwanted sound in the environment. It often includes sounds from traffic, industrial machinery, construction, loud music, and other sources that exceed acceptable or comfortable noise levels. Noise pollution disrupts normal activities and can have detrimental effects on human health, well-being, and the natural world.

Prolonged exposure to high noise levels can lead to a range of health issues, including:

- Stress
- Anxiety,
- Sleep disturbances
- High blood pressure
- Heart disease
- Impaired cognitive function

How it helps

One meta-analysis of 139 studies found a higher risk of heart disease and hypertension associated with noise pollution. Another analysis of 23 studies revealed that for every 10-dB increase in road traffic or aircraft noise, the risk of heart disease increased by 2% and 1.6%, respectively. This risk was even more pronounced for specific conditions, with stroke, heart failure, atrial fibrillation, and myocardial infarction showing increased risks ranging from 1% to 5%. Another meta-analysis found that a 10-dB increase in road traffic noise correlated with a 7% higher risk of stroke, a 13% higher risk of cardiovascular disease, and an 8% higher risk of all-cause mortality, particularly in men [\[R, R, R\]](#).

20



Alpha-Linolenic Acid (ALA)

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Incorporate foods high in alpha-linolenic acid (ALA) into your daily diet. This means eating about a tablespoon (14 grams) of flaxseeds or chia seeds, a quarter cup (30 grams) of walnuts, or using one tablespoon of flaxseed oil every day.

Description

Alpha-linolenic acid (ALA) is a type of omega-3 fatty acid found in plant-based sources like flaxseeds, chia seeds, and walnuts. It is essential for maintaining heart and brain health and is considered a healthy dietary fat.

How it helps

Experts suggest that ALA may help reduce the risk of heart disease by lowering blood pressure and cholesterol [\[R\]](#).

Genetically higher levels of ALA may be associated with a lower risk for ischemic heart disease [\[R\]](#).

21



Almonds

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a handful of almonds (about 23 kernels) into your daily diet. You can eat them as a snack, add them to your breakfast cereals or yogurt, or include them in salads and other dishes. Do this consistently for ongoing health benefits.

Description

Almonds are a good source of omega-6s, protein and vitamins, making for a great snack food. A 1-ounce serving provides 3700 mg of omega-6.

Almonds are nutritious tree nuts that originate from the Prunus dulcis tree. They are packed with essential nutrients, including healthy fats, fiber, vitamin E, and magnesium, which collectively contribute to heart health, support weight management, and may help regulate blood sugar levels.

How it helps

Experts recommend eating nuts to prevent heart disease [\[R, R, R\]](#).

You should try to eat **1 serving (28 g) of nuts per day** or at least **4-5 servings per week** for optimal protection [\[R, R, R, R, R, R\]](#).

Eating almonds (10-100 g/day for 4-12 weeks) may improve blood fat levels by increasing HDL cholesterol and reducing heart disease risk factors, such as [\[R, R\]](#):

- Total cholesterol
- LDL cholesterol
- Triglycerides
- Lipoprotein(a)
- Oxidized LDL

Almonds may help due to their content of fiber, protein, and monounsaturated fatty acids. Antioxidants in almonds may also help fight oxidative stress [\[R\]](#).

22



Extra Virgin Olive Oil (EVOO)

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

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

Description

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

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

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

- Heart disease
- Diabetes
- Cancer

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

How it helps

A meta-analysis of 30 studies and 3106 participants concluded that olive oil interventions (1-50 mg/day) decrease CRP (by 0.64 mg/L) and IL-6 (by 0.29 mg/L) [\[R\]](#).

Following a Mediterranean diet including extra-virgin olive oil reduced heart disease risk by 43% in a study of over 7,000 people [\[R\]](#).

In line with this, research involving 101,460 people found that a daily 25-g increase in olive oil consumption reduced the risk of heart disease by 37% [\[R\]](#).

In a double-blind crossover trial with chronic coronary artery syndrome patients, hydroxytyrosol-enriched olive oil (412.5 mg olive oil with 2.5 mg hydroxytyrosol for 1 month) significantly improved various cardiovascular markers compared to placebo. This included improved endothelial function, arterial health, and left ventricular diastolic function, while also reducing oxidative stress and inflammation markers [\[R\]](#).

23



Regular Sleep Schedule

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Go to bed and wake up at the same time every day, even on weekends and holidays. This helps regulate your body's internal clock, leading to better sleep quality. Aim for 7-9 hours of sleep per night.

Description

Maintaining a regular sleep schedule involves going to bed and waking up at consistent times each day. This practice helps regulate the body's internal clock and promotes better sleep quality, mood, and cognitive function.

How it helps

Data from over 320,000 people revealed that those engaged in shift work had a 13% increased risk of developing heart disease compared to those who did not work shifts. The risk increased with every year doing shift work [\[R\]](#).

Shift work may affect sleep duration and quality. Moreover, both short and long sleep durations are associated with an increased risk of heart disease and death from it. Compared with 7 hours of sleep, the risk of heart disease may increase 11% for one less hour of sleep and 7% for one more hour [\[R, R, R, R\]](#).

Poor sleep may contribute to heart disease through its link with more severe artery hardening [\[R, R, R\]](#).

24



Fish

IMPACT

3 / 5

EVIDENCE

3 / 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

Eating fish (at least 40 g/day) is associated with a lower risk of heart disease [\[R\]](#).

Mortality from heart disease may also drop up to 50% among people who consume fish (from once a week to at least 60g daily) than among those who do not [\[R, R, R, R, R\]](#).

Higher intakes of fish may help through its association with reduced inflammation and progression of artery hardening [\[R, R\]](#).

25



Whole Grains

IMPACT

3 / 5

EVIDENCE

3 / 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

Experts suggest all adults should consume a healthy diet that emphasizes the intake of whole grains [\[R\]](#).

Whole grains are an important source of dietary fiber. An analysis of 45 studies found a decrease of 23.5-28% in the risk of heart disease with a whole grain intake of 90 g/day [\[R\]](#).

26



Dietary Magnesium

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Increase your intake of magnesium-rich foods such as leafy green vegetables, nuts, seeds, and whole grains. Aim to include these foods in your diet daily, following the recommended dietary allowance of 320 mg per day for women and 420 mg per day for men.

Description

Magnesium is a vital mineral involved in over 300 biochemical reactions in the body. It supports various functions, including muscle and nerve function, bone health, and blood sugar regulation.

Magnesium is an essential mineral. Your body needs it for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [\[R\]](#).

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [\[R\]](#).

How it helps

Both actual and genetically predicted magnesium levels may be associated with a reduced risk of heart disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In line with this, higher dietary magnesium may be associated with a lower risk of heart disease and heart complications. Magnesium may help by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lowering blood pressure
- Improving blood vessel function
- Reducing inflammation
- Regulating blood clot formation

27



Avoid Organochlorine Pesticide Exposure

IMPACT

3 / 5

EVIDENCE

3 / 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 meta-analysis of 29 studies and 88891 participants associated exposure to organochlorine pesticides with a 12% higher risk of cardiovascular disease [\[R\]](#).

Organochlorine pesticides can accumulate in body fat, causing oxidative stress and inflammation that can directly harm your heart.

28



Meditation

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Set aside 10-20 minutes each day in a quiet space without distractions to practice meditation. Focus on your breath or perform guided meditation using an app or audio track.

TYPICAL STARTING DOSE

30 minutes

Description

Meditation is a mindfulness practice that can reduce stress, improve mental clarity, and promote relaxation. Regular meditation is associated with numerous mental and emotional health benefits, including reduced anxiety and enhanced emotional well-being.

Meditation is a relaxation technique that trains your mind to focus and redirect your thoughts. Some of the main types of meditation are [\[R\]](#):

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

People use meditation to improve [\[R\]](#), [\[R\]](#):

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

How it helps

Different mind-body interventions aimed at reducing stress, including meditation, may reduce the number of heart-related complications by 2.6 times in people with coronary artery disease [\[R\]](#).

29



Tai Chi

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Practice Tai Chi for 30 to 60 minutes at least twice a week. Choose a quiet, spacious area and follow along with a qualified instructor, either in person at a class or through an online video tutorial, to ensure proper technique and maximum benefit.

TYPICAL STARTING DOSE

1 hour

Description

Tai Chi is a traditional Chinese mind-body practice involving slow, flowing movements and deep breathing. It is known for its potential to reduce stress, improve balance, and enhance overall physical and mental well-being.

Tai chi involves gentle movements and breathing to strengthen and relax the mind and body. Practicing tai chi may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Manage pain
- Improve fitness
- Increase well-being
- Improve sleep and mood

How it helps

Tai chi may increase physical endurance while improving quality of life and reducing depression and anxiety in people with heart disease [\[R\]](#).

30



Shock Wave Therapy

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Schedule and attend sessions for extracorporeal shock wave therapy (ESWT) with a qualified healthcare provider. Typically, treatments may involve 1 to 3 sessions a week over a span of 3 to 4 weeks, depending on the condition being treated and the severity of symptoms.

Description

Extracorporeal shockwave therapy is a medical treatment that uses shockwaves to stimulate healing and reduce pain in various musculoskeletal conditions. It is often used for conditions such as plantar fasciitis and tendinitis.

In extracorporeal shockwave therapy, sound waves are emitted and passed through parts of the body. Doctors use it to help reduce pain and stimulate tissue recovery in people [\[R\]](#), [\[R\]](#).

How it helps

Three meta-analyses (the largest one with 39 studies and 1189 participants) concluded that cardiac shock wave therapy improves angina pectoris symptoms, reduces heart failure risk, and improves heart and myocardial function in people with ischemic heart disease or coronary artery disease [\[R\]](#), [\[R\]](#), [\[R\]](#).

31



Green Tea

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE

400 mg

Description

Tea is a beverage made by steeping the leaves of the *Camellia sinensis* plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to antioxidants and other bioactive compounds.

[Green](#) and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [\[R, R\]](#).

Tea contains antioxidants called **flavonoids**, which may help prevent [\[R, R, R, R\]](#):

- Heart disease
- Cancer
- Diabetes

How it helps

Drinking **green tea (1 cup or around 250 mL per day)** may help prevent heart disease [\[R\]](#).

Black tea (1-3 cups per day) may also help, but the evidence is mixed [\[R, R, R, R\]](#).

The amount of antioxidants found in 1 cup of tea may also reduce the risk of dying from heart disease [\[R, R\]](#).

Tea may help by [\[R, R\]](#):

- Improving blood vessel function
- Boosting blood flow
- Lowering [oxidative stress](#) and inflammation
- Reducing cholesterol

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

32



Garlic Supplement

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Take a garlic supplement, such as a garlic extract or aged garlic supplement, in a dosage of 600-1,200 mg per day, divided into separate doses. This should be taken with meals to minimize digestive issues. Continue daily for at least 8-12 weeks to evaluate its effects on health markers like blood pressure or cholesterol.

TYPICAL STARTING DOSE

200 mg

Description

Garlic is a pungent herb known for its potential health benefits, including cardiovascular support and immune system enhancement. It contains bioactive compounds that may help reduce the risk of chronic diseases and support overall well-being.

[Garlic](#) is a delicious aromatic herb that adds flavor to your food. But did you know that garlic has been a part of traditional medicine for thousands of years? **From ancient Egypt and Rome to China, people have praised garlic for its many health benefits.** Today, we can trace many of those benefits to sulfur-rich compounds found in garlic. People take garlic to help control their blood pressure and cholesterol [\[R\]](#).

Please note: *Garlic can interact with blood thinners (like aspirin, Plavix, Coumadin). If you are on blood thinners, consult your doctor before supplementing with garlic [\[R\]](#).*

How it helps

Experts say that garlic may improve some of the risk factors of heart disease [\[R\]](#).

More specifically, it may help reduce blood pressure and cholesterol [\[R, R, R, R, R, R\]](#).

Garlic may also protect the heart by [\[R, R, R, R, R\]](#):

- Lowering inflammation
- Improving blood vessel function
- Breaking down blood clots
- Increasing blood flow

Studied doses include:

- **Garlic powder tablets:** 0.3-0.8 g/day for 3-12 months [\[R, R, R, R, R\]](#)
- **Garlic extract:** 0.48-2.4 g/day for 2-12 weeks [\[R, R, R, R\]](#)
- **Garlic oil:** 4-18 mg/day for 4-16 weeks [\[R, R, R\]](#)

Please note: *Garlic can interact with blood thinners (like aspirin, Plavix, Coumadin). If you are on blood thinners, consult your doctor before supplementing with garlic [\[R\]](#).*

 PERSONALIZED TO YOUR GENES

Your **NOS3** gene variant is linked to heart disease. This gene helps make nitric oxide, a chemical that relaxes blood vessels. Garlic may support heart health by boosting nitric oxide [\[R, R, R, R\]](#).

GENE	SNP	GENOTYPE	EVIDENCE
NOS3	rs3918226	CT	

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Cocoa

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate 30-60 grams of high-quality dark chocolate (with at least 70% cocoa content) into your daily diet. Enjoy it as a snack or dessert to reap the potential heart health benefits.

Description

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It is found any many foods and drinks, and people have also used it as a medicine for thousands of years. The numerous active components of cocoa can help with weight control, fatigue, mood, and digestion, among others.

[Cocoa](#) comes from the beans of the *Theobroma cacao* tree. It’s often used for making chocolate, hot chocolate, and pastries. People have also used it as a medicine for over a thousand years [\[R, R\]](#).

Cocoa contains many active components that likely help [\[R, R, R, R\]](#):

- Control weight
- Lower fatigue
- Boost mood
- Improve digestion
- Balance blood sugar
- Support heart health

Note that pure cocoa is likely a healthier choice than chocolate. If you eat chocolate, choose dark chocolate with more cocoa and less sugar and fat.

How it helps

Experts say that cocoa may improve major risk factors for heart disease. It may lower blood pressure and help control cholesterol [\[R, R, R, R, R\]](#).

Cocoa may also [\[R, R, R, R, R\]](#):

- Improve blood vessel function
- Boost blood flow
- Reduce blood clots
- Prevent [oxidative stress](#)

Eating up to **100 g of chocolate per week** may also help prevent heart disease [\[R, R, R, R, R\]](#).

However, pure cocoa is likely a healthier choice. If you eat chocolate, choose dark chocolate with more cocoa and less sugar and fat.

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Black walnuts

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate black walnuts into your diet by adding a small handful (about 1 ounce or 28 grams) to your daily meals, such as in salads, oatmeal, or baking recipes. Do this regularly as part of your daily diet.

Description

Black walnuts are a nutrient-dense nut variety that offers healthy fats, protein, and essential minerals. They can be part of a nutritious diet and provide potential benefits for brain health and overall nutrition.

Black walnuts are a good source of ALA, as well as iron and potassium. A 1-ounce serving contains .76 g of ALA.

How it helps

Experts recommend eating nuts to prevent heart disease [\[R, R, R\]](#).

You should try to eat **1 serving (28 g) of nuts per day** or at least **4-5 servings per week** for optimal protection [\[R, R, R, R, R, R\]](#).

Nuts are rich in **plant sterols, unsaturated fat, and dietary fiber**. They may help reduce cholesterol, a major risk factor for heart disease [\[R, R, R, R, R\]](#).

In a non-placebo-controlled trial of 36 healthy participants, consuming black walnuts (30 g/day) for 30 days improved the fatty-acid composition of RBC membranes and maintained endothelial function despite eating a high-fat meal, suggesting protective effects against heart disease. It also slightly lowered total cholesterol and LDL cholesterol while increasing HDL cholesterol, but the effects were non-significant [\[R\]](#).

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Dietary Omega-3 Fatty Acids

IMPACT

3 / 5

EVIDENCE

3 / 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

Fish and fish oil stand out as the most potent sources of omega-3 fatty acids, essential for heart health, with fatty fish like salmon, herring, and light canned tuna offering the highest omega-3 content and associated benefits [\[R\]](#).

In line with this, experts recommend incorporating 1-2 servings of fish per week, including oily fish, into a healthy diet [\[R\]](#).

Increasing omega-3 intake can modestly reduce the risk of heart disease by 10-16%, with diets rich in omega-3s. In people with heart disease, it may also reduce the risk of [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart attacks by 25-43%
- Sudden death by 43%
- Mortality by 11-33%

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Avoid Rapid Weight Changes

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Maintain a consistent, healthy weight by avoiding extreme dieting or sudden increases in food intake. Aim for gradual weight changes, not exceeding 1-2 pounds per week, by adjusting your diet and physical activity levels accordingly. This approach should be sustained over a long-term period to ensure health and prevent potential adverse effects on the body.

Description

Avoiding extreme and rapid weight changes, whether through crash diets or excessive calorie restriction, is essential for preventing negative health consequences such as nutritional deficiencies and metabolic disruptions.

Your weight is determined by the number of calories you consume compared to those you burn. Changes in exercise frequency, amount and type of food consumed, and alcohol intake may alter your energy expenditure. This may cause small weight fluctuations [\[R\]](#).

Some people may gain or lose weight at a faster rate. Rapid weight fluctuations may be due to [\[R\]](#), [\[R\]](#):

- Very drastic diets
- Water retention or dehydration
- Hormonal changes
- Pregnancy
- Taking certain medications
- Certain health conditions

How it helps

People with heart disease who experience fluctuations in body weight may have a higher risk of heart complications and death compared to those with stable weight [\[R\]](#).

Unintentional weight loss may also increase the risk of heart complications. In contrast, intentional weight loss, understood as weight loss supported by programmed lifestyle changes, may lower these same risks [\[R\]](#).

Weight loss may also be associated with higher mortality in people with heart disease who already had a heart attack [\[R\]](#).

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Avoid Air Pollution

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Stay indoors on days when air quality indexes (AQI) indicate high pollution levels, which are often reported by weather services or government environmental agencies. **Install air purifiers** in your home, especially in bedrooms, to reduce indoor pollutants. Limit outdoor exercise when air pollution warnings are issued, opting for indoor activities instead.

Description

Avoiding air pollution by reducing exposure to pollutants in the environment is essential for respiratory and overall health. It can help lower the risk of respiratory diseases, cardiovascular conditions, and other health issues associated with poor air quality.

While city life is convenient in a lot of ways, it comes with some health hazards. Cars, factories, and other sources increase air [pollution](#) [\[R\]](#).

Air pollution plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lung disease
- Heart disease
- Diabetes
- Asthma
- Skin conditions

How it helps

Experts say that air pollution can lead to heart disease by causing [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Inflammation
- [Oxidative stress](#)
- Blood clots
- High blood pressure

Both short- and long-term exposure to air pollution are linked to heart disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Some ways to avoid air pollution include [\[R\]](#), [\[R\]](#):

- Not exercising in polluted areas
- Avoiding areas with lots of traffic
- Using air purifiers with HEPA filters
- Wearing N95 face masks in highly polluted areas



PERSONALIZED TO YOUR GENES

People with your **NOS3** gene variant may be at an increased risk of heart disease, especially if they are exposed to high levels of air pollution [R].
Exposure to air pollution may increase the risk of heart disease more in people with your **GSTP1** gene variant [R].
Air pollution may worsen the impact of your **MTHFR** gene variant on heart disease [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
NOS3	rs1799983	TT	
NDUFV1	rs596603	GT	
MTHFR	rs1801133	AA	

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Tomato

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate fresh or cooked tomatoes into your daily diet. This can be achieved by adding them to salads, sandwiches, pastas, and sauces or simply eating them on their own. Aim for at least one serving (approximately 1 medium-sized tomato or 1/2 cup of chopped or cooked tomatoes) per day.

Description

Tomatoes are a fruit grown widely in numerous varieties, and are rich in vitamins C and K, as well as the antioxidant lycopene, which may contribute to heart health and protect against certain chronic diseases when incorporated into a balanced diet.

Tomato (*Solanum lycopersicum*) is a fruit originally from the Andes in South America. It is usually consumed as a vegetable in juices, sauces, or fresh. Tomato is an important source of [\[R\]](#):

- [Vitamin C](#)
- Potassium
- Antioxidants (e.g., [lycopene](#))
- Vitamin B9 ([folate](#))

Tomato is traditionally used for [\[R\]](#), [\[R\]](#):

- High cholesterol
- High blood pressure

How it helps

Tomatoes are rich in potassium, fiber, vitamin C, and lycopene which are essential for heart health. These nutrients help lower bad cholesterol, prevent blood clots, and maintain healthy blood pressure levels helping in overall heart performance.

A systematic review of 17 studies found that tomato consumption reduces coronary heart disease mortality, while lycopene intake or serum levels reduce the risk of this condition [\[R\]](#).

In line with this, a meta-analysis of 25 studies associated a high intake of lycopene with a lower risk of heart disease (by 16%) [\[R\]](#).

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Intermittent Fasting

IMPACT3 / 5

EVIDENCE2 / 5

How to implement

Limit your daily eating to a specific window of time, typically within an 8-hour period such as from 12 pm to 8 pm, and fast for the remaining 16 hours of the day. Repeat this daily or for at least 3-4 days per week.

Description

Intermittent fasting is an eating pattern that involves cycling between periods of fasting and eating. It may help with weight management, improve metabolic health, and offer potential benefits for certain health conditions when done under proper guidance.

[Intermittent fasting](#) (IF) is a pattern of eating that alternates between periods of eating and fasting. The most popular IF method is called the 16/8 method, where you fast for 16 hours and eat during an 8-hour window.

People mainly practice IF to lose weight. Besides benefits related to weight reduction, IF may help lower the risk of [\[R\]](#):

- Alzheimer's disease
- Joint pain
- Asthma
- Multiple sclerosis
- Stroke

Some types of intermittent fasting, such as Ramadan fasting, are also practiced for religious reasons.

How it helps

Research of over 5,000 people associated the regular practice of intermittent fasting with a 23.5-117% reduced risk of coronary artery disease [\[R, R\]](#).

In line with this, in a study of 54 people, practicing intermittent fasting (for 10 weeks) reduced risk factors for coronary artery disease, such as [\[R\]](#):

- Body fat
- Small LDL levels
- Inflammation

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Broccoli

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Incorporate at least one cup of chopped broccoli, either steamed or raw, into your daily diet. This can be as part of a meal or snack. Continue this practice daily for ongoing health benefits.

Description

Broccoli and broccoli sprouts are nutrient-dense vegetables packed with vitamins, minerals, and antioxidants. They are known for their potential to support a healthy immune system, protect against chronic diseases, and promote overall nutritional wellness.

Broccoli is high in vitamin K and C, as well as a number of other vitamins and minerals, and antioxidants like quercetin. A ½ cup serving provides 110 mcg of vitamin K or 92%DV.

How it helps

Broccoli consumption may be linked to a lower risk of heart disease mortality over a decade. Kaempferol, an antioxidant in broccoli, may help by fighting oxidative stress and reducing blood clot formation [\[R, R\]](#).

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

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Fermented Dairy

IMPACT

3 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fermented dairy products like yogurt, kefir, or aged cheeses into one or two of your daily meals. For example, you could have yogurt with breakfast and add kefir to your smoothie for an afternoon snack. This practice should be maintained consistently as part of your diet.

Description

Fermented dairy products like yogurt and kefir contain beneficial probiotic bacteria that can support gut health and enhance digestion. They are also excellent sources of calcium and protein.

Food fermentation is a traditional food preservation method. Fermented foods may support gut and skin health [\[R\]](#) [\[R\]](#).

Food can be fermented by microbes that are naturally found in the product or by adding microbes (a starter culture) [\[R\]](#).

Fermented dairy products include [\[R\]](#) [\[R\]](#) [\[R\]](#):

- Yogurt
- [Kefir](#)
- Cheese
- Buttermilk

How it helps

A study of 1,981 men followed up for about 20 years associated the intake of fermented milk (about 10 g/day) with a 37% reduced incidence of heart disease [\[R\]](#).

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Vitamin C

IMPACT2 / 5

EVIDENCE3 / 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

Two meta-analyses (the largest one with 15 studies and 374,488 participants) associated high vitamin C intake with ~19% lower risk of coronary heart disease, while supplementing with at least 700 mg/day reduced the risk by ~33%. However, the results were mixed [\[R\]](#), [\[R\]](#).

Higher genetically predicted and actual blood levels of vitamin C and/or dietary intake may be causally a reduced risk of heart disease [\[R\]](#), [\[R\]](#).

Please note: *Supplementing with vitamin C is linked to a slightly higher risk of kidney stones in men. Talk to your doctor before taking vitamin C* [\[R\]](#), [\[R\]](#).

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Aromatherapy

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Select essential oils like lavender, peppermint, or eucalyptus. Use a diffuser to disperse the scent into your room for 30-60 minutes at a time, up to 3 times a day. Alternatively, apply a few drops diluted in a carrier oil directly to your skin, such as on your temples or wrists, twice a day.

TYPICAL STARTING DOSE

30 minutes

Description

Aromatherapy is a holistic practice that uses the scents and aromas of essential oils to promote physical, mental, and emotional well-being. It is often used for relaxation, stress reduction, and to address various health concerns through inhalation or topical application of essential oils.

Aromatherapy uses concentrated plant extracts known as **essential oils**. They can be inhaled using a diffuser (a device that releases small amounts of oil into the air) or applied to the skin using a roller [\[R\]](#).

[Lavender](#) is a decorative flower and a calming herb and its essential oil is commonly used in aromatherapy. People use it to [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce anxiety [\[R\]](#)
- Improve sleep quality [\[R\]](#), [\[R\]](#)
- Relieve pain [\[R\]](#), [\[R\]](#)

Essential oils can be harmful if not used properly. Tips for using them safely include [\[R\]](#), [\[R\]](#):

- Diluting them properly using a plant-based carrier oil (such as olive oil or almond oil)
- Using diffusers in a well-ventilated area for a maximum of 1 hour
- If using on the skin, testing a small area first and waiting a day before using more
- Keeping essential oils away from candles or other heat sources

How it helps

A meta-analysis of 12 studies found high evidence that aromatherapy improves heart rate and low evidence that it improves blood pressure in patients with heart disease [\[R\]](#).

Aromatherapy may help by reducing stress and promoting relaxation, thereby reducing blood pressure.

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Avocado

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate half to one whole avocado into your daily diet. You can add it to salads, sandwiches, or use it as a healthy fat substitute for spreads or dressings.

Description

Avocado is a nutrient-dense fruit known for its creamy texture and healthy monounsaturated fats. It is packed with vitamins, minerals, and dietary fiber, and may support heart health, skin health, and overall nutrition.

[Avocado](#) is a fruit first cultivated in Mexico in 500 BCE [\[R\]](#), [\[R\]](#).

You can eat it raw in salads, sandwiches, and dips. Avocado oil has recently become popular, but it’s much less nutritious than the whole fruit.

Avocado is rich in antioxidants, vitamins, minerals, and fiber. It may support [\[R\]](#):

- Heart health
- Healthy weight
- Healthy aging

How it helps

Eating avocado (200-500 g/day) may reduce the risk of heart disease by 16-21%, especially when included in a low-fat diet. It may increase HDL “good” cholesterol levels [\[R\]](#), [\[R\]](#).

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Oats

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

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

Description

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

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

How it helps

Eating oats may lower the risk of heart disease, especially in those who are overweight or have mild health issues, by improving [\[R, R\]](#):

- Total and LDL cholesterol levels
- Body weight
- Blood sugar levels

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Aquatic Exercise

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Participate in aquatic exercise sessions, such as swimming or water aerobics, for 60 minutes, 3 to 5 times per week. Ensure the exercise intensity is moderate, allowing you to talk but not sing during the activity. Consistency over time is key, so aim to incorporate this into your weekly routine for at least 3 to 6 months to observe benefits.

TYPICAL STARTING DOSE

1 hour

Description

Aquatic exercise involves physical activity performed in water, such as swimming, water aerobics, or aquatic therapy. It is gentle on the joints, making it suitable for individuals with mobility issues, and can help improve cardiovascular fitness and muscle strength.

Aquatic exercise is any type of low-impact physical activity performed in a pool. In this type of cardio exercise, water helps the body float, which reduces gravity and makes the practice more comfortable and tolerable [R, R].

Compared to land-based exercise, aquatic exercise may be better by [R]:

- Reducing the stress and impact on joints
- Lowering fracture risk

Hence, it is usually **recommended for the elderly**. Aquatic exercise is also suitable for people who don't know how to swim [R].

How it helps

Aquatic exercise, including activities such as aquatic walking and swimming, provides significant benefits for people with heart disease, including improved [R, R, R, R, R, R]:

- Body composition and weight
- Muscle strength
- Blood cholesterol and triglycerides
- Physical fitness
- Heart rate variability (HRV)

Aquatic exercise may also improve blood vessel function and reduce blood pressure in healthy people [R].

One study suggests that swimming may also help as part of a rehabilitation program for people with chronic heart failure and stable clinical conditions, without increasing their risk of heart-related complications [R].

Please note: *People with heart disease and history of myocardial ischemia due to exercise, which implies reduced blood and oxygen flow to the heart, should discuss the addition of swimming to their regular physical activity with their doctor. Precautions may need to be taken to monitor and manage the risk of myocardial ischemia* [R].

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Spinach

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate one cup of fresh spinach or half a cup of cooked spinach into your daily diet. You can add spinach to salads, smoothies, omelets, or pastas to easily increase your intake.

Description

Spinach is a leafy green vegetable packed with essential nutrients, including vitamins A and K, iron, and folate. Incorporating spinach into the diet supports eye health, bone health, and overall nutrition.

Spinach is a good source of molybdenum, folate, calcium, and iron, as well as vitamins A, C, and K1. A ½ cup serving provides 8 mcg of molybdenum or 18%DV.

How it helps

A meta-analysis of 23 studies concluded that spinaches and other nitrate-rich foods lower SBP (by 4.8 mmHg), DBP (by 1.74 mmHg), arterial stiffness (by 0.23 m/s), and platelet aggregation (by 18.9%) while increasing flow-mediated dilation (by 0.59%). As a result, they may help prevent heart disease [\[R\]](#).

Spinach is rich in dietary fiber and antioxidants, which help lower LDL cholesterol levels. Additionally, it contains potassium and folate that help regulate blood pressure, further supporting heart health.

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Avoid Arsenic Exposure

IMPACT

2 / 5

EVIDENCE

3 / 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

In a study of 4990 participants, higher urinary total arsenic levels showed a potential association with fatal heart disease mortality, particularly at low exposure levels (<4.5 µg/L). Water arsenic doubling was linked to a 16% increased risk of coronary heart disease mortality [\[R\]](#).

A meta-analysis of 31 studies found high arsenic exposure (>50 µg/L) in drinking water linked to increased risks of cardiovascular disease (by 32%), coronary heart disease (by 89%), and peripheral arterial disease (by 117%), but not stroke [\[R\]](#).

Similarly, a meta-analysis of 11 studies found that, compared to 10 µg/L, exposure to 20 µg/L water arsenic was associated with increased relative risks for cardiovascular disease incidence (by 9%), cardiovascular disease mortality (by 7%), coronary heart disease incidence (by 11%), coronary heart disease mortality (by 16%), stroke incidence (by 8%), and stroke mortality (by 6%) [\[R\]](#).

Exposure to drinking water with 10 µg/L arsenic concentration, compared to 1 µg/L, led to significant risks of coronary heart disease, cardiovascular disease, carotid atherosclerosis, and hypertension in another study [\[R\]](#).

Another study found that higher urine arsenic levels were associated with increased 10-year atherosclerotic cardiovascular disease risk in hypertensive men but not women. The risk was significant even at low arsenic levels [\[R\]](#).

Arsenic can damage blood vessels and disrupt heart rhythms, leading to heart disease. High arsenic levels can also increase both short and long-term risks for high blood pressure, a critical risk factor for heart disease.



PERSONALIZED TO YOUR GENES

Exposure to arsenic may increase the risk of heart tissue injury and cardiovascular disease more in people with your [AS3MT](#) gene variant [R].

Exposure to arsenic may increase the risk of heart tissue injury and cardiovascular disease more in people with your [AS3MT](#) gene variant [R].

Exposure to arsenic may increase the risk of heart tissue injury and cardiovascular disease more in people with your [NOS3](#) gene variant [R].

Exposure to arsenic may increase the risk of heart tissue injury and cardiovascular disease more in people with your [SOD2](#) gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
AS3MT	rs10748835	GA	
AS3MT	rs10748835	GA	
NOS3	rs3918181	AG	
TCP1	rs2758331	AA	



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Methylfolate

IMPACT

2 / 5

EVIDENCE

3 / 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

Two meta-analyses (the largest one with 11 studies and 369,746 participants) associated high folate intake with a 44% lower risk of coronary heart disease. Every 200-ug/day increment in folate intake was associated with a 12% lower risk and a 250-ug/day reduced it by 26%, while every 5-mmol/L increment in blood folate levels reduced the risk by 8% [\[R\]](#), [\[R\]](#)

However, supplementation with folate doesn't reduce the risk of heart disease in either healthy participants or those with preexisting cardiovascular diseases according to 4 meta-analyses [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

50



Niacin Supplements

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

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

TYPICAL STARTING DOSE

20 mg

Description

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

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

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

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

How it helps

A meta-analysis suggested that niacin monotherapy may reduce certain cardiovascular events in patients not being treated with statins [\[R\]](#).

Niacin use was linked to significantly reduced risks of composite cardiovascular disease events and major coronary heart disease events, but not stroke incidence, in a meta-analysis of 11 trials and 9,959 subjects [\[R\]](#).

A meta-analysis of 7 studies and 5137 patients found that niacin therapy significantly reduced coronary artery revascularization, nonfatal myocardial infarction, stroke, and transient ischemic attack [\[R\]](#).

However, a review of 23 randomized controlled trials and 39,195 participants found evidence that niacin does not reduce mortality, cardiovascular mortality, non-cardiovascular mortality, myocardial infarctions, or strokes. Instead, it was associated with side effects [\[R\]](#).

Please note: *Niacin has been linked to liver damage, diabetes, and strokes. It may also cause flushing, bruises, and bleeding. Most doctors do not recommend taking niacin unless a person can't take statins and has close medical supervision. Talk to your doctor before taking niacin.* [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

 PERSONALIZED TO YOUR GENES

Lipid lowering with niacin may improve heart health more in people with your [LIPC](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
ADAM10	rs1800588	CC	

51



Dietary Iron

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate iron-rich foods into your daily meals, such as red meat, chicken, turkey, fish, beans, lentils, tofu, cooked spinach, and fortified cereals. Aim for at least 18 mg of iron per day for adult women and 8 mg per day for adult men. It's also beneficial to pair these foods with vitamin C-rich foods like oranges, strawberries, or bell peppers to enhance iron absorption.

Description

Iron (Fe) is an essential mineral. It helps make [hemoglobin](#), a protein that carries oxygen to cells. In this way, iron **increases energy** and supports **brain and immune system function** [\[R, R, R\]](#).

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

- Oysters
- White beans
- Beef
- Chocolate
- Spinach
- Fortified cereals

Women should be getting **8-18 mg** of iron per day, while **men** should be getting **8 mg** [\[R\]](#).

Groups at risk of iron deficiency include [\[R\]](#):

- Menstruating women
- Children
- Vegetarians
- Routine blood donors

How it helps

Dietary iron intake may be associated with a lower risk of heart disease [\[R, R\]](#).

However, too much iron can be bad for the body. Excess dietary intake of iron may be associated with a higher risk of heart disease. However, not all studies have found this link [\[R, R\]](#).

Similarly, excess dietary intake of iron may be associated with mortality from stroke and heart disease [\[R\]](#).

52



Beetroot Juice

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume 200-250ml of beetroot juice daily, at least 1-2 hours before engaging in physical activity or as part of your breakfast routine. This regimen should be maintained consistently for at least 2 weeks to start noticing benefits in terms of increased stamina and blood pressure regulation.

Description

Beetroot juice is a concentrated source of dietary nitrates, known for their potential to enhance athletic performance and improve blood pressure regulation. It is often consumed by athletes to enhance stamina and aid in recovery.

Beetroot (*Beta vulgaris*) contains iron, nitrates, sodium, potassium, and betalaine [\[R\]](#).

Beets are an inexpensive and mineral-rich vegetable that are widely used in Western cooking. Compared to other vegetables with high iron content, beets have a low price and are easy to store [\[R\]](#).

How it helps

Taking a betalain-rich beetroot supplement may reduce the levels of risk factors for heart disease, including [\[R\]](#):

- Homocysteine
- Glucose
- Total cholesterol
- Triglycerides
- LDL,
- Blood pressure

Beetroot may help by supporting the production of nitric oxide [\[R\]](#).

53



Red Yeast Rice

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a 500 mg capsule of red yeast rice supplement once daily, preferably with your evening meal to help with absorption and efficacy.

TYPICAL STARTING DOSE

500 mg

Description

Red yeast rice is a fermented product made from rice and red yeast (*Monascus purpureus*). It has a long history of use in traditional Chinese medicine, and it is commonly used today as a dietary supplement to help lower cholesterol levels due to the presence of naturally occurring compounds called monacolins.

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

People mostly use red yeast rice to manage their cholesterol. It may also help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Inflammation
- High blood pressure
- High blood sugar

How it helps

Red yeast rice may help prevent heart disease by reducing cholesterol levels [\[R\]](#), [\[R\]](#), [\[R\]](#).

A red yeast rice extract (**600 mg for 4-8 weeks**) may be especially helpful [\[R\]](#).

A blend of red yeast rice, [coenzyme Q10](#), and other ingredients may also help [\[R\]](#), [\[R\]](#).

Please note: *The FDA does not allow the sale of products containing monacolin K in the United States. Thus, red yeast rice supplements sold in the USA probably don't contain enough monacolin K to affect cholesterol. Monacolin K itself may cause muscle and liver damage. It may also interact with medications for cholesterol. Talk to your doctor before taking red yeast rice* [\[R\]](#), [\[R\]](#), [\[R\]](#).

54



L-Carnitine

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of L-carnitine supplement daily with a glass of water, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

1 g

Description

L-carnitine is an amino acid-like compound that plays a role in energy metabolism and helps prevent toxic substances from building up in cells. It is often used in dietary supplements for its potential to support muscle recovery, reduce fatigue, and enhance athletic performance.

[L-carnitine](#) is a compound that helps you burn fat. It also prevents toxic substances from building up in cells [\[R\]](#).

Your body can usually make enough carnitine to meet its needs. You can also get it from **meat and dairy products** [\[R\]](#).

People use L-carnitine for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart problems
- Overactive thyroid
- Fertility problems
- Blood sugar control
- Weight control

How it helps

In a study involving cardiopathic patients taking 2 g daily of L-carnitine, those with stable effort angina and those with congestive heart failure showed reduced anginal episodes and nitrate use. Similar trials in Switzerland and Germany also demonstrated improved physical performance and quality of life [\[R\]](#).

In a study involving 44 men with stable chronic angina, L-carnitine (1 g twice daily) was compared to a placebo in a double-blind, crossover trial. L-carnitine improved exercise capacity, reduced angina symptoms, and lowered ECG signs of ischemia compared to the placebo. Some patients experienced relief from angina with L-carnitine. Side effects were minimal [\[R\]](#).

Two hundred patients aged 40 to 65 with stable angina were studied. Half received a daily 2 g oral dose of the drug in addition to their existing treatment for six months. This group showed reduced resting premature ventricular contractions (PVC) and improved exercise tolerance compared to the control group [\[R\]](#).

A study investigated L-carnitine supplementation (1000 mg/d) in 47 CAD patients. After 12 weeks, L-carnitine significantly reduced inflammation markers (CRP, IL-6, TNF-α) compared to placebo, suggesting its potential to reduce inflammation in CAD through antioxidant effects [\[R\]](#).

On the other hand, genetically higher carnitine levels might be linked to heart disease, but the evidence is mixed [\[R\]](#), [\[R\]](#), [\[R\]](#).

55



Tyrosol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a tyrosol supplement of approximately 10 to 50 milligrams per day, ideally with a meal to enhance absorption. Continuous daily intake is recommended for at least 8 to 12 weeks to evaluate benefits.

TYPICAL STARTING DOSE

10 mg

Description

Tyrosol is a phenolic compound found in olive oil and is known for its antioxidant properties. It is used for its potential to protect cells from oxidative damage and support cardiovascular health.

How it helps

Consuming white wine with tyrosine increased HDL cholesterol and decreased homocysteine and endothelin 1 in individuals at cardiovascular risk in a trial of 33 at-risk individuals. A nutraceutical containing red yeast rice, phytosterols, and L-tyrosol improved lipid profiles and liver function in patients with hypercholesterolemia. Olive oil with high tyrosol content increased HDL cholesterol in healthy volunteers and reduced LDL oxidation in various trials. Urinary tyrosol and hydroxytyrosol levels were associated with lower LDL oxidation [\[R, R, R, R, R, R, R, R\]](#).

Tyrosol may protect the heart by reducing inflammation and preventing the oxidation of LDL cholesterol. It also helps regulate blood pressure and improve blood vessel function, thus promoting overall heart health.

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Magnesium

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take up to 350 mg of magnesium daily as a supplement, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

350 mg

Description

Magnesium is an essential mineral involved in various bodily functions, including muscle contractions, nerve signaling, and bone health. Maintaining adequate magnesium levels through diet or supplements can support overall well-being and reduce the risk of magnesium deficiency-related health issues.

[Magnesium](#) is an essential mineral. Your body needs it for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [\[R\]](#).

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [\[R\]](#).

How it helps

Genetically higher magnesium levels may be causally associated with a lower risk of heart disease [\[R\]](#).

Magnesium supplementation (magnesium sulfate, about 300 mg, 1-2x/day for 3-6 months) improved exercise performance and may improve heart health in people with heart disease by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lowering inflammation
- Enhancing blood vessel function
- Improving blood fat levels
- Improving blood sugar control

However, not all studies found these benefits [\[R\]](#).

Please note: *Magnesium supplements should not exceed 350 mg/day of elemental magnesium. Higher doses may cause diarrhea, nausea, and abdominal cramps. In addition, magnesium supplements may interact with some medications, including antibiotics and "water pills" (diuretics)* [\[R\]](#).

57



Limit Caffeine Intake

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Limit your caffeine consumption to less than 200 milligrams per day, equivalent to about two 6-ounce cups of coffee. Aim to avoid caffeine-containing foods and beverages such as tea, chocolate, and some soft drinks, especially in the late afternoon and evening to minimize sleep disturbances.

Description

Although caffeine is the world's most popular stimulant, some people choose to limit or avoid it due to potential adverse effects on their sleep, mood, or blood pressure.

How it helps

Scientists are still not sure how exactly caffeine increases your blood pressure. Some believe that caffeine spikes blood pressure by increasing your stress (“fight-or-flight”) response.

Regardless, we do know that caffeine increases blood pressure at doses of 200-410 mg/day. This equals 2+ cups of coffee, 4+ cans of cola, or 4+ cups of black tea [\[R, R\]](#).

Where you get your caffeine from also matters. Caffeinated energy drinks may raise blood pressure more than other caffeine sources [\[R\]](#).

Some people can develop tolerance when they consume caffeine regularly. This means their body gets used to it, and their blood pressure stays normal. For others, this doesn't happen. Which group you belong to might depend on your genetics.

Heavy coffee intake may increase the risk of heart disease more in people with certain gene variants [\[R\]](#).

58



Salvia Miltiorrhiza

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 200-600mg of Salvia miltiorrhiza extract in capsule or tablet form daily, divided into two or three doses. This should be taken with water, preferably 30 minutes before meals. Continue for a period of 8 to 24 weeks for noticeable effects.

Description

Salvia miltiorrhiza, also known as Danshen, is a traditional Chinese medicinal herb. It is primarily used for its potential cardiovascular benefits, including improving blood circulation and reducing the risk of heart-related conditions. It contains various compounds, including tanshinones and salvianolic acids.

How it helps

Both injected and oral *Salvia miltiorrhiza* may improve heart disease symptoms and electrocardiogram results. *Salvia miltiorrhiza* may help by reducing oxidative stress and oxidized LDL cholesterol. However, the evidence supporting these benefits is low-quality [\[R, R, R, R\]](#).

59



Coenzyme Q10 (CoQ10)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a 100 mg Coenzyme Q10 (CoQ10) supplement once daily with a meal that contains fat for better absorption.

TYPICAL STARTING DOSE

100 mg

Description

Coenzyme Q10 (CoQ10) is a naturally occurring antioxidant that plays a crucial role in cellular energy production. It is often taken as a supplement to support heart health, improve energy levels, and provide antioxidant protection, especially for individuals with certain medical conditions or as they age.

[Coenzyme Q10](#) (CoQ10) is a compound that helps enzymes work better. By doing so, CoQ10 helps improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Energy levels
- Antioxidant protection
- Heart health
- Muscle strength
- Blood sugar control

The amount of CoQ10 made by your body decreases as you get older. Luckily, you can also get it from food or supplements. Good sources of CoQ10 include [\[R\]](#), [\[R\]](#):

- Organ meats
- Fatty fish
- Whole grains

How it helps

Experts say that coenzyme Q10 (CoQ10) may improve some of the risk factors of heart disease [\[R\]](#).

CoQ10 (100-300 mg/day for 4-16 weeks) may:

- Lower total cholesterol [\[R\]](#)
- Raise “good” (HDL) cholesterol [\[R\]](#)
- Reduce [oxidative stress](#) [\[R\]](#)
- Lower blood pressure [\[R\]](#)

Note that CoQ10 is fat-soluble. This means that **taking it with a fatty meal should help you absorb it better** [\[R\]](#).

Please note: *CoQ10 may reduce the effectiveness of blood thinners such as warfarin. Talk to your doctor before taking CoQ10* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your **[SOD2](#)** gene variant is linked to heart disease. This gene plays a role in oxidative stress. Coenzyme Q10 may help by lowering oxidative stress [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SOD2	rs4880	GG	

60



SAM-e

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 400-1600 mg of SAM-e as a supplement daily, preferably on an empty stomach to enhance absorption. It is often recommended to start with low dosage and observe how your body responds over a few weeks, adjusting as necessary under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

400 mg

Description

[SAM-e](#) is a chemical that helps maintain liver and brain health. Your body makes SAM-e from the amino acid *methionine*, but it’s also available as a supplement [\[R\]](#).

SAM-e supplementation may help with:

- Joint pain [\[R\]](#)
- Liver disease [\[R\]](#)
- Depression [\[R\]](#)

Please note: *SAM-e may not be safe for people with a bipolar disorder. It may also interact with 5-HTP, St. John’s wort, and different medications. Combining it with antidepressants can be dangerous and even life-threatening. Never take SAM-e supplements without consulting your doctor [\[R\]](#), [\[R\]](#), [\[R\]](#).*

How it helps

Coronary artery disease patients have significantly lower levels of SAM-e compared to control subjects, suggesting that low SAM-e might be a risk factor for this disease [\[R\]](#), [\[R\]](#).

Lower plasma SAM-e concentrations are associated with higher risks of all-cause and cardiovascular mortality in coronary artery disease patients [\[R\]](#).

61



DHEA (Dehydroepiandrosterone)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 25-50 mg of DHEA orally with water daily, preferably in the morning to mimic the body's natural rhythm of DHEA production. It is advisable to start at the lower dose to assess tolerance and adjust as needed. Consult a healthcare provider for personalized advice and before starting a new supplement regimen.

TYPICAL STARTING DOSE

25 mg

Description

DHEA is a hormone produced by the adrenal glands and has been used as a dietary supplement for various purposes, including supporting hormonal balance and energy levels. It may have potential benefits for specific individuals, but its use should be supervised by a healthcare professional due to its hormonal nature.

DHEA is a steroid hormone produced primarily by the adrenal glands. It is also produced to a much lesser extent by the testes and ovaries and, possibly, the brain [\[R, R\]](#).

DHEA helps make the sex hormones [testosterone](#) and [estrogen](#). DHEA is important for [\[R, R, R, R\]](#):

- Mood
- Immunity
- Muscle strength
- Bone health
- Skin health

DHEA is released in response to stress. In fact, one of DHEA's important roles is to protect against the adverse effects of prolonged and excessive exposure to cortisol, the stress hormone [\[R, R, R\]](#).

How it helps

A meta-analysis of 18 studies associated lower DHEAS levels with an increased risk of all-cause mortality (by 47%) and fatal (by 58%) and nonfatal (by 42%) cardiovascular events in patients with heart disease. Similarly, a meta-analysis of 6 studies and 6,744 elderly individuals associated low DHEAS levels with higher all-cause (by 41%, only in men) and cardiovascular mortality (by 49%). Another systematic review of 26 studies and a meta-analysis of 14 case-control studies found that the DHEAS diffusivity of coronary heart disease cases was lower than that of controls. This suggests that decreased DHEAS may be associated with coronary heart disease risk but not with arteriosclerosis [\[R, R, R\]](#).

DHEA may help by enhancing the production of nitric oxide, reducing inflammation, and improving metabolic functions that contribute to a healthy heart.

Please note: *DHEA has been banned by sport associations and anti-doping agencies. DHEA should not be used at high doses or long-term and is contraindicated in patients with hormone-responsive cancers. DHEA supplements should only be used with the prescription of a medical professional. Discuss risks and side effects with your doctor [\[R\]](#).*

62



Limit Copper Intake

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Do not include copper supplements in your daily vitamin or supplement routine. Check the labels of any multivitamins or dietary supplements you are currently taking to ensure they do not contain copper. Ideally, you should also check copper levels in your tap water. If they are excessive, consider using a reliable water filter or drinking spring water.

Description

Taking too many copper supplements can cause a copper overdose in your body. This can be harmful, leading to issues like stomach pain, nausea, and even heart problems. For healthy individuals, the amount of copper obtained through a balanced diet is usually enough without needing supplementation. It's vital to maintain the natural balance of minerals in the body for good health.

Contaminated tap water can also be a source of excess copper.

How it helps

Research involving 47,931 people found that excessive copper intake (above 2.45 mg/day) may be associated with increased risks of death, heart disease, and stroke [\[R\]](#).

High copper levels may also be associated with heart failure [\[R\]](#).

63



Resveratrol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 150-500 mg of resveratrol as a supplement daily, preferably with meals to enhance absorption. This dosage range is based on studies for various health benefits, and it's advised to not exceed 500 mg per day without medical supervision.

TYPICAL STARTING DOSE

150 mg

Description

Resveratrol is a natural compound found in red grapes, red wine, and some berries. It is known for its potential antioxidant properties and its role in promoting heart health.

[Resveratrol](#) is an antioxidant found mainly in [\[R\]](#):

- Berries
- Red grapes
- Red wine
- Peanuts

It’s purported to have anti-inflammatory and antioxidant effects [\[R, R, R\]](#).

How it helps

In a series of placebo-controlled trials, resveratrol supplementation demonstrated various positive effects on coronary artery disease patients. At 10 mg/day for 3 months, it improved diastolic function, endothelial function, and LDL-cholesterol levels. At 100 mg/day for 2 months, it enhanced left ventricular systolic function, while a 330-mg dose for 3 days boosted FMD after coronary artery bypass grafting [\[R, R, R\]](#).

Resveratrol may help by improving cholesterol levels, reducing inflammation, and preventing blood clots.

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Gentle Yoga

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

20 minutes

Description

[Yoga](#) combines breathing, stretching, and relaxation techniques. Practicing yoga may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce [stress](#)
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

Gentle yoga is practiced at a slower pace, with less intense positions, and usually including more time for meditation, breathing, and relaxation. It's a great choice for people who feel they are not fit or flexible enough to do all yoga poses, as well as for those with injuries, pain, impaired mobility, or health issues.

How it helps

Different mind-body interventions aimed at reducing stress, including yoga, may reduce the number of heart-related complications by 2.6 times in people with coronary artery disease [\[R\]](#).

In a non-placebo-controlled trial of 50 cancer caregivers, a gentle yoga-based stress reduction intervention failed to improve stress or anxiety but did reduce triglyceride-rich lipoprotein particles and insulin resistance, potentially reducing the risk of heart disease [\[R\]](#).

65



Avoid Long Naps

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Limit your daily naps to 20-30 minutes. Try to nap before 3 pm to avoid interfering with nighttime sleep.

Description

Limiting long naps during the day can help improve nighttime sleep quality and reduce the risk of sleep disturbances. Shorter naps are generally more beneficial for enhancing daytime alertness without interfering with nighttime rest.

How it helps

Multiple meta-analyses highlight the effects of daytime napping on health. Overall, napping is associated with increased all-cause mortality risk by 15-22%. Cardiovascular disease risk is higher, with a 19-82% increase in risk, especially for long naps (≥60 minutes). A J-curve relationship exists between nap duration and CVD risk. Chinese populations show a stronger link to coronary heart disease (30% increase), especially with longer naps. Mendelian randomization suggests a genetic link to heart issues, and network meta-analysis supports an increased risk of CVD with naps exceeding 60 minutes. [\[R, R, R, R, R, R\]](#).

Taking long naps during the day can disrupt nighttime sleep, which is essential for heart health.

66



Pomegranate Juice

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Drink 8 ounces (about 240 milliliters) of 100% pomegranate juice daily, ideally in the morning to incorporate it into your daily routine. Continue this practice regularly as part of your daily diet.

Description

Pomegranate juice is made from the seeds and pulp of the fruit. It is rich in nutrients, including vitamin C, vitamin K, folate, potassium, and dietary fiber., and provides a source of dietary antioxidants that may provide addition benefits for inflammation and heart health.

[Pomegranates](#) are red fruits that contain seeds covered by edible sweet coats. They are rich in antioxidants [\[R, R\]](#).

Pomegranate may reduce inflammation and support heart health. People use pomegranate seed oil and peel in cosmetics and traditional medicine [\[R, R\]](#).

How it helps

In a placebo-controlled trial of 289 participants at risk of coronary heart disease, consuming pomegranate juice (240 mL/day) over 18 months resulted in a deceleration of carotid intima-media thickness (CIMT) progression, especially in subjects with heightened oxidative stress and abnormalities in the TG-rich lipoprotein/HDL axis. Another placebo-controlled trial of 45 patients with this condition experiencing myocardial ischemia demonstrated that drinking pomegranate juice for three months led to a reduction in stress-induced ischemia [\[R, R\]](#).

Pomegranate juice is rich in antioxidants, which can help reduce the buildup of cholesterol in your arteries. Additionally, its anti-inflammatory properties can help lower blood pressure.

67



Transcendental Meditation

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Practice transcendental meditation for 20 minutes twice a day, once in the morning before breakfast and once in the afternoon or early evening. Sit comfortably in a quiet place, close your eyes, and silently repeat a mantra given to you by a certified transcendental meditation teacher.

TYPICAL STARTING DOSE

20 minutes

Description

Transcendental Meditation is a technique for mindfulness and stress reduction that involves silently repeating a specific mantra to attain a state of deep relaxation and heightened awareness. It is associated with reduced stress, improved focus, and enhanced overall well-being.

How it helps

Transcendental meditation demonstrated positive effects on coronary heart disease in several non-placebo-controlled trials. Participants experienced reduced risk of mortality, myocardial infarction, and stroke, as well as improved blood pressure, insulin resistance, HRV, exercise tolerance, and left ventricular mass index progression. Long-term practice of transcendental meditation also showed an inverse correlation with cardiovascular disease risk factors in women [\[R, R, R, R, R\]](#).

68



Yoga

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

[Yoga](#) combines breathing, stretching, and relaxation techniques. Practicing yoga may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce [stress](#)
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Different mind-body interventions aimed at reducing stress, including yoga, may reduce the number of heart-related complications by 2.6 times in people with coronary artery disease [\[R\]](#).

69



Soy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate soy-based products such as tofu, soy milk, and edamame into your daily diet. Aim for at least one serving per day, equivalent to about a cup of soy milk, a half-cup of cooked soybeans, or a 3-ounce piece of tofu.

Description

Soy is a legume native to East Asia, and its health benefits include being a source of plant-based protein, fiber, and various vitamins and minerals. It is known for its potential to support heart health, reduce cholesterol levels, and provide essential nutrients in vegetarian and vegan diets.

Soy is a common food in many cuisines around the world, especially Asian cuisines [\[R\]](#).

It’s a great source of [\[R\]](#), [\[R\]](#):

- Plant-based protein
- Fiber
- Omega-3 fats
- Antioxidants (isoflavones)

Soy-based foods include [\[R\]](#):

- Soy beverages
- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Eating soy regularly may lower the odds of heart disease [\[R\]](#), [\[R\]](#).

Adding **soy protein (at least 25 g/day)** to your diet may help by lowering total and “bad” (LDL) cholesterol levels. Soy isoflavones may have similar effects on LDL cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

70



Avoid Asbestos

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Check for the presence of asbestos in materials in old buildings, especially those built before the 1980s, before doing any renovations or demolitions. Avoid disturbing materials that might contain asbestos, such as insulation, tiles, and roofing. If asbestos needs to be removed, hire professionals who specialize in asbestos abatement.

Description

Avoiding asbestos exposure is critical to prevent the development of asbestos-related diseases such as mesothelioma and lung cancer. Asbestos is a known carcinogen found in some construction materials and should be handled with extreme care or avoided altogether.

How it helps

A meta-analysis of 16 studies concluded that exposure to asbestos increases the risk of cardiovascular diseases by 11% [\[R\]](#).

71



Music Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Engage in music therapy sessions for at least 30 minutes a day, three times a week. These sessions can involve listening to music, playing an instrument, singing, or writing songs, facilitated by a certified music therapist if possible.

TYPICAL STARTING DOSE

30 minutes

Description

Music therapy is a therapeutic approach that uses music to address physical, emotional, cognitive, and social needs. It can improve mental health, enhance emotional expression, and support overall well-being.

[Music](#) therapy is a form of therapy that involves making, reflecting on, and/or listening to music. It can be applied individually or in groups and may not require the presence of a therapist [\[R\]](#).

Music therapy provides tools for body relaxation and positive imagery. It aims to improve communication, quality of life, and well-being [\[R\]](#), [\[R\]](#).

How it helps

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

Stress from work may be especially harmful [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

In a non-placebo-controlled trial of 74 patients with stable coronary artery disease, listening to their favorite music for 1.5 hours every day for 3 weeks improved endothelial function [\[R\]](#).

72



Strawberries

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a serving of strawberries, which is approximately eight medium-sized strawberries (about 1 cup or 150 grams), into your daily diet. You can enjoy them as a snack, add them to your breakfast cereal or oatmeal, blend them into smoothies, or use them as a topping for salads and desserts.

Description

Strawberries are a delicious fruit rich in vitamin C, antioxidants, and dietary fiber. They provide essential nutrients and are associated with various health benefits, including improved immune function and heart health.

Strawberries (*Fragaria ananassa*) are one of the most consumed berries, both fresh and processed in juices, jams, yogurts, and desserts [\[R\]](#).

Strawberries have a high content of antioxidants and vitamins, such as [\[R\]](#), [\[R\]](#):

- Vitamin C
- Folate
- Flavonoids

How it helps

Strawberries are packed with antioxidants like anthocyanins that lower bad cholesterol levels, reducing heart attack risk. They also contain potassium, which helps regulate blood pressure.

A systematic review and meta-analysis of 14 randomized trials showed that strawberry supplementation reduced oxidized LDL, malondialdehyde, C-reactive protein, total cholesterol, and diastolic blood pressure. It raised fasting blood sugar but had no other significant effects on cardiovascular risk factors. A more recent meta-analysis of 11 trials found strawberries reduced CRP but had no impact on blood pressure, lipid profile, or fasting blood glucose in most cases. In a separate study, strawberry powder improved flow-mediated dilation and lowered systolic BP, possibly due to microbial-derived phenolic metabolites. However, another study found no effects on vascular function or postprandial metabolic parameters. Larger, longer-term studies are needed [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

73



Terminalia Arjuna

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 500mg of Terminalia arjuna extract twice daily with water. Continue this supplementation for at least 8 to 12 weeks to observe potential benefits.

Description

Terminalia arjuna is a tree native to India, and its bark, which contains compounds like arjunolic acid, flavonoids, and tannins. is traditionally used in Ayurvedic medicine for its potential cardiovascular benefits. It may help support heart health by promoting healthy blood pressure and cholesterol levels.

Terminalia arjuna is an evergreen tree popularly known as **arjuna**. Its stem bark is traditionally used in Ayurveda (Indian traditional medicine) to help with [R](#), [R](#):

- High blood pressure
- Heart failure
- High cholesterol

How it helps

Supplementation with *Terminalia arjuna* bark (500-1,500 mg/day for 7-30 days) may reduce heart disease risk factors in people with heart disease, such as [R](#), [R](#), [R](#):

- Total cholesterol
- LDL cholesterol
- VLDL-cholesterol
- Triglycerides
- Oxidative stress
- Inflammation

It may also help reduce chest pain episodes and the need for medication while improving physical function.

74



Beetroot

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate beetroot into your diet by eating it raw in salads or drinking beetroot juice. Aim for a serving of about one small beetroot or 200-250 ml of beetroot juice daily. You can maintain this dietary practice consistently as part of your regular diet.

Description

Beetroot is a vegetable rich in dietary nitrates, which may help improve cardiovascular health and exercise performance.

How it helps

In a study of 48 men with heart disease, a betalain-rich supplement of red beetroot decreased blood pressure and blood levels of marker associated with heart disease including [\[R\]](#):

- Homocysteine
- Total cholesterol
- LDL cholesterol
- Triglycerides
- Glucose

75



Low-Intensity Exercise

IMPACT2 / 5

EVIDENCE2 / 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

Low-intensity exercise (15-60 min, 3 days/week for 3-12 months) may reduce blood pressure and improve physical fitness in people with heart disease. Studied forms of exercise include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Walking
- Jogging
- Stationary cycling

Higher-intensity exercise and, especially, higher exercise frequency, may offer greater benefits [\[R\]](#), [\[R\]](#).

76



Rhodiola

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of rhodiola supplement daily, preferably in the morning to avoid potential interference with sleep.

TYPICAL STARTING DOSE

500 mg

Description

Rhodiola is a plant native to the arctic regions of Europe and Asia, where it's traditionally used to enhance stamina, combat stress and fatigue, and improve mental performance and resilience in harsh environments. Its main compounds include rosavins and salidroside.

[Rhodiola](#) (*Rhodiola rosea*) is a plant that grows in the mountains of eastern Europe and Asia [\[R\]](#).

Rhodiola is an *adaptogen*, meaning that it may help you adapt to stress. According to early research, this herb may help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fatigue
- Burnout
- Low mood

How it helps

A meta-analysis of 13 studies and 1672 participants concluded that supplementation with rhodiola, both alone and as an add-on to conventional medicine, improves ischemic heart disease symptoms and ECG. However, the authors warned about the poor quality and high heterogeneity of the included studies [\[R\]](#).

77



Zinc

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

15 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

[Zinc](#) is an essential mineral. Your body needs it to [\[R\]](#), [\[R\]](#):

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [\[R\]](#).

Adults should get **8-11 mg of zinc** per day [\[R\]](#).

How it helps

People with heart disease and heart failure may have lower zinc levels compared to healthy people [\[R\]](#), [\[R\]](#).

Zinc supplementation may reduce heart disease risk factors such as [\[R\]](#), [\[R\]](#):

- Blood sugar levels
- Cholesterol levels

However, zinc supplementation is associated with a decrease in HDL “good” cholesterol, which is associated with a higher risk of heart disease. Moreover, genetically higher zinc levels have been associated with ischemic heart disease [\[R\]](#), [\[R\]](#).

78



Cruciferous Vegetables

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a serving of cruciferous vegetables, such as broccoli, cauliflower, Brussels sprouts, kale, or cabbage, into at least one meal each day. A serving size is about a half cup cooked or one cup raw. Try to maintain this habit consistently over time for the best health outcomes.

Description

Cruciferous vegetables like broccoli, cauliflower, and kale are rich in vitamins, fiber, and antioxidants. Including them in your diet can promote overall health and may offer cancer-protective properties.

Cruciferous vegetables are a group of vegetables that belong to the Brassicaceae family. They are rich in fiber, vitamins, minerals, and other nutrients.

Some common cruciferous vegetables include broccoli, cauliflower, cabbage, kale, and brussels sprouts.

How it helps

Consuming fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [\[R\]](#).

Cruciferous vegetables like broccoli and cabbage are rich in dietary fiber, antioxidants, and vitamins which help to reduce bad cholesterol levels and promote heart health. They also contain compounds that help to regulate blood pressure, reducing the risk of heart disease.

79



Leafy Green Vegetables

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Incorporate at least one serving of leafy green vegetables, such as spinach, kale, or Swiss chard, into your diet daily. This can be done by adding them to salads, smoothies, or as a side dish to your meals.

Description

Leafy green vegetables like spinach and kale are packed with vitamins, minerals, and antioxidants. Incorporating them into your diet can promote overall health by providing essential nutrients, supporting digestion, and reducing the risk of chronic diseases like heart disease and certain cancers.

Leafy green vegetables, also called leafy greens, or greens, are edible plant leaves, which can include stalks and shoots as well. Common examples include: lettuce, spinach, kale, chard, endive, and fennel.

Leafy greens contain a host of vitamins and minerals, as well as fiber. Most of them are a particularly good source of vitamin K.

How it helps

Consuming fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [\[R\]](#).

Leafy green vegetables are rich in dietary fiber, antioxidants, and heart-healthy nutrients like potassium and folate, which help lower high blood pressure and bad cholesterol levels.

80



Lycopene

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a lycopene supplement of 10 to 30 mg per day. It can be consumed with a fat-containing meal to enhance absorption. This supplementation can be ongoing daily to support overall health benefits such as heart health and antioxidant protection.

TYPICAL STARTING DOSE

10 mg

Description

Lycopene is a powerful antioxidant found in tomatoes and other red or pink fruits and vegetables. Consuming lycopene-rich foods may help reduce the risk of chronic diseases and support heart and prostate health.

[Lycopene](#) is a bright red substance that gives color to a number of fruits such as [R](#), [R](#):

- Tomato
- Watermelon
- Papaya
- Apricot

Lycopene has antioxidant properties. It may help support [R](#), [R](#), [R](#):

- Heart health
- Prostate health
- Cognition

How it helps

In a review of 17 articles, dietary lycopene intake or serum lycopene was inversely associated with all-cause mortality, prostate cancer, stroke, cardiovascular disease, metabolic syndrome, and male infertility [R](#).

Circulating lycopene, but not dietary lycopene, was associated with a statistically significant decrease in stroke risk in another study [R](#).

A meta-analysis of 5 studies found that high lycopene intake or serum levels were associated with a reduced stroke, cardiovascular disease, and mortality risk, but not with myocardial infarction [R](#).

81



Vitamin K1

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a vitamin K1 supplement once daily with a meal that includes fat, as fat increases its absorption. The dosage can vary depending on individual needs, but a common dose is between 90-300 micrograms. Continue this regimen daily for ongoing health benefits, particularly for bone and cardiovascular health.

TYPICAL STARTING DOSE

90 mcg

Description

Vitamin K encompasses two main forms: vitamin K1 (phylloquinone) and vitamin K2 (menaquinone). Vitamin K1 is primarily found in leafy green vegetables and plays a crucial role in blood clotting. Vitamin K2, sourced from animal products and fermented foods, is known for its potential to promote bone health and cardiovascular wellness.

How it helps

A significant association was found between dietary phylloquinone and reduced total coronary heart disease risk in a study. Elevated plasma dp-ucMGP, a marker of vitamin K deficiency, was linked to higher all-cause mortality risk and cardiovascular disease mortality [\[R\]](#).

Genetically higher vitamin K1 has been associated with a higher risk of ischemic heart disease [\[R\]](#).

82



L-Citrulline

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take 1.5 to 5 grams of L-citrulline supplements per day, orally, with or without food. This dosage can be taken all at once or divided into two to three smaller doses throughout the day. It's generally recommended to start at the lower end of the dosage range and adjust based on your body's response.

TYPICAL STARTING DOSE

3 g

Description

L-citrulline is an amino acid that may help improve blood flow and reduce muscle soreness, making it a popular supplement for athletes and individuals with certain cardiovascular conditions. Its potential to enhance nitric oxide production supports vascular health and overall circulation.

[Citrulline](#) is an amino acid (protein building block). Citrulline can be found in foods like [R](#), [R](#), [R](#), [R](#), [R](#):

- Watermelon
- Pumpkins
- Cucumber
- Bitter melon

The body uses L-citrulline to produce nitric oxide, a compound that helps widen blood vessels. It is important for heart and sexual health [R](#), [R](#), [R](#).

L-citrulline is commonly used as supplement to support [R](#):

- Blood vessel health
- Muscle health
- Metabolic health
- Sexual health

How it helps

L-Citrulline supplementation (6 g/day for 7-15 days) may improve blood vessel function in people with heart disease [R](#), [R](#).

83



Pycnogenol

IMPACT

2 / 5

EVIDENCE

1 / 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 a study of 23 people with heart disease, the maritime pine extract Pycnogenol (200 mg/day for 8 weeks) improved blood vessel function and reduced oxidative stress [\[R\]](#).

84



Fruits

IMPACT

1 / 5

EVIDENCE

3 / 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

Consuming fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [\[R\]](#).

Fruits are rich in vital nutrients such as fiber, potassium, and antioxidants that aid in controlling blood pressure and reducing LDL cholesterol. They also reduce the risk of heart disease by preventing artery inflammation and maintaining a healthy weight.

How to implement

Description

BPA is a well-known hormone disruptor. Research has linked BPA exposure to diabetes, heart disease, altered behavior, and more [R].

How it helps

Long-term exposure to PCB138 and PCB153, organo-chlorine pesticides, phthalates, and BPA has been associated with increased cardiovascular disease risk [R].

A meta-analysis associated BPA exposure with a 19% higher risk of cardiovascular disease [R].

BPA may contribute to heart disease by damaging the heart and blood vessels.

86



Berries

IMPACT

1 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a variety of berries such as strawberries, blueberries, raspberries, and blackberries into your daily diet. Aim for at least one cup of fresh or frozen berries every day, either as a snack, part of your breakfast (such as in oatmeal or yogurt), or as a dessert.

Description

Berries, such as strawberries, blueberries, and raspberries, are packed with antioxidants, vitamins, and fiber. Regular consumption of berries may support heart health, improve cognitive function, and contribute to overall well-being.

How it helps

Consuming fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [\[R\]](#).

Higher consumption of fruits, berries, and vegetables may be associated with an up to 41% reduced mortality risk from heart disease according to a study of 2641 men [\[R\]](#).

87



Avoid Cadmium Exposure

IMPACT

1 / 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

Elevated cadmium exposure, measured by increased urinary and blood levels, is linked to higher cardiovascular disease mortality (34% and 78%, respectively), coronary heart disease, stroke, and peripheral artery disease. It's also associated with higher total cholesterol, elevated LDL cholesterol, and lower HDL cholesterol levels. A systematic review of 12 studies found a connection between cadmium exposure and cardiovascular disease, particularly coronary heart disease (36% higher risk). Smokers have higher serum cadmium levels, potentially linking cadmium exposure to cardiovascular disease risk [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Cadmium can damage heart tissues, leading to cardiovascular diseases.

How to implement

Description

How it helps

- Artery hardening
- High blood pressure

Moreover, genetically higher BCAAs levels may be causally associated with an increased risk of high blood pressure [R, R].

Please note: *There is not enough safety data for long-term BCAA supplementation at doses above **12 g/day**. Increased BCAA intake may be linked to type 2 diabetes [R].*

89



Vegetables

IMPACT

1 / 5

EVIDENCE

3 / 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 fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [\[R\]](#).

Eating vegetables can directly boost heart health as they are low in unhealthy fats and cholesterol while being high in dietary fiber. Also, they contain various nutrients like potassium and vitamins that are beneficial to blood pressure and heart functions.

90



Mindfulness-Based Stress Reduction (MBSR)

IMPACT

1 / 5

EVIDENCE

3 / 5

How to implement

Enroll in an 8-week MBSR course, which includes a weekly 2.5-hour class, one all-day class after the sixth week, and 45 minutes of daily home practice guided by assignments and instructional recordings.

TYPICAL STARTING DOSE

2 hours

Description

Mindfulness-Based Stress Reduction (MBSR) is a structured program that teaches mindfulness techniques to reduce stress and improve overall mental and emotional health. MBSR has been shown to help individuals cope with chronic pain, anxiety, and other stress-related conditions.

How it helps

People with heart disease who participate in mindfulness-based stress reduction (30-180 min/session, 3-31 sessions, daily to every 2 weeks for 1 week to 1 year) may experience reductions in depression and stress compared to those who only receive usual care [\[R\]](#).

How to implement

Description

Mercury and other [heavy metals](#) are found in the soil, water, food, and some commonly-used household products. They adversely affect the environment and living organisms. According to some studies, mercury is considered **the most toxic heavy metal** in the environment [R, R].

- Tuna
- Shark
- Swordfish

How it helps

Mercury exposure was linked to increased risks of nonfatal ischemic heart disease, all-cause mortality, cardiovascular disease mortality, and mortality from other heart diseases in a meta-analysis of 14 studies and 34,000 participants. Notably, associations were observed at hair mercury concentrations of 1 µg/g for ischemic heart disease and 2 µg/g for all cardiovascular diseases but not stroke [R].

High levels of mercury can damage the heart tissues, leading to cardiovascular diseases.

How to implement

TYPICAL STARTING DOSE

300 mg

Description

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

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

How it helps

Experts suggest that stanols may help reduce the risk of heart disease by lowering blood pressure and cholesterol [R].

Sources of plant sterols and stanols that may reduce cholesterol include:

- **Nuts** like walnuts, pistachios, and almonds (at least 60 g/day) [[R](#), [R](#), [R](#), [R](#), [R](#)]
- **Rice bran oil** (18-50 g/day) [[R](#), [R](#)]
- **Avocado** (135-500 g/day) [[R](#), [R](#)]
- Plant sterol and stanol supplements (2-9 g/day for 4-6 weeks) [[R](#)]

Consuming plant sterols and stanols (1.6-2.5 g/day for 3-16 weeks) may reduce total cholesterol, LDL cholesterol, and triglycerides, potentially reducing the risk of coronary artery disease. You may also add plant sterols and stanols (2-3 g/day) to your diet by eating foods fortified with sterols and stanols [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

However, not all fortified foods are healthy and good for your cholesterol.

How to implement

Description

Carrots are an excellent source of vitamin A, as well as biotin, vitamins K1 and B6, potassium, and antioxidants. A ½ cup serving provides 459 mcg of vitamin A or 51%DV.

How it helps

Consuming fruits and vegetables is linked to a lower risk of cardiovascular diseases, including coronary heart disease and stroke, as well as reduced mortality from these conditions. Certain fruits and vegetables offer greater benefits [R].

Carrots are high in fiber and potassium, which can help reduce LDL cholesterol levels and promote heart health. Additionally, antioxidants in carrots like beta-carotene reduce oxidative stress.

How to implement

To avoid phthalate exposure, check product labels and choose phthalate-free options for personal care items, plastics (look for recycling codes 3 and 7 or the letters 'V' or 'PVC'), and household products. Additionally, reduce the use of plastic containers for food storage, especially those not marked as 'phthalate-free', and avoid microwaving food in plastic containers. Aim to make these changes consistently in your daily life for long-term health benefits.

Description

Avoiding phthalate exposure involves choosing phthalate-free products, such as personal care items and plastics, to minimize potential endocrine-disrupting effects and protect reproductive and hormonal health.

How it helps

Phthalates can disrupt your endocrine system and lead to a range of ailments including heart disease.

A meta-analysis of 29 studies and 88891 participants associated exposure to phthalate with an increased risk of cardiovascular disease [R].

95



Avoid Beta-Carotene Supplements

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Do not purchase or consume supplements that list beta-carotene as an ingredient. This includes checking the labels of multivitamins and other health supplements to ensure they are free of beta-carotene.

Description

Avoiding high-dose beta-carotene supplements is advisable, as excessive intake may increase the risk of certain health issues, including lung cancer in smokers. Getting beta-carotene from dietary sources like fruits and vegetables is a safer way to support overall health.

How it helps

A meta-analysis with 10 trials and 182,788 participants found that β -carotene supplementation was associated with a slight increase in overall cardiovascular incidence (by 4%) and consistently increased cardiovascular mortality (by 12%). A higher risk was observed when β -carotene was given alone and in smokers [R].

However, a Mendelian randomization study found there was no association [R].

96



Calcium Supplements

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Take 500-600 mg of calcium supplement twice daily with food. For best absorption, do not exceed 600 mg at one time and ensure a total daily intake of 1000-1200 mg from all sources, including diet. Continue indefinitely for ongoing support of bone health.

TYPICAL STARTING DOSE

1000 mg

Description

Calcium supplements are commonly used to support bone health and prevent conditions like osteoporosis. Adequate calcium intake is essential for maintaining strong bones and teeth.

[Calcium](#) is the most abundant mineral in the human body. It is vital for the bones, heart, muscles, and nervous system [\[R\]](#).

Your body gets calcium from food and needs vitamin D to help absorb it. Calcium can be found in a variety of foods, including [\[R\]](#):

- Dairy products
- Green, leafy vegetables
- Fish with edible soft bones (e.g., sardines)
- Calcium-fortified foods and beverages

How it helps

In a study of 17,968 participants aged 40-79, calcium supplementation was linked to increased cardiovascular and all-cause mortality in women but not in men. A review of 26 studies and 16 trials found that calcium supplements raised the risk of coronary heart disease by 8%, and by 20% when taken alone. Similarly, they increased the risk of myocardial infarction by 14%, and by 21% when taken alone. Dietary calcium sources did not increase cardiovascular disease risk, but calcium supplements might elevate coronary heart disease risk, particularly for myocardial infarction. Another meta-analysis involving 89,251 participants found no significant associations between supplementation and composite cardiovascular outcomes [\[R, R, R\]](#).

A genetic predisposition to higher serum calcium levels was associated with an increased risk of coronary artery disease and myocardial infarction [\[R, R\]](#).

Calcium supplements can cause calcium to build up in your arteries, leading to heart disease.

Please note: calcium competes with iron for absorption in the intestines, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using calcium supplements.

How to implement

Description

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

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

Heavy metals can cause inflammation and oxidative stress in the heart, disrupting its normal function.

98



Avoid Calcium Supplements

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Do not purchase or consume any calcium supplements. If you're currently using them, discontinue use immediately and do not replace them with another form of calcium supplement. Ensure that your calcium needs are met through dietary sources such as dairy products, leafy green vegetables, or fortified foods instead.

Description

Calcium supplements are pills people take to increase their calcium levels. But sometimes, instead of helping, they can lead to kidney stones and heart issues. Therefore, it's generally healthier to get your calcium from food like milk, cheese, and leafy green vegetables.

How it helps

In a study of 17,968 participants aged 40-79, calcium supplementation was linked to increased cardiovascular and all-cause mortality in women but not in men. A review of 26 studies and 16 trials found that calcium supplements raised the risk of coronary heart disease by 8%, and by 20% when taken alone. Similarly, they increased the risk of myocardial infarction by 14%, and by 21% when taken alone. Dietary calcium sources did not increase cardiovascular disease risk, but calcium supplements might elevate coronary heart disease risk, particularly for myocardial infarction. Another meta-analysis involving 89,251 participants found no significant associations between supplementation and composite cardiovascular outcomes [\[R\]](#), [\[R\]](#), [\[R\]](#).

A genetic predisposition to higher serum calcium levels was associated with an increased risk of coronary artery disease and myocardial infarction [\[R\]](#), [\[R\]](#).

Calcium supplements can cause calcium to build up in your arteries, leading to heart disease.

Please note: *calcium competes with iron for absorption in the intestines, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using calcium supplements.*

How to implement

TYPICAL STARTING DOSE

6 mg

Description

Beta-carotene is a pigment found in various fruits and veggies like carrots, which gives them their bright colors. When we eat these foods, our body can convert beta-carotene into vitamin A, which is essential for good vision, a strong immune system, and healthy skin. So eating plenty of beta-carotene-rich foods can help us maintain our overall well-being.

How it helps

A meta-analysis with 10 trials and 182,788 participants found that β -carotene supplementation was associated with a slight increase in overall cardiovascular incidence (by 4%) and consistently increased cardiovascular mortality (by 12%). A higher risk was observed when β -carotene was given alone and in smokers [R].

However, a Mendelian randomization study found there was no association [R].

100



Glucosamine

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Take glucosamine as a dietary supplement, commonly available in capsules or liquid form. The standard dose is 1500 mg per day, which can be taken all at once or divided into multiple doses throughout the day. It's often recommended to continue taking glucosamine for at least 3 to 4 months to evaluate its effectiveness in relieving joint pain or osteoarthritis symptoms.

TYPICAL STARTING DOSE

1500 mg

Description

Glucosamine is a supplement commonly used to support joint health and may help alleviate symptoms of osteoarthritis. It's believed to promote cartilage health and reduce joint discomfort, but individual responses can vary.

[Glucosamine](#) is a compound naturally made by the body. It helps keep the connective tissues, such as the cartilage in the joints, strong and elastic [\[R\]](#).

Many people use glucosamine supplements to support joint health [\[R, R, R\]](#).

How it helps

In a study with 479,650 participants, glucosamine use was associated with a reduced risk of heart failure (HF) by 13%. This protective effect was stronger in males and those with an unfavorable lifestyle. Mendelian randomization analysis confirmed this protective effect and suggested that it may be partially mediated by a 10.5% reduction in coronary heart disease risk and a 14.4% reduction in stroke risk, with both mediators contributing to a total of 22.7% reduction in HF risk associated with glucosamine use [\[R\]](#).

101



Policosanol

IMPACT

1 / 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

Policosanol (1-20mg, 2x/day over 2-20 months) may increase exercise performance, reduce total and LDL cholesterol, and improve heart disease symptoms in people with coronary artery disease. The benefits may be greater when combined with standard therapy [\[R, R, R\]](#).

102



Genistein

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a genistein supplement daily, with a usual dosage range between 30 mg to 100 mg. It is best taken with food to enhance absorption. Continue this regimen daily for at least six months to evaluate its benefits fully.

TYPICAL STARTING DOSE

30 mg

Description

Genistein is an isoflavone found in soy products that may offer potential health benefits, including antioxidant and anti-inflammatory properties. It has been studied for its potential role in hormone regulation and the reduction of certain cancer risks.

How it helps

In one study in postmenopausal women with metabolic syndrome, 1-year genistein supplementation (54 mg/day) alongside a Mediterranean-style diet and exercise improved cardiac function, particularly left ventricular ejection fraction and left atrium remodeling [\[R\]](#).

Another study involving 79 healthy postmenopausal women showed that 1-year genistein therapy (54 mg/day) had a similar positive effect on endothelial function as estrogen/progestin therapy, brachial artery flow-mediated dilation, and nitric oxide metabolism [\[R\]](#).

Genistein may help by lowering LDL cholesterol levels and improving blood vessel elasticity.

103



Cranberry

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume one to two 8-ounce servings of unsweetened cranberry juice daily, or take 500 mg of cranberry supplements twice daily. Continue this practice consistently for at least several weeks to potentially observe benefits.

Description

Cranberries are known for their high antioxidant content and potential to promote urinary tract health by preventing bacterial adhesion. Consuming cranberries or cranberry products may help reduce the risk of urinary tract infections and provide antioxidant benefits.

Cranberries are fruits rich in vitamins, minerals, and antioxidants. They are available in different forms, including [\[R\]](#):

- Dried fruits
- Juice
- Powder
- Pills

How it helps

Chronic cranberry juice (containing 835 mg total polyphenols and 94 mg anthocyanins for 2 weeks) intake may reduce artery hardening in people with heart disease [\[R\]](#).

104



Black Seed (Black Cumin)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 1000 mg of black seed (black cumin) supplement daily, preferably split into two doses of 500 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE
1000 mg

Description

Black seed, also known as black cumin or *Nigella sativa*, has been used for its potential health benefits in traditional medicine. It is believed to have anti-inflammatory, antioxidant, and immune-boosting properties.

[Black seed](#) (black cumin) and its oil are used in cooking and traditional medicine [\[R\]](#).

People use black seed for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Asthma
- Allergies
- High blood sugar
- High blood pressure
- Joint pain

How it helps

A systematic review concluded that black seed (both in powder and oil form) improved blood lipid profile, potentially helping prevent heart disease [\[R\]](#).

In a placebo-controlled trial with 60 coronary artery disease patients, 8 weeks of black seed oil (2 g/day) supplementation led to significant improvements in metabolic parameters, including weight loss (1.82 kg), reduced BMI (0.67 kg/m2), decreased waist circumference (2.15 cm), lower hip circumference (1.26 cm), improved waist-to-hip ratio (0.008), and lowered systolic (9.52 mmHg) and diastolic blood pressure (8.26 mmHg), as well as fasting blood glucose levels (4.32 mg/dL), and levels of ICAM-1, VCAM-1, and MDA [\[R\]](#), [\[R\]](#).

Black seed oil (500 mg, 2x/day for 2 months) increased FMD (by 2.97%) and plasma NOx levels (by 4.73 μmol/L) in a placebo-controlled trial of 50 subjects with cardiovascular disease risk factors [\[R\]](#).

Black seed may help by reducing risk factors for heart disease such as high blood pressure and high cholesterol. Additionally, its antioxidant properties may help protect the heart and blood vessels from damage and inflammation.

105



Quercetin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 250-1000 mg of quercetin supplement daily with a glass of water, preferably with a meal to aid in its absorption.

TYPICAL STARTING DOSE

250 mg

Description

Quercetin is a natural plant flavonoid found in various foods, particularly in fruits and vegetables like apples, onions, and broccoli. It is used as a dietary supplement and is valued for its potential antioxidant and anti-inflammatory properties.

[Quercetin](#) is a **plant-based antioxidant**. It supports the immune system and helps lower inflammation [\[R\]](#), [\[R\]](#).

Good sources of quercetin include [\[R\]](#):

- Apples
- Onions
- Tea

People mainly use quercetin supplements to relieve allergies [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a study of 85 patients with coronary heart disease, quercetin (120 mg daily) added to standard treatment improved left ventricular and diastolic function and reduced ST segment depression [\[R\]](#).

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

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

106



Blood Flow Restriction Training

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Wrap a blood flow restriction (BFR) band or cuff around the upper portion of your limbs (arms or legs) at a pressure that feels tight but not painful, aiming for a perceived tightness of 7 out of 10. Engage in low-intensity resistance training, such as lifting weights that are 20% to 30% of your one-rep max, or perform bodyweight exercises. Do this for 15-30 minutes, 2-3 times a week. Always release the bands after each exercise set to restore normal circulation.

TYPICAL STARTING DOSE

15 minutes

Description

Blood flow restriction (BFR) training is a specialized fitness and rehabilitation technique that involves applying pressure to restrict blood flow to specific muscles during exercise. This is typically achieved using cuffs or wraps placed on the limbs and then inflated to a controlled pressure. By temporarily reducing blood flow while allowing arterial inflow, BFR training creates a unique physiological response. It induces metabolic stress and muscle fatigue, leading to muscle growth and strength gains, even with lighter weights.

BFR is widely used in rehabilitation settings to aid in the recovery of injured individuals, helping them rebuild muscle strength without overloading compromised areas. It also has applications in improving muscular endurance and may have potential cardiovascular benefits, such as lowering blood pressure and enhancing vascular function. However, it should be performed under the guidance of a trained professional, as it's not suitable for everyone and has specific safety considerations.

How it helps

In a non-placebo-controlled trial of 24 patients with coronary artery disease, receiving BFR training for 8 weeks lowered systolic (by 10 mmHg) and diastolic (by 2 mmHg) blood pressure while improving hemodynamic and hemostatic responses [\[R\]](#).

107



Propionyl-L-Carnitine

IMPACT

1 / 5

EVIDENCE

1 / 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

The effects of propionyl-L-carnitine on exercise tolerance of 12 patients with stable exertional angina were assessed in a study. Compared to placebo, propionyl-L-carnitine significantly increased total work (17%) and prolonged exercise time and time to an ischemic threshold. It caused no significant changes in heart rate and systolic blood pressure [\[R\]](#).

Propionyl-L-carnitine aids in heart health by improving the body's energy production and blood circulation, particularly to the heart muscles. It may also help by enhancing heart function and exercise tolerance.

108



Apple Juice

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 8 ounces (about 240 milliliters) of apple juice once daily, preferably in the morning with your breakfast. This routine should be maintained for at least 4 weeks to observe potential health benefits.

Description

Apple juice is known for its natural sweetness and pleasant taste. It is a good source of vitamin C and contains essential antioxidants, which can support immune health and provide a boost of hydration.

How it helps

Consumption of apple juice (375 mL/day for 6 weeks) may reduce oxidized LDL cholesterol levels in healthy people, which might be associated with reduced heart disease risk. Apples may help due to their antioxidant properties [\[R\]](#).

109



Avoid Acrylamide

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Reduce your intake of fried, baked, or roasted high-carbohydrate foods, such as potato chips, fries, and toast, to minimal levels. Opt for boiling, steaming, or microwaving these foods instead. When cooking at high temperatures, aim to keep the temperature below 248 degrees Fahrenheit (120 degrees Celsius) to prevent the formation of acrylamide.

Description

Avoiding acrylamide involves minimizing exposure to this chemical compound, which can form in certain foods when cooked at high temperatures. Reducing acrylamide intake may lower the risk of potential health concerns associated with its consumption.

How it helps

A study of 4670 participants associated exposure to acrylamide with cardiovascular diseases, but only in smokers [\[R\]](#).

Acrylamide may increase the risk of heart disease by causing inflammation and oxidative stress. This may damage the tissues of the heart and blood vessels over time.

110



Capsaicin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Apply a capsaicin cream or gel to the affected area up to 4 times daily. Make sure the skin is intact and not broken. Start with a lower concentration (0.025%) and gradually increase to 0.075% if needed for pain relief. Use continuously for at least 4 weeks to evaluate its effectiveness.

Description

Capsaicin, found in chili peppers, is known for its potential to boost metabolism and promote weight loss. It can also provide pain relief when used topically in certain creams and ointments.

How it helps

In a placebo-controlled trial of 12 male patients with stable coronary artery disease, transdermal patches with oleic capsaicin (3 g) applied for 1 day improved ischemic threshold. In a placebo-controlled trial of 42 adults with low HDL cholesterol, supplementation with capsaicin (4 mg/day) for 3 months increased HDL cholesterol (by 0.08 mmol/L) while lowering triglycerides, CRP, and phospholipid transfer protein activity [\[R\]](#), [\[R\]](#).

Capsaicin may help by improving blood flow and reducing cholesterol levels.

111



Bananas

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate 1-2 bananas into your daily diet. Bananas can be eaten as a standalone snack, added to cereal, oatmeal, or smoothies, or used as an ingredient in baking. Aim to include them regularly for ongoing dietary benefits.

Description

Bananas are a nutrient-rich fruit packed with potassium, fiber, and essential vitamins. They are a convenient and healthy snack option that can help support heart health, digestive regularity, and overall well-being.

Bananas are a good source of vitamins B6 and C, as well as numerous minerals, including potassium, copper, and magnesium. A single banana provides 0.4 mg of vitamin B6 or 25%DV.

How it helps

A study among 398 people found a 44-62% risk reduction in heart disease with banana consumption (1-2 and 3-6 servings/week) [\[R\]](#).

112



Orange Juice

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 8-ounces (about 240 milliliters) of orange juice daily, preferably in the morning with breakfast. This routine can be followed every day as part of a balanced diet for an indefinite period.

Description

Orange juice is a citrus beverage made from the juice of oranges. It is a rich source of vitamin C and other essential nutrients, contributing to immune support, skin health, and overall well-being.

How it helps

Orange juice (more than 500 mL/day) may support heart health by [\[R\]](#), [\[R\]](#):

- Lowering total and LDL cholesterol
- Increasing HDL cholesterol

113

Bifidobacterium Animalis Subsp. Lactis

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing Bifidobacterium animalis subsp. lactis at a dose of 10 billion colony-forming units (CFU) daily, with or without food. Joe's preferred strain is *B lactis* HN019 (10B CFU). Continue this regimen daily for at least 2 weeks to 4 weeks to observe potential benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Bifidobacterium animalis lactis is a specific strain of probiotic bacteria known for its potential to support digestive health and immune function.

[Bifidobacterium animalis](#) is a [probiotic](#) bacterium that can be found in the healthy gut of most mammals, including humans. *B. lactis* was previously considered to be a separate species but was shown to be a subspecies of *B. animalis* [\[R, R\]](#).

People mainly take *B. animalis* to support gut health [\[R, R, R, R, R, R\]](#).

How it helps

In a 6-month randomized trial, coronary artery disease patients were divided into a probiotic group (which received *Bifidobacterium lactis* Probio-M8, atorvastatin, and metoprolol) and a placebo group (which received placebo, atorvastatin, and metoprolol). The probiotic group showed significant improvements in Seattle Angina Questionnaire (SAQ) scores, reduced depression and anxiety, and lower levels of interleukin-6 and LDL cholesterol compared to the placebo group [\[R\]](#).

114



Green Tea Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a green tea extract supplement containing 250-500 mg of EGCG (the active compound in green tea) daily, preferably with a meal to enhance absorption. This dosage is typically split into two separate doses, taken in the morning and later in the day. Continue this regimen for at least three months to observe potential health benefits.

TYPICAL STARTING DOSE

250 mg

Description

Green tea extract is a concentrated form of the beneficial compounds found in green tea, such as catechins. It is used in dietary supplements for its potential to enhance metabolism, aid in weight management, and provide antioxidant protection.

[Green tea](#) is made from the same plant as black tea (*Camellia sinensis*). However, the leaves and buds are processed differently [\[R\]](#).

Green tea contains **catechins**. These are antioxidants that help prevent [oxidative stress](#) [\[R\]](#).

EGCG is the main catechin found in green tea. It may help reduce inflammation and support weight loss [\[R\]](#).

How it helps

Green tea extract (equivalent to 8.5 g/day of tea for 5 weeks) may reduce the levels of oxidized low-density lipoprotein (LDL), which plays a key role in the development of artery hardening and heart disease. It may also improve blood vessel function due to its antioxidants [\[R\]](#).

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

115



Ginkgo

IMPACT

1 / 5

EVIDENCE

1 / 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

In 2 non-placebo-controlled trials of 160 patients with coronary artery disease, intravenous administration of ginkgo extract for 2 weeks increased descending coronary artery blood flow [\[R\]](#), [\[R\]](#).

116



Lactobacillus Plantarum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a probiotic supplement containing *Lactobacillus plantarum* 299V daily. The typical dosage is 10 billion colony-forming units (CFUs). Continue for at least 4 weeks to assess benefits on digestive health.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus plantarum is a [probiotic](#) bacterium found in many fermented plant products such as sauerkraut, pickles, brined olives, and Korean kimchi [\[R\]](#).

People take *L. plantarum* supplements to improve [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Diarrhea
- Skin appearance
- IBD
- High cholesterol

How it helps

In a placebo-controlled trial of 20 men with stable CAD, supplementation with *L. plantarum* Lp299v (20 billion cfu/day) for 6 weeks improved vascular endothelial function and decreased systemic inflammation [\[R\]](#).

117



Hydroxytyrosol And Extra Virgin Olive Oil (EVOO)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing at least 5 mg of hydroxytyrosol daily, and incorporate 1-2 tablespoons of extra virgin olive oil into your diet. This can be done by using the olive oil as a dressing for salads, drizzling it over cooked vegetables, or using it in low-temperature cooking.

TYPICAL STARTING DOSE

5 mg

Description

Hydroxytyrosol is a natural phenolic compound found in extra virgin olive oil. It is known for its antioxidant properties and may contribute to the health benefits associated with the Mediterranean diet. Extra virgin olive oil is a key component of the Mediterranean diet and is rich in monounsaturated fats and antioxidants like hydroxytyrosol. It is associated with heart health and may have anti-inflammatory properties.

How it helps

In a double-blind crossover trial with chronic coronary artery syndrome patients, hydroxytyrosol-enriched olive oil (412.5 mg olive oil with 2.5 mg hydroxytyrosol for 1 month) significantly improved various cardiovascular markers compared to placebo. This included improved endothelial function, arterial health, and left ventricular diastolic function, while also reducing oxidative stress and inflammation markers [\[R\]](#).

Hydroxytyrosol may help by reducing inflammation and LDL cholesterol levels. Additionally, EVOO is high in cholesterol-lowering monounsaturated fats.

118



Exercise and Sauna

IMPACT

1 / 5

EVIDENCE

1 / 5

Description

Regular exercise offers a wide range of health benefits, including improved cardiovascular fitness, enhanced muscle strength, better mental health, and reduced risk of chronic diseases such as obesity, diabetes, and heart disease. Engaging in physical activity promotes overall well-being and longevity.

Sauna is a form of whole-body hot application that originated in Finland. Saunas are small rooms that use dry heat from a stove or hot rocks to raise the temperature of the room to 80-100 °C with very low humidity (10-20%) [\[R\]](#).

[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 **30 minutes of moderate physical activity every day**, including walking. **Getting a mix of cardio (at least 150 min/week) and strength training (2 times/week) may be optimal.**

People mainly use saunas to help [\[R\]](#):

- Detox
- Increase blood circulation
- Reduce pain
- Promote relaxation

How it helps

A study compared exercise with and without sauna bathing in sedentary adults with cardiovascular risk factors. Adding sauna to regular exercise significantly enhanced cardiorespiratory fitness, reduced systolic blood pressure, and lowered cholesterol [\[R\]](#).

119



D-Ribose

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 5 grams of D-Ribose powder mixed with water or juice, three times a day. Start with this dosage for at least 3 weeks to help improve energy levels and heart function, then adjust as needed.

TYPICAL STARTING DOSE

15 g

Description

D-ribose is a sugar molecule that plays a role in energy production in cells. It is sometimes used as a supplement to support muscle recovery, reduce fatigue, and improve exercise performance.

[D-ribose](#) is a sugar involved in the production of energy in the body. It is also the structural basis of DNA and RNA [\[R\]](#).

People use it as a supplement to help with heart disease and [chronic fatigue syndrome](#) [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a placebo-controlled trial of 20 men with coronary artery disease, supplementation with D-ribose (60 g/day) for 3 days improved the heart’s tolerance to ischemia. The combination of D-ribose, creatine, vitamin B1, and vitamin B6 as an add-on to conventional treatment improved exercise tolerance in a placebo-controlled trial of 53 patients with ischemic heart disease [\[R\]](#), [\[R\]](#).

D-ribose aids in the production of ATP, which is vital in maintaining healthy heart function.

Please note: *The long-term safety of D-ribose in daily doses above 36 mg/kg (2.5 g for a 70-kg person) is unknown. Consult your doctor before supplementing* [\[R\]](#).

120



Rose Hip

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a 500 mg rose hip supplement daily, preferably with a meal to aid absorption.

TYPICAL STARTING DOSE

500 mg

Description

Rose hip is the fruit of the wild rose plant and is commonly used in various forms, such as oil or extract. It's rich in nutrients like vitamin C, antioxidants, and essential fatty acids, making it valuable for skincare and immune health.

Rose hips are round fruits found on rose plants [\[R\]](#).

They're a **good source of vitamin C and other antioxidants**. Some compounds in rose hips are also **anti-inflammatory** [\[R, R, R\]](#).

How it helps

In a placebo-controlled trial of 31 obese participants, consuming a rose hip powder drink (40 g/day) for 6 months lowered systolic blood pressure (by 3.4%) LDL cholesterol (by 6%), and LDL:HDL (by 6.5%), as well as the risk of heart disease (by 17%) [\[R\]](#).

In another placebo-controlled trial of 160 patients with coronary heart disease, supplementation with mulberry leaf extract (150 mg/day) for 1 year improved antioxidant and anti-inflammatory status and serum lipid profile, and reduced carotid intima-media thickness [\[R\]](#).

Mulberry supplements are rich in antioxidants and nutrients like resveratrol that can contribute to heart health by reducing inflammation and oxidative stress. They may also help lower cholesterol levels and blood pressure, thus reducing the risk of heart disease.

121



Red Light Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Position yourself or the specific area of your body that needs treatment about 6 inches away from a red light therapy device. Use the device for 10 to 20 minutes daily. It is recommended to continue this daily regimen for at least several weeks to notice benefits.

TYPICAL STARTING DOSE

20 minutes

Description

Red light therapy involves exposure to low-level red or near-infrared light, which may promote skin rejuvenation, reduce inflammation, and improve circulation when used for therapeutic purposes in skin care and wellness treatments.

How it helps

In a study of 39 heart disease patients, red light therapy improved ventricular function and decreased chest pain during exercise tests [\[R\]](#).

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Baicalin

IMPACT

1 / 5

EVIDENCE

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How to implement

Take baicalin supplements in doses ranging from 50 to 500 mg per day. Choose a high-quality supplement and consult with a healthcare provider before beginning, especially if taking other medications or if pregnant or breastfeeding. Baicalin should be taken with a glass of water, preferably with a meal to aid absorption, and can be divided into 1-2 doses throughout the day. Continuous use should be reassessed every 3-6 months with healthcare guidance.

TYPICAL STARTING DOSE

50 mg

Description

Baicalin is a natural compound found in certain plants like the Chinese skullcap. It has several health benefits like reducing inflammation, battling bacteria, and protecting the brain. Research also suggests it could be useful in treatments for heart and liver conditions.

How it helps

In a placebo-controlled trial of 374 patients with coronary artery disease and rheumatoid arthritis, supplementation with baicalin (500 mg/day) for 12 weeks lowered triglycerides, total cholesterol, LDL-cholesterol, and CRP levels [\[R\]](#).

Baicalin may help by reducing inflammation and oxidative stress, two key factors in heart disease.

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Ergothioneine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take ergothioneine as a dietary supplement in the range of 5-10 mg per day. This is typically done by consuming a capsule or tablet once daily, ideally with a meal to enhance absorption. There is currently no established duration for ergothioneine supplementation, so it may be taken indefinitely or as needed based on personal health goals and under the guidance of a healthcare provider.

TYPICAL STARTING DOSE

5 mg

Description

Ergothioneine is an amino acid-like compound found in certain foods, particularly mushrooms. It is believed to have antioxidant properties and may contribute to overall cellular health and protection against oxidative stress.

How it helps

Ergothioneine exhibits significant antioxidant and anti-inflammatory effects [\[R\]](#), [\[R\]](#).

In one study, higher ergothioneine levels were responsible for the link between healthy eating patterns and lower coronary artery disease risk [\[R\]](#).

The concentration of ergothioneine in human blood varies with age. It peaks during adolescence and then gradually declines, with a slight increase observed in older adults. This pattern suggests a potential role in maintaining health across different life stages [\[R\]](#).

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Black Seed Oil

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take one to two teaspoons (5-10ml) of black seed oil twice daily, preferably before meals. For capsule forms, follow the manufacturer's instructions, commonly 500mg capsules twice daily. Continue this regimen for up to 8 weeks to evaluate its effects.

TYPICAL STARTING DOSE

2 tsp

Description

Both black seed extract and black seed oil have been traditionally used for their potential health benefits, including anti-inflammatory and antioxidant properties. They may support overall wellness and immune function when incorporated into a balanced diet.

[Black seed](#) (black cumin) and its oil are used in cooking and traditional medicine [\[R\]](#).

People mainly use black seed for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Allergies
- Joint pain

How it helps

In a placebo-controlled trial with 60 coronary artery disease patients, 8 weeks of black seed oil (2 g/day) supplementation led to significant improvements in metabolic parameters, including weight loss (1.82 kg), reduced BMI (0.67 kg/m2), decreased waist circumference (2.15 cm), lower hip circumference (1.26 cm), improved waist-to-hip ratio (0.008), and lowered systolic (9.52 mmHg) and diastolic blood pressure (8.26 mmHg), as well as fasting blood glucose levels (4.32 mg/dL), and levels of ICAM-1, VCAM-1, and MDA [\[R\]](#), [\[R\]](#).

Black seed oil (500 mg, 2x/day for 2 months) increased FMD (by 2.97%) and plasma NOx levels (by 4.73 μmol/L) in a placebo-controlled trial of 50 subjects with cardiovascular disease risk factors [\[R\]](#).

Black seed oil may help by reducing LDL cholesterol and blood pressure, which are key risk factors for heart disease. It may also help manage blood sugar levels.

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Avoid Excessive Oleic Acid Consumption

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Limit your intake of foods high in oleic acid, such as olive oil, avocados, and certain nuts like almonds and hazelnuts, to no more than 2 servings per day. A serving is typically 1 tablespoon for oils or 1 ounce for nuts and avocados.

Description

Oleic acid is a type of fat found in certain foods like olive oil. Although it's good for your heart in small amounts, eating too much of it can lead to weight gain and other health problems. So, it's important to consume it in moderation for a balanced diet and overall health.

How it helps

Genetically higher oleic acid levels may be associated with a greater risk of dilated cardiomyopathy. However, higher oleic acid levels may not be associated with other cardiovascular events [\[R\]](#), [\[R\]](#).

High oleic acid levels may be a risk factor for heart complications and death from any cause [\[R\]](#).

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Singing

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Dedicate at least 20 minutes to singing daily, choosing songs that you enjoy and that allow for a range of vocal expressions. This practice can be done alone, with a group, or during a dedicated singing class, with consistency being key for potential health benefits.

TYPICAL STARTING DOSE

20 minutes

Description

Singing is a form of expression where you use your voice to create music. It also exercises your lungs and heart by providing a kind of workout for your respiratory system. By doing so, it improves your cardiovascular performance and overall health, reducing stress and boosting your mood.

How it helps

In a non-placebo-controlled trial of 24 patients with acquired or congenital structural heart disease, singing in a choir for 12 weeks improved respiratory muscle strength and quality of life [\[R\]](#).

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Betaine (TMG)

IMPACT

0 / 5

EVIDENCE

3 / 5

How to implement

To take Betaine (TMG) as a supplement, consume 500-2000 mg daily, preferably with a meal to enhance absorption. It is recommended to start at the lower end of the dosage range and adjust based on personal tolerance and effectiveness. This supplement can be taken indefinitely for ongoing support of heart health and liver function.

TYPICAL STARTING DOSE

500 mg

Description

Betaine is a compound found in various foods and used in dietary supplements for its potential to support liver health and contribute to healthy homocysteine levels.

How it helps

A meta-analysis of 16 prospective studies, 19256 participants, and 3315 incident cases found that people with elevated concentrations of TMAO precursors (L-carnitine, choline, or betaine) had an approximately 1.3 to 1.4 times higher risk for major adverse cardiovascular events compared to those with low concentrations [\[R\]](#).

However, another meta-analysis of 6 prospective studies comprising 18,076 incident cardiovascular events, 5343 cardiovascular deaths, and 184,010 total participants found that incident cardiovascular disease was not associated with betaine intake [\[R\]](#).

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Avoid Betaine (TMG) Supplements

IMPACT

0 / 5

EVIDENCE

3 / 5

How to implement

Do not purchase or consume any dietary supplements that list betaine (also known as trimethylglycine or TMG) among their ingredients. Check the labels of supplements you currently use or plan to buy to ensure they are free of betaine.

Description

Avoiding excessive betaine supplements is recommended, as very high intake may have potential side effects. Betaine can be obtained naturally from foods like beets and spinach without the risk of overconsumption.

How it helps

A meta-analysis of 16 prospective studies, 19256 participants, and 3315 incident cases found that people with elevated concentrations of TMAO precursors (L-carnitine, choline, or betaine) had an approximately 1.3 to 1.4 times higher risk for major adverse cardiovascular events compared to those with low concentrations [\[R\]](#).

However, another meta-analysis of 6 prospective studies comprising 18,076 incident cardiovascular events, 5343 cardiovascular deaths, and 184,010 total participants found that incident cardiovascular disease was not associated with betaine intake [\[R\]](#).

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Plasmalogens

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

Follow the dosage instructions provided on the product label or as directed by your healthcare provider. Typically, these supplements come in capsule form and are taken once daily with water, ideally with a meal to enhance absorption. Consistency is key, so taking them at the same time each day is recommended. Always consult a healthcare professional before starting plasmalogen supplements, especially if you are pregnant, nursing, or have any medical conditions.

Description

Plasmalogens are a special kind of phospholipids found in cell membranes, particularly in the brain (comprising 20% of its content), heart, lungs, eyes, and kidneys. Plasmalogens help the nervous system work and prevent brain cell death by reducing inflammation and oxidative stress. Their levels decrease with age [\[R\]](#).

Plasmalogen supplements are being researched to improve cognitive function in both healthy subjects and those with mild cognitive impairment or Alzheimer’s disease [\[R, R\]](#).

How it helps

A study of 10,339 participants found that those with the highest ethanolamine plasmalogen levels had a decreased prevalence of type 2 diabetes and cardiovascular disease, as well as reduced mortality risk [\[R\]](#).

However, whether supplementation helps reduce the risks remains unknown.

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Hydroxytyrosol

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a hydroxytyrosol supplement at a dose of 5 to 10 mg per day, with or without food. This supplement should be taken daily for at least 8 to 12 weeks to observe potential health benefits.

TYPICAL STARTING DOSE
5 mg

Description

Hydroxytyrosol is a natural phenolic compound found in extra virgin olive oil. It is known for its antioxidant properties and may contribute to the health benefits associated with the Mediterranean diet.

How it helps

In a double-blind crossover trial with chronic coronary artery syndrome patients, hydroxytyrosol-enriched olive oil (412.5 mg olive oil with 2.5 mg hydroxytyrosol for 1 month) significantly improved various cardiovascular markers compared to placebo. This included improved endothelial function, arterial health, and left ventricular diastolic function, while also reducing oxidative stress and inflammation markers [\[R\]](#).

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Black Chokeberry

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate black chokeberry (*Aronia melanocarpa*) in your diet by consuming 100-200 grams of fresh berries daily. If using a concentrated form like juice or extracts, follow the manufacturer's instructions, usually around 100 ml of juice or 500 mg of extract per day, for at least 8-10 weeks to observe potential health benefits.

Description

Black chokeberry is a fruit known for its high content of antioxidants and potential health benefits. It may support cardiovascular health and provide immune system support when incorporated into a balanced diet.

How it helps

Polyphenols from black chokeberry may be more effective at preventing heart disease in people with certain gene variants [\[R\]](#).

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Acetyl-L-Carnitine

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500-1,000 mg of Acetyl-L-Carnitine per day, split into 2 or 3 doses, with or without food. Joe prefers taking 500 mg in the morning. It can be taken indefinitely for chronic conditions or for a period of several months for acute concerns.

TYPICAL STARTING DOSE

500 mg

Description

[Carnitine](#) is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine. Acetyl-L-carnitine may help with nerve damage and mood problems.

[Carnitine](#) is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine [\[R\]](#), [\[R\]](#), [\[R\]](#).

[Acetyl-L-carnitine](#) may help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Nerve damage
- Mood problems
- Cognitive decline

Doctors are also studying its potential effect on drug addiction [\[R\]](#).

How it helps

Genetically predicted acetyl-carnitine is associated with a higher risk of heart disease and heart failure, especially in men. Acetyl-L-carnitine may be linked to [\[R\]](#):

- Higher triglycerides
- Lower HDL-cholesterol

Next Steps

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

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

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.