

High Cholesterol

DNA Health Report

REPORT CATEGORY —



HEART & BLOOD
VESSELS

Sample Client

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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

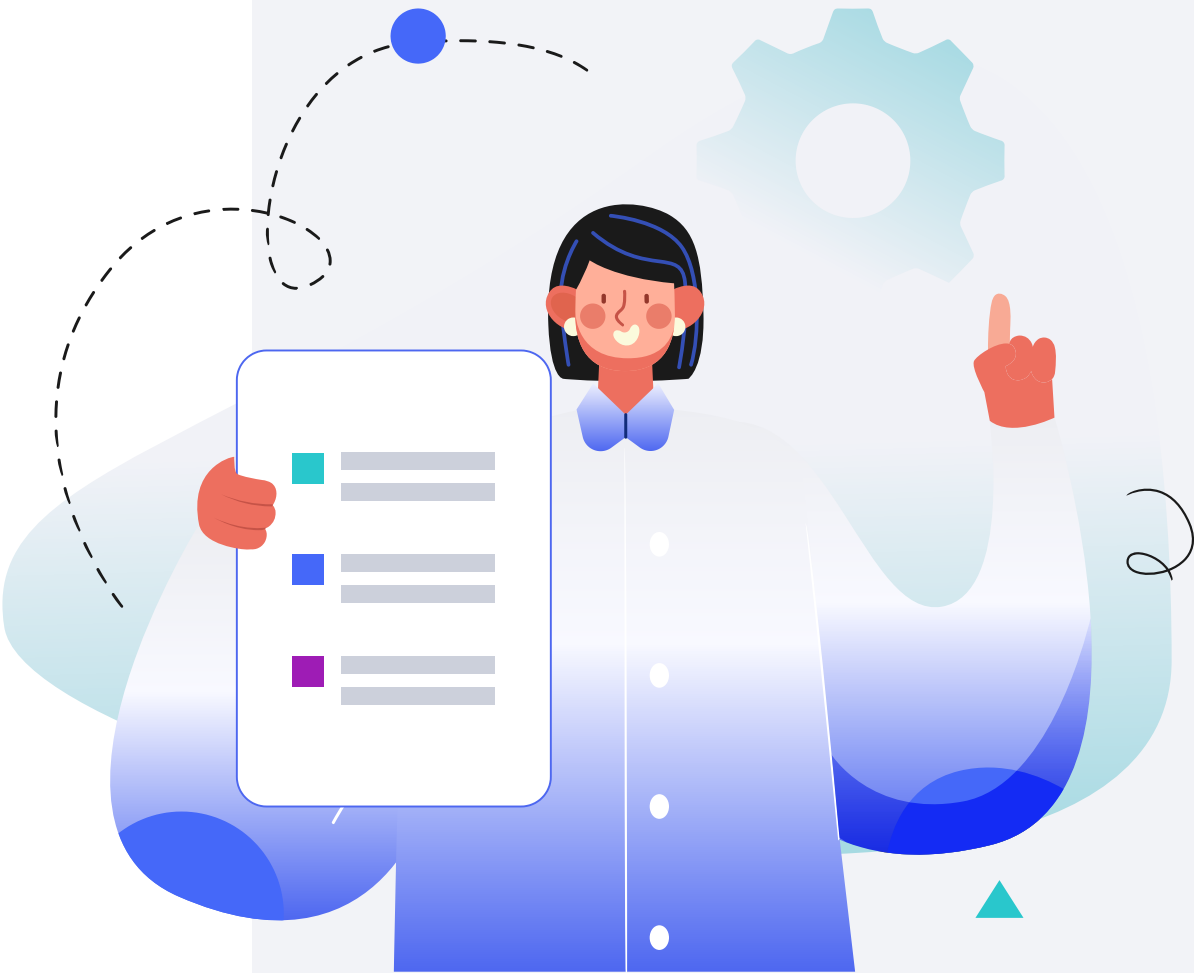
Male

HEIGHT

5ft 5" 165cm

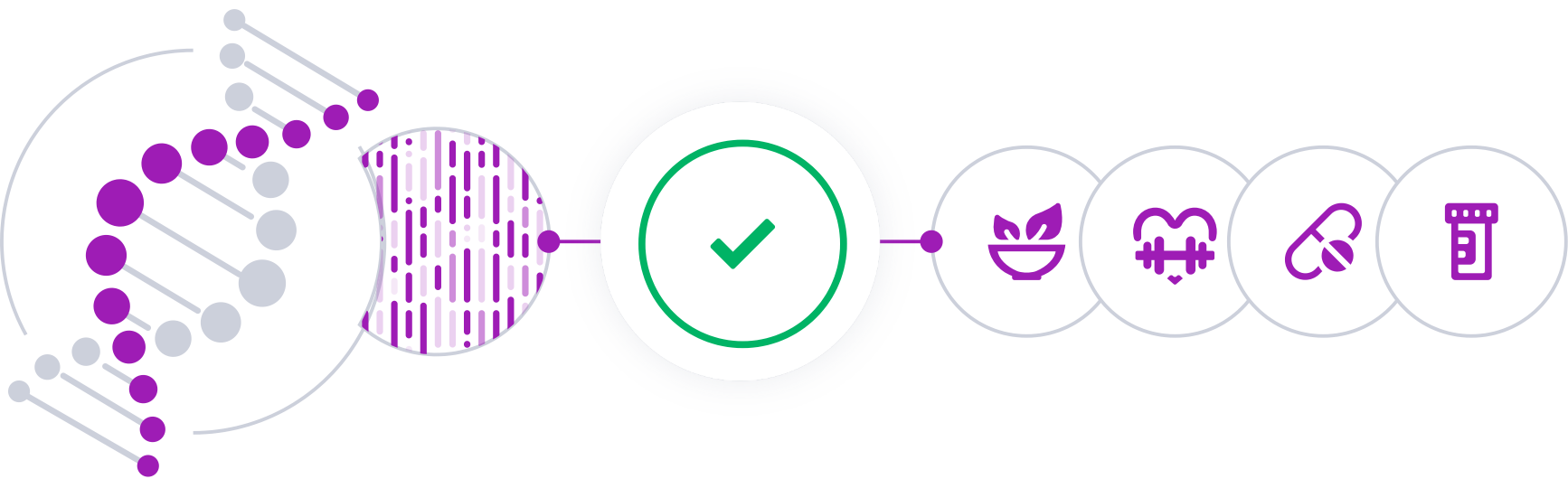
WEIGHT

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.

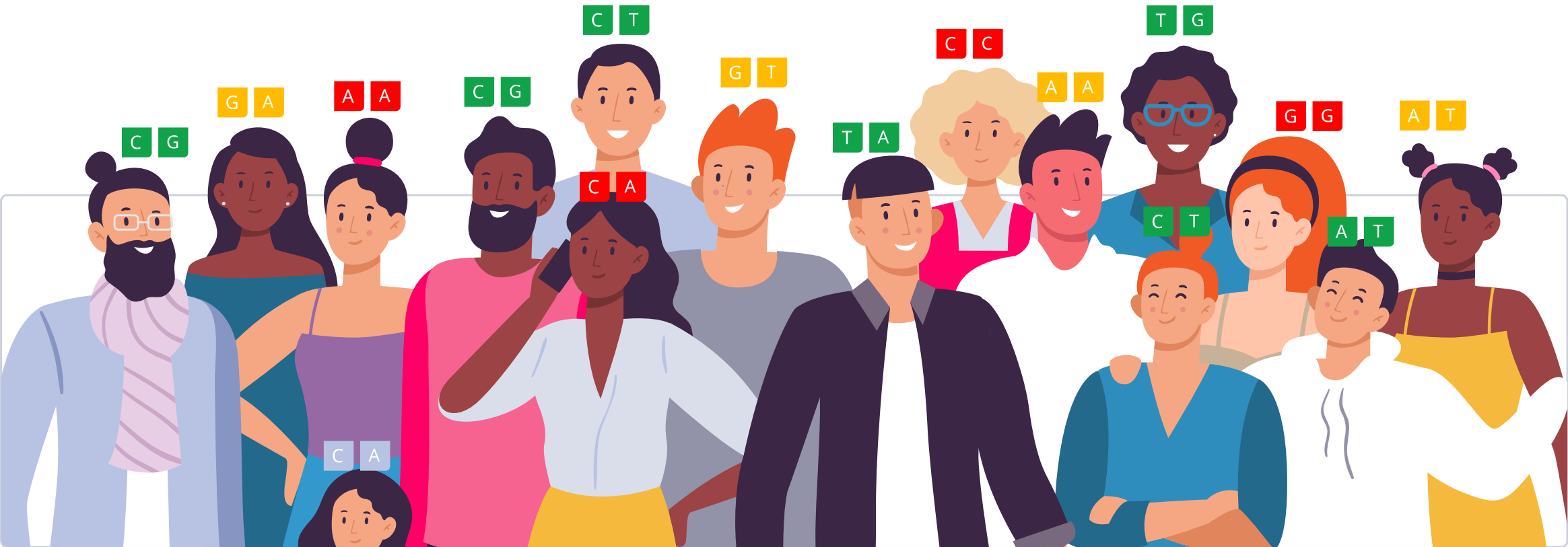


Similarly, our Trait Reports look at how your DNA influences your traits.



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

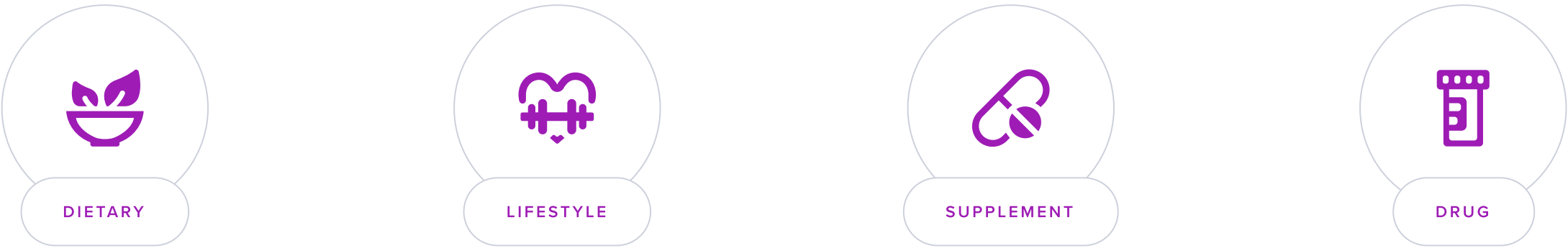
You have 2 risk alleles

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

Around 20% of your cholesterol is absorbed in your gut from the food you eat. That’s why if you have high cholesterol, one of the first actions your doctor will recommend is to eat less saturated and trans fat [\[R\]](#).

Unfortunately, simply eating less of these foods isn’t enough to sufficiently lower cholesterol for some people. Thankfully, there are other cholesterol-lowering strategies available, like eating plant sterols and stanols!

These compounds are found in plants like nuts, rice bran, and avocado. You can think of them as the plant versions of cholesterol (plant-sterol, if you will). Plant-sterol is very similar in structure to cholesterol, but doesn’t come with the negative health effects [\[R\]](#), [\[R\]](#)!

Just like cholesterol, plant-sterol is absorbed in your gut. Because they’re so similar in structure, they compete for absorption at the same location. As a result, the more plant-sterol you eat, the more it will compete with cholesterol, causing less cholesterol to be absorbed [\[R\]](#), [\[R\]](#), [\[R\]](#).

Strangely, researchers investigating the effects of plant-sterol on your “bad” cholesterol (LDL) found that, despite their potential benefits, a small group of people actually experienced no benefit. Even worse, some people experience an increase in “bad” cholesterol after consuming plant-sterols. But why does this happen [\[R\]](#), [\[R\]](#), [\[R\]](#)?

Well, the answer may lie in your DNA!

Take your *CYP7A1* gene. A variant of the *CYP7A1* gene may alter your cholesterol levels by increasing the rate at which cholesterol is absorbed in your gut. This variant may also increase the effectiveness of plant sterols and stanols at lowering your cholesterol [\[R\]](#).

If your absorption levels are higher, even if you eat less cholesterol than another person, you may end up having higher cholesterol levels. Pretty unfair, right? Which is why it’s particularly important to understand how your body works. Then you can take targeted action to lower your cholesterol absorption rate, like eating more plant-sterol [\[R\]](#)!

We’re all unique. Your genetics can influence how well your body handles cholesterol. The information hidden in your DNA may help predict the best cholesterol-lowering strategies for you, helping you to live a healthier and happier life.

This report focuses on the genetics of cholesterol. Read more to find out:

- **The role of genetics on your cholesterol levels**
- **Your genetic risk score based on over one million genetic variants**
- **Personalized recommendations based on your genetics**

About Cholesterol

Key Takeaways:

- **65%** of people's differences in cholesterol levels may be due to genetics.
- Other risk factors include a diet high in saturated fat, obesity, lack of exercise, older age, smoking, and diabetes.
- If you have high genetic risk, monitoring your cholesterol levels and taking action on modifiable risk factors can reduce your overall risk. If your genetic risk is low but you are testing high or have several risk factors, you may want to take action now.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

People think of [cholesterol](#) as being bad, but it's actually **essential**. Cholesterol gives shape to all of your cells. Your body also uses it to make vitamin D and some types of hormones [\[R\]](#).

There are two major types of cholesterol: LDL and HDL. We call HDL "good cholesterol" because it helps your liver get rid of excess cholesterol. On the other hand, LDL cholesterol is "bad" because it can stick to your blood vessels. This can cause heart problems [\[R\]](#), [\[R\]](#).

If your doctor has ever told you that you have high cholesterol, they were either referring to [\[R\]](#):

- LDL cholesterol
- Total cholesterol (LDL + HDL)

Some risk factors for high LDL cholesterol include [\[R\]](#), [\[R\]](#):

- A diet high in saturated fat
- Obesity
- Lack of exercise
- Older age
- Smoking
- Diabetes
- Family history (genetics)



TYPICAL LIKELIHOOD

Typical likelihood of high cholesterol based on 1,171,067 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
APOE	rs7412	CC
PCSK9	rs28362286	CC
PCSK9	rs11591147	GG
PCSK9	rs562556	AA
APOE	rs141622900	GG
APOE	rs7254892	GG
CETP	rs708272	AA
SIDT2	rs651821	TT
APOE	rs12721109	GG
APOE	rs62117160	GG
ABCA1	rs188308962	AA
LDLR	rs72658867	GA
CETP	rs5882	AG
APOE	rs429358	TT
LPL	rs328	CC
PCSK7	rs662799	AA
PCSK7	rs5128	CC
LIPG	rs77960347	AA
/	rs12713559	GG
/	rs151135411	GG
SNX8	rs144787122	AA
MICB	rs361525	GG
IL6	rs1800795	GG
FABP2	rs1799883	CC

If your cholesterol levels rise, your doctor will recommend strategies for lowering them. These may include [R](#):

- A diet low in saturated fat
- The Mediterranean diet
- Exercise
- Losing weight

How well you respond to these strategies may depend on your genes.

Up to 65% of differences in cholesterol levels may be attributed to genetics. Genes that may contribute to high cholesterol influence [R](#), [R](#), [R](#), [R](#), [R](#), [R](#):

- Cholesterol production ([LPL](#), [LIPC](#), [HMGCR](#))
- Cholesterol transport ([APOB](#))
- HDL and LDL cholesterol balance ([CETP](#))

GENE	SNP	GENOTYPE
LIPG	rs117623631	CC
APOC4	rs140526515	AA
/	rs150401285	AA
NECTIN2	rs138914864	CC
NECTIN2	rs117310449	CC
NECTIN2	rs144261139	CC
NECTIN2	rs76366838	GG
APOE	rs769449	GG
ABCG5	rs141828689	CC
APOE	rs4420638	AA
CLPTM1	rs12691088	GG
NECTIN2	rs138607350	TT
NECTIN2	rs34095326	GG
TOMM40	rs394819	GG
PVR	rs139267469	CC
LIPG	rs80175721	AA
SLC22A3	rs3918291	TT
CLPTM1	rs79429216	GG
MAFB	rs2207132	GG
NECTIN2	rs41289512	CC
LPA	rs3798220	TT
APOC1	rs60049679	GG
BCL3	rs114036675	GG
/	rs145030841	CC
ABCA6	rs77542162	AA
MAFB	rs1883711	GG

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

Your Recommendations

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

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

DOSAGE		DOSAGE	
1	Eat Fiber-Rich Foods	2	Choose Healthy Fats
3	Red Yeast Rice500 mg	4	Plant Sterols & Stanols300 mg
5	Limit Saturated Fat	6	Berberine500 mg
7	Relaxation Techniques30 minutes	8	Exercise At Least One Hour a Day1 hour
9	Aerobic Exercise (Cardio)1 hour	10	Mediterranean Diet
11	Dietary Antioxidants	12	Walking30 minutes
13	Glucomannan3 g	14	Black Seed (Black Cumin)1000 mg
15	Garlic	16	Artichoke Leaf Extract500 mg
17	Spirulina500 mg	18	Alpha-Lipoic Acid100 mg
19	Green Coffee Extract400 mg	20	Pycnogenol100 mg
21	Limit Coffee Intake	22	Barberry500 mg
23	Cumin500 mg	24	Pantethine600 mg
25	Chickpeas	26	Probiotic Yogurt
27	Xylo-oligosaccharides2 g	28	Niacin Supplements20 mg
29	Soy	30	Yoga30 minutes
31	Genistein30 mg	32	Red Clover40 mg

33	Fenugreek	500 mg	34	L-Carnitine	500 mg
35	Resveratrol	150 mg	36	Soy Protein	20 g
37	Blueberries		38	Gamma-Oryzanol	
39	Astaxanthin	12 mg	40	Yerba Mate	1 g
41	Macadamia Nuts		42	Black Garlic	
43	Taurine	500 mg	44	Avoid Betaine (TMG) Supplements	
45	Apple Pectin And Citrus Pectin	500 mg	46	Hatha Yoga	1 hour
47	Inositol	2 g	48	Pecans	
49	Kimchi		50	Broccoli Sprouts	2 tbsp
51	Myo-inositol	4 g	52	Chlorella	3 g
53	Vitamin D and Calcium		54	Broccoli	
55	Grapes		56	Honey	
57	Avocado		58	Soy Isoflavones	40 mg
59	Saffron	20 mg	60	Lactobacillus Paracasei	10 billion CFU
61	Whole-Body Cryotherapy	2 minutes	62	Extra Virgin Olive Oil (EVOO) With Thyme	
63	Avoid Lead Exposure		64	Intermittent Fasting	
65	Olive Leaf Extract	500 mg	66	Garlic Supplement	200 mg
67	American Ginseng	200 mg	68	Apples	
69	Coconut		70	Ecklonia Cava	100 mg
71	Chromium	200 mcg	72	Sulforaphane	30 mg

73	Lactobacillus Gasseri	10 billion CFU	74	Tart Cherries	
75	Alpha-Linolenic Acid (ALA)		76	White Kidney Bean Extract	500 mg
77	Selenium Supplements	50 mcg	78	Avoid Mercury Exposure	
79	Sage Extract	300 mg	80	Royal Jelly	300 mg
81	Theaflavins		82	Colostrum	20 g
83	Chamomile	300 mg	84	Brazil Nuts	
85	Activated Charcoal	500 mg	86	Cabbage	
87	Okra		88	Brewer's Yeast	
89	Ubiquinol	100 mg	90	Barley	
91	Canola Oil		92	Tree Turmeric and Milk Thistle	
93	Buckwheat		94	Morning Sunlight Exposure	30 minutes
95	Bergamot		96	Polyunsaturated Fatty Acids (PUFAs)	
97	Lycopene	10 mg	98	Curcumin	500 mg
99	Basketball	30 minutes	100	Aquatic Exercise	1 hour
101	Prickly Pear (Nopal Cactus)		102	Lactobacillus Acidophilus	10 billion CFU
103	Lactobacillus Salivarius	10 billion CFU	104	Berries	
105	Inulin	5 g	106	Beta-Glucans	
107	Strength Training	1 hour	108	Lactobacillus Reuteri	10 billion CFU
109	Avocado Oil		110	Pectin	500 mg
111	Rice Bran Oil		112	Limit Trans Fats	

113	Oats		114	Green Tea Extract	250 mg
115	Pistachios		116	Maintain Optimal Vitamin D Levels	1000 iu
117	Probiotics	10 billion	118	African Mango Seed Extract	300 mg
119	Flaxseed	2 tbsp	120	Swimming	30 minutes
121	Psyllium	5 g	122	Locust Bean Gum	5 g
123	Almonds		124	Meditation	30 minutes
125	Hazelnuts		126	Paleo Diet	
127	Prickly Pear (Nopal Cactus) Extract	500 mg	128	Artichoke	
129	Vitamin C	500 mg	130	Guggul	500 mg
131	Safflower Oil		132	Orange Juice	
133	Guar Gum	5 g	134	Chitosan	500 mg
135	DASH Diet		136	Amla	
137	Almond oil		138	Green Tea	400 mg
139	Legumes		140	Lactobacillus Plantarum	10 billion CFU
141	Lupin Fiber	5 g	142	Ginger	500 mg
143	Calcium Supplements	1000 mg	144	Extra Virgin Olive Oil (EVOO)	
145	Tai Chi	1 hour			

Eat Fiber-Rich Foods

IMPACT

5 / 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

Health officials recommend eating more fiber (3-10 g) to improve your cholesterol levels. Fiber stops your gut from absorbing too much cholesterol. By doing so, it lowers cholesterol levels in the blood [[R](#), [R](#), [R](#)].

High-fiber foods that may lower cholesterol include:

- Buckwheat [[R](#), [R](#), [R](#)]
- Oats [[R](#)]
- Barley [[R](#), [R](#)]
- Beans [[R](#)]
- Apples [[R](#)]

Diets high in the above foods may be a good choice for reducing cholesterol. They include:

- The Mediterranean diet [R, R]
- Vegetarian diets [R, R]
- The DASH diet [R]

The following fiber supplements may also help improve cholesterol levels:

- [Psyllium](#) [R, R, R, R]
- Beta-glucans [R, R, R, R]
- [Glucomannan](#) [R, R]
- [Inulin](#) [R, R, R, R]
- [Pectin](#) [R, R]
- Resistant starch [R]



PERSONALIZED TO YOUR GENES

People with your **LEP** variant may see a bigger drop in cholesterol from fiber (psyllium) supplementation [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
LEP	rs7799039	GG	

2



Choose Healthy Fats

IMPACT

5 / 5

EVIDENCE

4 / 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

Many experts recommend eating less saturated fat to help lower cholesterol. This may lower your risk of heart disease [\[R, R, R, R\]](#).

However, keep in mind that simply reducing saturated fats may not reduce your cholesterol. **This is especially true if you replace saturated fats with processed and sugary foods** [\[R\]](#).

To make a meaningful change, replace saturated fats with healthier alternatives, such as unsaturated fats. Good sources of these healthy fats include [\[R, R, R, R, R\]](#):

- Fish
- Nuts
- Seeds
- Avocado
- Safflower, olive, and canola oil

Fish, walnuts, and seeds are rich in polyunsaturated fats (PUFAs). These fats may be the best replacement for saturated fat [\[R\]](#).

Making these healthy replacements may lower cholesterol by up to 17% [\[R, R, R, R\]](#).

Diets rich in healthy fats include [\[R, R, R\]](#):

- The Mediterranean diet
- The DASH diet
- Vegetarian diets

 PERSONALIZED TO YOUR GENES

People with your [PPARA](#) gene variant may respond better to diets low in saturated fat [\[R\]](#). Try to focus on healthy unsaturated fat sources.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
PPARA	rs135549	TT	

3



Red Yeast Rice

IMPACT4 / 5

EVIDENCE4 / 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 contains monacolin K, which works in a similar way as the cholesterol drug lovastatin [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Red yeast rice may work well in combination with [berberine](#) and [policosanol](#). This combination may lower total and “bad” (LDL) cholesterol and raise “good” (HDL) cholesterol [\[R\]](#), [\[R\]](#).

Most experts agree that red yeast rice can affect cholesterol levels. However, not many of these supplements are of good quality. It’s also hard to tell whether they are safe [\[R\]](#), [\[R\]](#).

Please note: The FDA regulates lovastatin. It 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. Talk to your doctor before taking red yeast rice [\[R\]](#), [\[R\]](#).

4



Plant Sterols & Stanols

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

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

TYPICAL STARTING DOSE

300 mg

Description

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

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

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

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

How it helps

Adding plant sterols and stanols to your diet may help lower total and “bad” (LDL) cholesterol. They block cholesterol absorption in the gut, reducing its blood levels [\[R\]](#), [\[R\]](#), [\[R\]](#).

They may even boost the effectiveness of cholesterol-lowering diets and medications [\[R\]](#), [\[R\]](#), [\[R\]](#).

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) [\[R\]](#)

You may also add plant sterols and stanols (2-3 g/day) to your diet by eating fortified foods like [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Spreads
- Dairy products
- Salad dressings
- Plant oils

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

5



Limit Saturated Fat

IMPACT4 / 5

EVIDENCE4 / 5

How to implement

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

Description

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

How it helps

Many experts recommend eating less saturated fat to help lower cholesterol. This may lower your risk of heart disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

However, keep in mind that simply reducing saturated fats may not reduce your cholesterol. **This is especially true if you replace saturated fats with processed and sugary foods** [\[R\]](#).

To make a meaningful change, replace saturated fats with healthier alternatives, such as unsaturated fats. Good sources of these healthy fats include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fish
- Nuts
- Seeds
- Avocado
- Safflower, olive, and canola oil

Fish, walnuts, and seeds are rich in polyunsaturated fats (PUFAs). These fats may be the best replacement for saturated fat [\[R\]](#).

Making these healthy replacements may lower cholesterol by up to 17% [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

6



Berberine

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Take 500 mg of berberine two times a day before meals. Continue this regimen for up to three months, then evaluate its effects with your healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Berberine is a compound found in certain plants, known for its potential to support blood sugar control and heart health.

[Berberine](#) is an active compound of some plants used in traditional medicine, such as [\[R\]](#):

- European barberry
- Oregon grape
- Goldenseal
- Chinese goldthread
- Tree turmeric

Berberine is also available as a supplement. People use it to help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Diabetes
- High cholesterol
- High blood pressure
- PCOS

How it helps

Berberine (0.9-1.5 g/day for 2-6 months) may lower total and “bad” (LDL) cholesterol while raising “good” (HDL) cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

It may also improve cholesterol when it’s combined with other ingredients, such as:

- [Milk thistle](#) [\[R\]](#), [\[R\]](#)
- [Red yeast rice](#) [\[R\]](#), [\[R\]](#)
- [Policosanol](#) [\[R\]](#), [\[R\]](#)
- [Coenzyme Q10](#) [\[R\]](#)

Berberine may help remove cholesterol from the blood and reduce its production [\[R\]](#), [\[R\]](#).

 PERSONALIZED TO YOUR GENES

A supplement with berberine may reduce cholesterol more in people with your [LDLR](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
SPC24	rs14158	GG	

7

Relaxation Techniques

IMPACT

4 / 5

EVIDENCE

3 / 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

Stress and anxiety may increase your cholesterol. People under a lot of stress are much more likely to have high “bad” (LDL) cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#).

Fortunately, when stress increases cholesterol, it only seems to do so for a short while. Total cholesterol tends to drop back down after stressful situations are over [\[R\]](#).

Relaxation techniques like yoga and meditation may help combat stress and lower cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#).

PERSONALIZED TO YOUR GENES

In people with your [KDR](#) gene variant, stress may have a greater effect on cholesterol [\[R\]](#). Relaxation techniques may help.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
KDR	rs1870377	TT	

8



Exercise At Least One Hour a Day

IMPACT

3 / 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

Exercise is one of the best things you can do to lower cholesterol [\[R, R, R\]](#).

Exercise can help you burn fat and boost HDL or “good” cholesterol [\[R, R\]](#).

People who exercise for at least 150 minutes per week tend to have lower cholesterol. All types of exercise are helpful. In fact, strength and endurance training have about the same effect on cholesterol [\[R, R, R, R\]](#).

Low-intensity exercise, such as tai chi and [yoga](#), may reduce cholesterol as well [\[R, R, R, R\]](#).

Exercise works especially well if you also eat a healthy diet [\[R, R, R, R\]](#).

9



Aerobic Exercise (Cardio)

IMPACT3 / 5

EVIDENCE5 / 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

Exercise is one of the best things you can do to lower cholesterol [\[R, R, R\]](#).

People who exercise for at least 150 minutes per week tend to have lower cholesterol. All types of exercise are helpful. In fact, strength and endurance training have about the same effect on cholesterol [\[R, R, R, R\]](#).

Exercise works especially well if you also eat a healthy diet [\[R, R, R, R\]](#).

10



Mediterranean Diet

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

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

Description

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

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

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

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

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

How it helps

The Mediterranean diet may lower total and “bad” cholesterol (LDL) [\[R, R, R\]](#).

Overweight or obese men may reap the most benefits from this type of diet [\[R\]](#).

Studies suggest that the Mediterranean diet may be better than a low-fat, vegetarian, or Paleo diet at improving cholesterol [\[R, R, R\]](#).

What makes the Mediterranean diet a great choice?

- It’s low in saturated fat [\[R\]](#)
- It focuses on healthy fat sources like olive oil and fish [\[R\]](#)
- It’s rich in fiber [\[R\]](#)

Health experts agree that the Mediterranean diet may help improve cholesterol. Because of this, it may protect against heart disease [\[R, R, R\]](#).

11



Dietary Antioxidants

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Incorporate foods rich in antioxidants, such as fruits (berries, oranges, plums), vegetables (spinach, kale, bell peppers), nuts (walnuts, almonds), and seeds (flaxseeds, chia seeds) into your daily meals. Aim for at least 5 servings of fruits and vegetables per day, ensuring a variety of colors to cover different antioxidants.

Description

Dietary antioxidants are compounds found in foods that help neutralize harmful molecules called free radicals, potentially reducing the risk of oxidative stress-related diseases and supporting overall health. Examples include vitamins C and E, beta-carotene, and polyphenols.

Our cells sometimes produce molecules called **reactive oxygen species (ROS)** [\[R\]](#).

High levels of ROS can cause [oxidative stress](#) and damage our cells. Oxidative stress plays a role in many health conditions, including [\[R\]](#):

- High blood sugar
- Type 2 diabetes
- Heart disease

Antioxidants are substances that help combat ROS [\[R\]](#).

Antioxidants are found in many plants. Good sources include [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Fruits like tomatoes, berries, and pomegranates
- Vegetables like onions, spinach, and celery
- Chocolate
- Olive oil
- Wine

How it helps

Eating a lot of tomatoes (200-400 g/day for 1-3 months) may lower “bad” (LDL) cholesterol and raise “good” (HDL) cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#).

Tomatoes contain [lycopene](#) and other antioxidants. These compounds prevent some of the toxic effects of LDL cholesterol. **Supplementing with lycopene (25 mg per day for 1-2 months) may lower total and LDL cholesterol** [\[R\]](#), [\[R\]](#).

Other antioxidant-rich foods may also improve your cholesterol. These include:

- Oranges [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Grapes [\[R\]](#)
- Indian gooseberry [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Tea [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)

If you don’t eat enough of these foods, some supplements may help. Antioxidant supplements that may lower cholesterol include:

- [Alpha-lipoic acid](#) [\[R\]](#), [\[R\]](#), [\[R\]](#)
- [Coenzyme Q10](#) [\[R\]](#)



PERSONALIZED TO YOUR GENES

People with your **SCARB1** gene variant tend to have lower levels of lycopene. Eating more tomatoes and other sources of antioxidants may help make up the difference [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
SCARB1	rs1672879	GG	



Walking



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

Walking helps manage high cholesterol by boosting your body's levels of "good" cholesterol (HDL), reducing the "bad" cholesterol (LDL), and improving overall heart health. It also helps in weight management, which is crucial in controlling cholesterol levels.

A systematic review and meta-analysis of 42 studies (1843 participants) found that walking groups offer various health benefits, such as reduced total cholesterol, increased VO2max, improved physical functioning, and decreased depression scores. Another meta-analysis of 12 studies in overweight or obese women found moderate reductions in total cholesterol and LDL levels with regular moderate-intensity walking. Additionally, a meta-analysis of 25 trials (1176 adults) showed reduced LDL-C and TC/HDL-C with walking, regardless of body composition changes. Another meta-analysis (22 trials, 948 subjects) found a 4% decrease in non-HDL-C in walking groups, with more recent studies showing greater reductions. However, the optimal frequency, duration, and intensity for cardiovascular risk reduction remain unclear, as per a meta-analysis of 37 trials involving 2001 participants [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

13



Glucomannan

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 1 gram of glucomannan powder with 8 ounces of water, 15 minutes to 1 hour before each meal, three times daily. It's essential to drink plenty of water when taking glucomannan to ensure it reaches the stomach and expands, helping to promote a feeling of fullness.

TYPICAL STARTING DOSE

3 g

Description

Glucomannan is a dietary fiber derived from the root of the konjac plant and is often used as a weight loss supplement. It may promote feelings of fullness and support weight management when used in conjunction with a balanced diet.

How it helps

In one meta-analysis with 12 studies and 370 participants, glucomannan lowered LDL-C by 15.99 mg/dL [\[R\]](#).

In patients with type 2 diabetes, glucomannan reduces total cholesterol, and LDL cholesterol according to a meta-analysis of 6 trials and 440 participants [\[R\]](#).

14



Black Seed (Black Cumin)

IMPACT3 / 5

EVIDENCE3 / 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

Black seed supplements may lower total and “bad” (LDL) cholesterol. The antioxidants and healthy fats in black seed may explain these effects [\[R, R, R\]](#).

Studied doses include [\[R, R, R\]](#):

- **Powder:** 0.5-2 g/day for 1-2 months
- **Oil:** up to 5 g/day for 1-3 months
- **Extract:** 0.7-1 g/day for 2 months

It is sometimes combined with [turmeric](#), [garlic](#), or [fenugreek](#) in supplements for high cholesterol [\[R, R, R\]](#).

Black seed may also increase “good” (HDL) cholesterol. However, the evidence for this effect is mixed [\[R, R, R\]](#).

 PERSONALIZED TO YOUR GENES

Your ***HMGR*** gene variant is linked to higher cholesterol levels. This gene helps make an enzyme that produces cholesterol. Black seed may help by blocking this enzyme [\[R, R, R, R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
HMGR	rs3846663	TC	

15



Garlic

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Incorporate 1-2 cloves of raw garlic into your meals daily. This can be achieved by finely chopping or crushing the garlic and letting it sit for a few minutes before adding it to your dishes to maximize its health benefits.

Description

Garlic is a popular herb known for its potential cardiovascular benefits, including lowering blood pressure and cholesterol levels. It also possesses antimicrobial properties and may support immune function.

[Garlic](#) is a vegetable often used to flavor food. It’s been a part of traditional medicine for thousands of years [\[R\]](#).

Today, people take garlic to help control their blood pressure and cholesterol [\[R\]](#).

How it helps

Garlic (600-900 mg/day for 3-6 months) may help lower total and “bad” (LDL) cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Garlic may help lower cholesterol by blocking its production [\[R\]](#), [\[R\]](#), [\[R\]](#).

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 **[HMGCR](#)** gene variant is linked to higher cholesterol levels. This gene helps make an enzyme that produces cholesterol. Garlic may help by blocking this enzyme [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
HMGCR	rs3846663	TC	

16



Artichoke Leaf Extract

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 500 mg of artichoke leaf extract daily with a glass of water, preferably with or after a meal to aid absorption.

TYPICAL STARTING DOSE

500 mg

Description

Artichoke leaf extract is derived from the leaves of the artichoke plant and is used as a dietary supplement. It is being researched for its potential to support liver health and digestive function.

[Artichokes](#) are packed with antioxidants and fiber. People eat the heart of the artichoke. However, many of the plant’s active compounds are also found in its leaves [\[R\]](#), [\[R\]](#).

People use artichoke leaf extracts to help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lower cholesterol
- Lower blood pressure
- Improve digestion

How it helps

Artichoke leaf extract (up to 2.7 g/day for 5-12 weeks) may lower total and “bad” (LDL) cholesterol [\[R\]](#).

Compounds from artichoke leaf extract help your body get rid of cholesterol. They may also prevent your body from making too much cholesterol [\[R\]](#), [\[R\]](#).

17



Spirulina

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 1-8 g of spirulina supplements daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

Spirulina is a blue-green algae. It is rich in nutrients like protein, vitamins, and minerals, particularly vitamin B12 and iron, and is a source of antioxidants, chlorophyll, and phycocyanin. It can be found in powdered or tablet form as a supplement, and is often used to boost energy, support the immune system, and enhance overall nutrition. Additionally, spirulina.

[Spirulina](#) is a supplement made from blue-green algae that grows in fresh and marine water [\[R, R\]](#).

Dried spirulina is up to 70% protein. It’s also rich in vitamins, antioxidants, and healthy fats. This makes it a great source of nutrition for both people and livestock [\[R, R, R\]](#).

People use spirulina supplements to reduce [\[R, R\]](#):

- Cholesterol
- Blood pressure
- Blood sugar

How it helps

Spirulina supplements (1-10 g/day for 2-12 months) may reduce “bad” (LDL) cholesterol and raise “good” (HDL) cholesterol [\[R\]](#).

Spirulina may stop your gut from absorbing too much cholesterol from food. It may also prevent some of the toxic effects of LDL cholesterol [\[R, R, R\]](#).

Spirulina may be especially helpful for people with [\[R, R, R, R\]](#):

- Obesity
- High blood pressure
- High blood sugar

 PERSONALIZED TO YOUR GENES

Your ***NPC1L1*** gene variant is linked to higher levels of “bad” (LDL) cholesterol. This gene affects the amount of cholesterol your body absorbs. Spirulina may help by reducing cholesterol absorption [\[R, R, R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
NPC1L1	rs2072183	GC	

18



Alpha-Lipoic Acid

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

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

TYPICAL STARTING DOSE

100 mg

Description

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

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

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

How it helps

Alpha-lipoic acid helps lower cholesterol by preventing the oxidation of LDL (bad cholesterol), thereby reducing its buildup in your arteries. It also improves the function of cells that remove cholesterol from your body, aiding in overall cholesterol management.

Two meta-analyses (the largest one with 12 studies and 770 participants) concluded that supplementation with [alpha-lipoic acid](#) (typically 600 mg/day for 8-16 weeks) **lowers total cholesterol (by 10.18-10.68 mg/dL), LDL cholesterol (by 9.22-12.91 mg/dL)**, and triglycerides but not HDL cholesterol [\[R, R\]](#).

Alpha-lipoic acid may have **similar effects in people with metabolic diseases such as type 2 diabetes** according to a meta-analysis of 24 trials [\[R\]](#).

19



Green Coffee Extract

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a 400 mg dose of green coffee extract supplement daily. This can be consumed in the morning or as directed on the supplement’s packaging.

TYPICAL STARTING DOSE
400 mg

Description

Green coffee extract is believed to support weight management due to its high content of chlorogenic acids, which may help regulate blood sugar levels and promote fat metabolism.

Green coffee is made from unroasted coffee beans. It’s rich in an anti-inflammatory and antioxidant compound called [chlorogenic acid](#) [R, R].

Green coffee may help lower [R]:

- Blood pressure
- Weight
- Blood sugar levels

How it helps

Three meta-analyses (the largest one with 17 studies) concluded that green coffee bean extract lowers total cholesterol (by 4.51-5.93 mg/dL) and LDL cholesterol (by 4.38 mg/dL), and increases HDL cholesterol (by 2.63 mg/dL) [R, R, R].

Green coffee extract contains chlorogenic acid, which can help reduce the absorption of and utilization of cholesterol in your liver. Chlorogenic acid may also reduce the absorption of carbohydrates, indirectly helping in managing high cholesterol levels.

Please note: *Green coffee bean extract contains caffeine. Keep this in mind if you're trying to limit your caffeine intake. If you're pregnant, limit caffeine to 200 mg per day* [R].

Please note: *chlorogenic acid from green coffee beans 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 coffee bean extract and always consult with a healthcare provider before taking this supplement* [R].

Please note: *polyphenols and tannins from coffee 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 coffee or coffee supplements.*

20



Pycnogenol

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

100 mg

Description

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

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

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

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

How it helps

Pycnogenol is an antioxidant that improves the health of your blood vessels, making it more difficult for cholesterol to clog them. This helps lower your cholesterol levels, reducing your risk of heart disease.

A [meta-analysis of 24 trials and 1594 participants](#) concluded that supplementation with pycnogenol (150-200 mg/day for 8-24 weeks) **reduces LDL-C (by 7.12 mg/dL) while increasing HDL-C (by 3.27 mg/dL)** [\[R\]](#).

In a [placebo-controlled trial of 25 healthy subjects](#), supplementation with pycnogenol (150 mg/day) for 6 weeks **reduced LDL-C and increased HDL-C in 66% of the subjects** [\[R\]](#).

In a [placebo-controlled trial of 46 patients with type 2 diabetes](#), French maritime pine bark extract (50 mg/day for 8 weeks) **reduced total cholesterol** [\[R\]](#).

21



Limit Coffee Intake

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Reduce your coffee consumption to no more than 2-3 cups (approximately 200-300 mg of caffeine) per day. Try to avoid drinking coffee after 2 PM to minimize potential impacts on sleep.

Description

Limiting coffee consumption can help prevent potential side effects like jitteriness, insomnia, and increased heart rate, while allowing for better sleep quality and overall energy regulation. Moderation in coffee intake supports overall well-being without overstimulation.

People often drink coffee for an energy and mood boost [\[R, R\]](#).

However, **coffee also comes with some drawbacks**. Drinking a lot of coffee can increase blood pressure and anxiety. It may also cause headaches [\[R, R, R\]](#).

How it helps

Compounds found in coffee may increase how much cholesterol your body makes [\[R, R, R\]](#).

So, it’s no surprise that high **coffee intake is linked to higher levels of total and LDL cholesterol**. This includes decaffeinated coffee. However, filtering the coffee may reduce its impact on cholesterol [\[R, R, R\]](#).

Drinking coffee in moderation may not affect your cholesterol. However, **heavy drinking (6 or more cups a day) may raise it significantly** [\[R, R, R\]](#).

22



Barberry

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take a barberry supplement of 500-1000 mg daily, divided into two or three doses with meals for up to 12 weeks. Do not exceed the recommended dose without consulting a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

Barberry is an herbal remedy used in traditional medicine for its potential to support digestive health and reduce inflammation. It contains compounds that may have antimicrobial and antioxidant properties.

How it helps

A meta-analysis of 5 trials involving 339 participants found that barberry supplementation reduces total cholesterol (by 23.58 mg/dL), and LDL cholesterol (by 13.75 mg/dL), with no significant impact on HDL cholesterol. Additionally, another meta-analysis showed that specific barberry species lowered total cholesterol and LDL cholesterol while increasing HDL cholesterol in individuals with metabolic syndrome. Furthermore, barberry supplementation led to improvements in cholesterol levels in several trials. A combination of barberry and milk thistle reduced total cholesterol and LDL cholesterol but had no significant effect on HDL cholesterol in individuals with dyslipidemia [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

Barberry contains berberine, a compound known to reduce LDL cholesterol levels by inhibiting an enzyme that produces cholesterol in the liver.

23



Cumin

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

To implement this supplement recommendation, take 500 mg of cumin in capsule form daily, preferably with a meal to enhance absorption. It's often recommended to continue this regimen for at least 8 weeks to observe potential health benefits.

TYPICAL STARTING DOSE

500 mg

Description

Cumin is a spice used in cooking and traditional medicine. It contains compounds that may have antioxidant and anti-inflammatory effects.

Cumin (*Cuminum cyminum L.*) is a flowering herb cultivated in the Middle East, India, China, and the Mediterranean area [\[R\]](#).

Cumin seeds are used as a spice and, in traditional medicine, for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Diarrhea
- Stomachache
- High cholesterol
- Diabetes

How it helps

Two meta-analyses (the largest one with 8 trials) concluded that supplementation with cumin (25-100 mg/day for 8-12 weeks) lowers total cholesterol (by 4-10 mg/dL) and LDL cholesterol (by 7 mg/dL) while increasing HDL cholesterol (by 3.35 mg/dL) [\[R\]](#), [\[R\]](#).

Cumin contains phytosterols that prevent cholesterol absorption in the body. Also, it's rich in antioxidants that reduce inflammation and oxidative stress linked to high cholesterol.

24



Pantethine

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take 600-900 mg of pantethine supplement daily, divided into 2 or 3 doses with meals. Continue this regimen for at least 8 weeks to assess effectiveness in lowering cholesterol levels.

TYPICAL STARTING DOSE
600 mg

Description

Pantethine is a form of vitamin B5 that aids the body in breaking down fats and proteins necessary for energy production. Its key role is to help your body properly use these nutrients for maintaining a healthy metabolic function. This is crucial for overall health because having a well-functioning metabolism means our body can effectively utilize the food we eat, thereby sustaining all its necessary functions.

How it helps

Pantethine, a derivative of vitamin B5, aids in reducing bad cholesterol levels because it promotes the breakdown and removal of fats in the bloodstream. Hence, it's beneficial to people with high cholesterol owing to its potential to lower the total and LDL cholesterol levels.

In 2 placebo-controlled trials of 152 participants at risk of heart disease, supplementation with pantethine (600 mg/day from weeks 1 to 8 and 900 mg/day from weeks 9 to 16) **decreased total (by 6 mg/dL, 0.16 mmol/L, or 3%), LDL cholesterol (by 4 mg/dL, 0.10 mmol/L, or 4%), and apoB (by 4 mg/dL, 0.04 g/L, or 5%)** [\[R\]](#).

In a non-placebo-controlled trial of 216 participant with moderate dyslipidemia, supplementation with pantethine (600 U/day) for 4 weeks **reduced total cholesterol, non-HDL cholesterol, and triglycerides**. However, **coQ10 was more effective** [\[R\]](#).

The combination of pantethine (600 mg/day) and probucol (500 mg/day) taken for 8 weeks **lowered total cholesterol while increasing HDL cholesterol** in a non-placebo-controlled trial of 48 patients with moderate hypercholesterolemia [\[R\]](#).

In 2 placebo-controlled trials of 39 patients with different forms of hyperlipoproteinemia, supplementation with pantethine (900 mg/day) for 28 days **lowered total cholesterol (by 13.5%), LDL cholesterol (by 13.5%), and triglycerides (by 13-30%) while increasing HDL cholesterol (by 10%)** [\[R\]](#), [\[R\]](#).

Pantethine (600-1200 mg/day) taken for 7-24 months **lowered total cholesterol and triglycerides** in an uncontrolled trial of 31 CKD patients with dyslipidemia [\[R\]](#).

25



Chickpeas

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Incorporate chickpeas into your diet by adding them to salads, soups, and stews, or by making hummus. Aim for at least a half-cup serving, 3-4 times a week.

Description

Chickpeas, also known as garbanzo beans, are a good source of fiber, protein, and various vitamins and minerals. They can promote digestive regularity, provide sustained energy, and contribute to overall well-being when included in a balanced diet.

Chickpeas are a good source of minerals like manganese, iron, copper, zinc, and phosphorus, as well as folate and fiber. A ½ cup serving provides 0.9 mg of manganese or 39%DV.

How it helps

In several non-placebo-controlled trials on healthy volunteers, incorporating chickpeas or chickpea-based products into the diet consistently resulted in reductions in total cholesterol (by 3.9%, 0.25 mmol/L, or 7.7 mg/dL) and LDL cholesterol levels (by 4.6%, 0.2 mmol/L, or 7.3 mg/dL) [\[R, R, R\]](#).

Chickpeas are rich in soluble fiber, which helps lower LDL cholesterol levels by binding to it and removing it from your body. Additionally, they contain plant sterols that inhibit cholesterol absorption.

26



Probiotic Yogurt

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Consume one to two servings of probiotic yogurt each day. Each serving is typically 6 to 8 ounces. Continue this practice daily for at least 1 to 2 weeks to begin noticing benefits to digestive health.

Description

Probiotic yogurt is a dairy product containing live probiotic cultures like Lactobacillus and Bifidobacterium, which can aid digestion and improve gut health when consumed regularly. It is a good source of calcium, protein, and probiotics, contributing to bone health and digestive well-being.

How it helps

Probiotic yogurt introduces beneficial bacteria to your gut, which can lower LDL ("bad") cholesterol levels. It helps regulate cholesterol metabolism, potentially reducing your risk of heart disease.

54 volunteers were studied for varying periods with dietary supplementation of non pasteurized yogurt, pasteurized yogurt and 2% butterfat milk. Serum cholesterol was significantly reduced by 5 to 10% after 1 week of supplementation with either non pasteurized or pasteurized yogurt; 2% butterfat milk reduced serum cholesterol to a smaller and less significant effect. Serum triglycerides were unaffected by the diet [\[R\]](#).

A randomized and crossover trial included 14 healthy subjects Consumption of probiotic yogurt in comparison with ordinary yogurt caused a significant decrease in serum total cholesterol [\[R\]](#).

Subjects in the intervention group (n=36) consumed 300 g/d of probiotic yogurt containing Lactobacillus acidophilus La5 and Bifidobacterium lactis Bb12 and those in the control group (n=36) consumed 300 g/d of conventional yogurt for 8 wk. Probiotic yogurt consumption resulted in reductions in serum levels of alanine aminotransferase, aspartate aminotransferase, total cholesterol, and low-density lipoprotein cholesterol, compared with control group [\[R\]](#).

In a double-blind trial, 60 type 2 diabetic individuals consumed probiotic or conventional yogurt for 6 weeks. Probiotic yogurt significantly lowered total cholesterol (4.54%) and LDL cholesterol (7.45%), without significant changes in triglycerides or HDL cholesterol. Atherogenic indices also improved, suggesting potential cardiovascular benefits [\[R\]](#).

27



Xylo-oligosaccharides

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Take xylo-oligosaccharides (XOS) as a dietary supplement in doses typically ranging from 1.4 to 2.8 grams per day. This can be consumed either in a single dose or divided into two doses throughout the day. It is usually found in powder form that can be mixed into water, juice, or added to food. Continue daily for at least 4 to 8 weeks to observe potential benefits.

TYPICAL STARTING DOSE

2 g

Description

Xylo-oligosaccharides are a type of prebiotic fiber found in fruits and vegetables. They serve as food for beneficial gut bacteria, promoting gut health and aiding in digestive regularity.

How it helps

Xylo-oligosaccharides are a type of fiber that feed the beneficial bacteria in your gut, promoting better digestion and overall health. By maintaining the right balance of these bacteria, your body may absorb less cholesterol, potentially leading to lower cholesterol levels.

In a 21-day study, Xylo-oligosaccharide (XOS) supplementation increased bowel movements and participant-reported vitality and happiness in healthy adults. It also boosted bifidobacterial counts and HDL levels [\[R\]](#).

28



Niacin Supplements

IMPACT2 / 5

EVIDENCE4 / 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

This vitamin may slightly lower “bad” (LDL) cholesterol levels by preventing fat buildup in your blood. **However, it is much better at raising “good” (HDL) cholesterol** [\[R\]](#).

Niacin supplements (500 mg/day for 3-12 months) may lower cholesterol in some people. Combining them with statins may work better than either alone [\[R\]](#), [\[R\]](#), [\[R\]](#).

Note: *Niacin supplements have been linked to liver damage and strokes. They may also cause flushing, bruises, and bleeding. Most doctors do not recommend taking them unless a person can’t take statins. Talk to your doctor before supplementing* [\[R\]](#), [\[R\]](#), [\[R\]](#).

29



Soy

IMPACT

2 / 5

EVIDENCE

4 / 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

Two types of soy products may help with cholesterol:

- **Soy protein (25-30 g/day for 6-9 weeks)** may lower total and “bad” (LDL) cholesterol [\[R\]](#), [\[R\]](#).
- **Soy isoflavones (around 100 mg/day for 1-3 months)** may have similar effects on LDL cholesterol only [\[R\]](#), [\[R\]](#), [\[R\]](#).

Note that processed soybeans tend to be lower in isoflavones [\[R\]](#).

Soy may improve cholesterol levels by helping you burn fat. It’s low in saturated fat and high in omega-3 fats and fiber [\[R\]](#), [\[R\]](#).

30



Yoga

IMPACT

2 / 5

EVIDENCE

3 / 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

Exercise is one of the best things you can do to lower cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#).

Exercise can help you burn fat and boost HDL or “good” cholesterol [\[R\]](#), [\[R\]](#).

People who exercise for at least 150 minutes per week tend to have lower cholesterol. All types of exercise are helpful [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Low-intensity exercise, such as tai chi and [yoga](#), may reduce cholesterol as well [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Exercise works especially well if you also eat a healthy diet [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

31



Genistein

IMPACT

2 / 5

EVIDENCE

3 / 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

Genistein intake may significantly reduce total cholesterol, LDL cholesterol, and systolic blood pressure, with greater effects in postmenopausal women with metabolic syndrome and longer durations of intake [R].

In one study, LDL cholesterol reduction with genistein was not statistically significant, but other outcomes like total cholesterol, HDL cholesterol, fasting glucose, and insulin showed significant differences [R].

In another study, genistein effectively lowered homocysteine levels and increased HDL cholesterol. It reduced LDL cholesterol, total cholesterol, and triglycerides in postmenopausal women with metabolic syndrome but not in others [R].

Genistein may help by reducing the body's ability to make cholesterol and enhancing its ability to eliminate it.

32



Red Clover

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take a red clover supplement in the form of capsules, typically ranging from 40 to 80 milligrams daily. This should be done under the guidance of a healthcare provider, especially if you're using it for menopausal symptoms or bone health, to ensure it's appropriate for your individual needs. Generally, it's used for periods ranging from 3 to 12 months.

TYPICAL STARTING DOSE

40 mg

Description

Red Clover is a plant that's often utilized for its health benefits. Not just pleasing to the eyes with its bright color, it's known to help with skin health and menopause symptoms. Additionally, it may improve heart health and bone density. It's like a power-plant, offering multiple health benefits in one package.

How it helps

Three meta-analyses (the largest one with 12 trials and 1284 women) concluded that supplementation with red clover for 1-18 months lowers total cholesterol (by 11.21-12.34 mg/dL) and LDL-cholesterol (by 5.02-10.61 mg/dL) while increasing HDL-cholesterol (by 1.60-5.41 mg/dL) in perimenopausal and postmenopausal women [\[R\]](#), [\[R\]](#), [\[R\]](#).

Red clover contains isoflavones that act like estrogen in the body, which may help reduce LDL cholesterol levels while increasing HDL cholesterol.

33



Fenugreek

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take a 500 mg fenugreek supplement daily, preferably with a meal to aid in digestion and absorption.

TYPICAL STARTING DOSE

500 mg

Description

Fenugreek is an herb and spice commonly used in traditional medicine for its potential to support digestive health, regulate blood sugar levels, and promote lactation in nursing mothers. Its compounds, such as soluble fiber and fenugreek seeds, contribute to its various health benefits.

[Fenugreek](#) is a leafy green legume originating from central Asia. Its leaves and seeds are both used in cooking. Some people also use the seeds to make tea [[R](#), [R](#)].

People use fenugreek tea or supplements for [[R](#), [R](#), [R](#), [R](#)]:

- Reproductive health
- Blood sugar control
- Decreasing cholesterol

How it helps

Fenugreek may lower total and LDL cholesterol. Different forms of fenugreek have been used, including [[R](#), [R](#), [R](#), [R](#)]:

- Leaf powder
- Seed extract
- Seed powder

Fenugreek contains active compounds that may help you absorb less cholesterol from food. It’s also high in healthy fats and dietary fiber, which help lower cholesterol [[R](#), [R](#), [R](#)].

34



L-Carnitine

IMPACT

2 / 5

EVIDENCE

3 / 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

500 mg

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

L-carnitine (2-3 g/day for 2-12 months) may lower total and “bad” (LDL) cholesterol levels [\[R\]](#), [\[R\]](#), [\[R\]](#).

L-carnitine probably works by helping the body burn fats for energy [\[R\]](#).

It may also be helpful for people with health issues like diabetes and kidney problems [\[R\]](#), [\[R\]](#), [\[R\]](#).

35



Resveratrol

IMPACT

2 / 5

EVIDENCE

3 / 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

Multiple meta-analyses on resveratrol supplementation indicate mixed effects on lipid profiles. It generally lowers total cholesterol (by 7.65-9.75 mg/dL), LDL-cholesterol, and triglycerides, with stronger effects in interventions lasting over 3 months or involving type 2 diabetes patients. However, it may raise total and LDL cholesterol, with non-significant effects on triglycerides, in people with type 2 diabetes and obesity [\[R, R, R, R, R, R\]](#).

36



Soy Protein

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Include 20 grams of soy protein in your daily diet. This can be achieved by consuming soy-based products such as tofu, soy milk, or soy nuts throughout the day.

TYPICAL STARTING DOSE

20 g

Description

Soy protein is a high-quality plant-based protein derived from soybeans. It is commonly used in vegetarian and vegan diets and may support muscle growth, weight management, and overall nutritional needs.

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 [\[R\]](#):

- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Soy protein (25-30 g/day for 6-9 weeks) may lower total and “bad” (LDL) cholesterol [\[R\]](#), [\[R\]](#).

Soy may improve cholesterol levels by helping you burn fat. It’s low in saturated fat and high in omega-3 fats and fiber [\[R\]](#), [\[R\]](#).

37



Blueberries

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a half to one cup of fresh or frozen blueberries into your daily diet. You can add them to your breakfast cereal, smoothies, or enjoy them as a snack on their own.

Description

Blueberries are a nutritious fruit packed with antioxidants, vitamins, and fiber. They are known for their potential to support brain health, reduce the risk of chronic diseases, and promote overall well-being.

[Blueberries](#) are enjoyed all around the world for their sweet taste and nutritional benefits. They may support [\[R\]](#):

- Heart health
- Cognitive function
- Normal blood sugar levels

How it helps

A meta-analysis of 21 studies concluded that blueberries improve systolic and diastolic blood pressure, triglycerides, total cholesterol, LDL cholesterol, HDL cholesterol, and insulin levels. Another meta-analysis (12 trials) found that blueberry interventions decreased total and LDL cholesterol, as well as diastolic blood pressure. However, a meta-analysis of 11 studies found that blueberries improved triglycerides but no other cardiovascular risk factors [\[R, R, R\]](#).

38



Gamma-Oryzanol

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 300-600mg of gamma-oryzanol supplements daily, ideally with meals to enhance absorption. This dosage can be divided into two to three smaller doses throughout the day. Continue this supplementation for 4 to 9 weeks to observe potential benefits.

Description

Gamma oryzanol is a compound found in rice bran oil and other grains. It is believed to have antioxidant properties and may be used to support cardiovascular health and reduce symptoms of menopause.

How it helps

In a placebo-controlled trial of 59 hyperlipidemic subjects, incorporating 30 mL/day rice bran oil (with 4,000-11,000 ppm gamma-oryzanol) into daily meals for 4 weeks lowered LDL-C (by 8-12.2%) and increased antioxidant capacity. Consuming 50 g/day of rice bran oil (with 0.05 or 0.8 g/day gamma-oryzanol) for 4 weeks lowered LDL cholesterol (by 10.5%) and the LDL:HDL ratio (by 18.9%) in a placebo-controlled trial of 30 mildly hypercholesterolemic men [\[R\]](#), [\[R\]](#).

In a placebo-controlled trial of 30 mildly hypercholesterolemic men, consuming 50 g/day of rice bran oil (with 0.05 or 0.8 g/day gamma-oryzanol) for 4 weeks lowered total cholesterol by 6.3% [\[R\]](#).

Gamma-oryzanol may reduce cholesterol absorption while enhancing its elimination.

39



Astaxanthin

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take an astaxanthin supplement daily, with a typical dosage ranging from 4 to 12 mg. It is best taken with a fat-containing meal to enhance absorption.

TYPICAL STARTING DOSE

12 mg

Description

Astaxanthin is a powerful antioxidant found in certain microalgae and seafood. It is known for its potential benefits in reducing oxidative stress, supporting skin health, and promoting eye health.

[Astaxanthin](#) is a naturally-occurring orange-red pigment carotenoid found in algae, shrimp, lobster, crab, and salmon [\[R\]](#). As an antioxidant, astaxanthin is **10 times stronger than zeaxanthin, lutein and [beta-carotene](#), and 100 times stronger than [vitamin E](#)** [\[R\]](#). People take astaxanthin to:

- Support skin health [\[R, R\]](#)
- Reduce exercise fatigue [\[R, R\]](#)
- Prevent heart disease [\[R, R, R\]](#)

How it helps

Astaxanthin, a powerful antioxidant, helps improve high cholesterol by reducing the oxidation of LDL (bad cholesterol), which often leads to plaque formation in arteries. In this way, it can contribute to overall healthier cholesterol levels.

A [meta-analysis of 7 studies and 321 participants at risk of metabolic syndrome](#) concluded that astaxanthin **significantly lowers LDL cholesterol and marginally lowers total cholesterol and systolic blood pressure** [\[R\]](#).

In a [placebo-controlled trial of 61 participants with elevated triglycerides](#), supplementation with astaxanthin (6-18 mg/day) for 12 weeks **lowered triglycerides and raised HDL** [\[R\]](#).

Astaxanthin (8 mg/day taken for 8 weeks) **lowered plasma glucose, triglycerides, visceral fat, VLDL, total cholesterol, and systolic blood pressure** in a [placebo-controlled trial of 44 patients with type 2 diabetes](#) [\[R\]](#).

A multi-ingredient nutraceutical with astaxanthin, red yeast rice, berberine, policosanol, coenzyme Q10, and folic acid (NComb) **lowers total cholesterol (by 26.15mg/dL), LDL-cholesterol (by 23.85mg/dL), triglycerides (by 13.83mg/dL) and glucose (by 2.59mg/dL) while increasing HDL-cholesterol (by 2.53mg/dL)** according to a [meta-analysis of 14 trials and over 3k participants](#) [\[R\]](#).

40



Yerba Mate

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take yerba mate as a supplement by consuming 1 to 3 grams of the dried leaves in capsule form daily, or by drinking 1 to 3 cups of yerba mate tea. Do this consistently for at least 4 to 8 weeks to observe potential benefits.

TYPICAL STARTING DOSE

1 g

Description

Yerba mate is a South American herbal tea known for its caffeine content and antioxidant properties. It provides a boost in alertness and mental clarity and is used for its potential to enhance focus and energy.

Yerba mate is a traditional South American beverage made from the dried leaves of the yerba mate plant (*Ilex paraguariensis*). It is commonly consumed in countries like Argentina, Uruguay, Paraguay, and Brazil, and has a long history of cultural significance and social bonding.

Yerba mate is traditionally sipped through a *bombilla*, a special metal straw, from a gourd-shaped container. This results in a flavorful and stimulating drink often shared among friends and family.

How it helps

In a non-placebo-controlled trial of 102 participants, drinking yerba mate (330 mL, 3x/day) for 20-40 days reduced LDL cholesterol (by 8.7% in normolipidemic subjects, by 8.1-8.6% in dyslipidemic subjects, and by 10-13% in those on statins), increased HDL-cholesterol (by 4.4% in normolipidemic subjects and by 5.4-6.5% in dyslipidemic subjects), and decreased apoB (by 6% in normolipidemic subjects) [\[R\]](#).

Yerba mate contains antioxidant compounds that may help lower LDL cholesterol levels.

41



Macadamia Nuts

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a handful of macadamia nuts (about 10-12 nuts or 30 grams) into your daily diet. You can eat them alone as a snack, add them to salads, or use them in baking. Do this regularly as part of a healthy diet to reap the benefits.

Description

Macadamia nuts are a nutrient-dense snack rich in heart-healthy monounsaturated fats, fiber, and antioxidants. Consuming macadamia nuts in moderation can support cardiovascular health, help regulate cholesterol levels, and provide essential nutrients.

How it helps

In an uncontrolled trial of 17 hypercholesterolemic men, consuming macadamia nuts (40-90 g/day) for 4 weeks decreased total cholesterol (by 3%) and LDL cholesterol (by 5.3%) while increasing HDL cholesterol (by 7.9%). Similarly, eating a macadamia nut-based diet (42.5 g/2100 kcal) for 5 weeks lowered total cholesterol (by 0.51 mmol/L), LDL cholesterol (by 0.30 mmol/L), TC:HDL-C (by 0.29), and LDL-C:HDL-C (by 0.18) better than a standard American diet in a non-placebo-controlled trial of 25 mildly hypercholesterolemic subjects. However, consuming palmitoleic acid from macadamia nuts for 4 weeks increased LDL cholesterol (by 4%) in a non-placebo-controlled trial of 34 hypercholesterolemic men [\[R\]](#), [\[R\]](#), [\[R\]](#).

In a non-placebo-controlled trial of 30 healthy volunteers, consuming a macadamia nut-based diet (37% energy from fat) for 30 days was as effective as a Step 1 diet at lowering total cholesterol and LDL cholesterol. In a non-placebo-controlled trial of 35 subjects with abdominal obesity, consuming the usual diet plus 15% daily calories of macadamia nuts for 8 weeks non-significantly reduced total cholesterol (by 2.1%) and LDL cholesterol (by 4%), especially in those with lower BMI or body fat [\[R\]](#), [\[R\]](#).

Macadamia nuts are high in heart-healthy monounsaturated fats, which can lower LDL cholesterol while increasing HDL cholesterol.

42



Black Garlic

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate black garlic into your diet by adding 1 to 2 cloves to meals daily. You can use it in sauces, as a topping for dishes, or blend it into dressings. Consistent consumption for at least 4 weeks is suggested to observe potential health benefits.

Description

Black garlic is garlic that has been fermented, resulting in a sweet and savory flavor profile. It is believed to have antioxidant and anti-inflammatory properties, potentially offering health benefits such as immune support and improved cardiovascular health.

How it helps

In a placebo-controlled trial of 60 participants with mild hypercholesterolemia, supplementation with aged black garlic (6 g/day) before breakfast for 12 weeks increased HDL cholesterol and LDL:apoB while lowering apoB [\[R\]](#).

Ingesting 4 cloves (12 g) of black garlic per day for 12 weeks increased ApoA1 while lowering artery hardening markers (MCP-1, ICAM-1, and VCAM-1) in a non-placebo-controlled trial of 62 hypercholesterolemic and healthy individuals [\[R\]](#).

Black garlic is rich in antioxidants that can lower LDL cholesterol levels. Additionally, it enhances overall heart health by decreasing inflammation and preventing plaque build-up in your arteries.

43



Taurine

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 1-4 g of taurine supplement daily, divided into two or three doses with meals for optimal absorption. It can be taken continuously, with periodic evaluations of its effects and benefits.

TYPICAL STARTING DOSE

500 mg

Description

Taurine is an amino acid found in various foods and often used in energy drinks and supplements. It plays a role in neurological and cardiovascular health and can help support energy metabolism.

[Taurine](#) is the most abundant free amino acid in humans. It's not essential, which means we can produce it. We can also get it from protein-rich foods, such as [\[R\]](#):

- Seafood
- Meat
- Dairy

Taurine is a popular additive in energy drinks and can also be taken as a supplement [\[R\]](#).

Taurine plays an important role in [\[R\]](#), [\[R\]](#):

- Bile production
- Calcium metabolism

It is also well-known for its antioxidant and anti-inflammatory properties [\[R\]](#).

How it helps

A [meta-analysis of 12 studies](#) concluded that supplementation with taurine (0.5-6 g/day for 1.5-12 weeks) **lowers total cholesterol by 10.87 mg/dL but has no effect on LDL or HDL cholesterol** [\[R\]](#).

Taurine may help lower cholesterol by increasing the production of bile in the liver. Bile binds to cholesterol in the body, helping excrete it.

44



Avoid Betaine (TMG) Supplements

IMPACT2 / 5

EVIDENCE2 / 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

Betaine supplements can boost your liver's function and help lower high cholesterol levels. This action may prevent the development or progression of conditions linked to high cholesterol, such as heart disease or stroke.

A [multicenter, controlled, randomized, parallel-group, and primary prevention trial with 5,613 participants with overweight, obesity, and ≥3 criteria of metabolic syndrome](#) found that the greatest 1-y increase in **dietary betaine intake** was associated with lower **total cholesterol (-4.52 mg/dL), and LDL cholesterol (-4.16 mg/dL)** [\[R\]](#).

A [meta-analysis of 6 randomized placebo-controlled trials](#) found that betaine supplementation (at least 4 g/day for 6-24 weeks) may **increase total cholesterol** (0.34 mmol/L ,95% CI: 0.02, 0.65) [\[R\]](#).

A [meta-analysis](#) found that betaine supplementation (**≥4 g/day**) intended to lower homocysteine may **increase total cholesterol (MD: 14.12 mg/dl, 95% CI%: 9.23 to 19.02), low-density lipoprotein (LDL) (MD: 10.26 mg/dl, 95% CI: 6.14 to 14.38)],** dimethylglycine (DMG) (MD: 21.33 micromol/L, 95% CI: 13.87 to 28.80), and methionine (MD: 2.06 micromol/L, 95% CI: 0.23 to 3.88). Doses of 4 g/day **did not cause any adverse effect on lipid profiles** [\[R\]](#).

45



Apple Pectin And Citrus Pectin

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a daily supplement containing of apple and citrus pectin (500 mg each), ideally with a meal to aid in its absorption. This regimen can be continued on a long-term basis to support dietary fiber intake and digestive health.

TYPICAL STARTING DOSE

500 mg

Description

Apple and citrus pectin are types of dietary fiber found in apples and citrus fruits. They are known for their potential to support digestive health and helping to lower cholesterol levels.

How it helps

Two crossover studies in mildly hyper-cholesterolemic individuals showed that 15g/day of pectin (citrus or apple, DE-70) lowered LDL cholesterol by 7-10% compared to control [R].

Apple pectin and citrus work by binding to cholesterol in the gut and preventing its absorption.

46



Hatha Yoga

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Practice Hatha Yoga for 60 minutes at least twice a week. Choose a quiet, comfortable space and consider guided sessions for beginners or those unfamiliar with the poses. Consistency over a period of months to years is beneficial for appreciating its full effects.

TYPICAL STARTING DOSE

1 hour

Description

Hatha yoga is a gentle and accessible form of yoga that combines physical postures, breathing exercises, and meditation. Practicing hatha yoga regularly can promote flexibility, stress reduction, and overall physical and mental well-being.

How it helps

Hatha yoga may lower total and LDL cholesterol while reducing HDL cholesterol in healthy participants, as well as in those with end-stage kidney disease or type 2 diabetes [R, R, R].

Hatha yoga may help by reducing stress.

47



Inositol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take inositol as a daily supplement, usually available in powder or capsule form. The typical dosage ranges from 2 grams to 18 grams per day, divided into smaller doses taken with meals and water to aid absorption. It's important to start with a lower dose and gradually increase to avoid digestive side effects.

TYPICAL STARTING DOSE

2 g

Description

Inositol is a naturally occurring compound that plays a role in cell signaling and neurotransmitter function. It has been studied for its potential in promoting mental health and managing conditions like anxiety and depression when used as a supplement under the guidance of a healthcare professional.

Inositol is a type of sugar that our bodies need to function. It was considered a vitamin (vitamin B8) until it was discovered that our bodies can make it from another common sugar, glucose [\[R\]](#).

[Myo-inositol](#) is the most common form of inositol. It plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart health
- Normal blood sugar levels
- Mental health
- Cognitive function
- Reproductive health

Myo-inositol can convert to [D-chiro-inositol](#) in the body. These two forms of inositol are often combined in supplements. People use them to improve blood sugar control and PCOS [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a double-blinded RCT with 48 obese NAFLD patients, myo-inositol (4g/day) led to significant weight loss, lower systolic BP, reduced insulin levels, improved lipid profile, liver enzymes, and NAFLD severity compared to placebo after 8 weeks [\[R\]](#).

In a 12-month study with 80 postmenopausal women and metabolic syndrome, myo-inositol (2 g, b.i.d) showed significant improvements in glucose, insulin, HOMA-IR, triglycerides, HDL cholesterol, and blood pressure compared to placebo, while BMI and waist circumference remained unchanged [\[R\]](#).

In a study of 80 postmenopausal women with metabolic syndrome, myo-inositol (2 g, b.i.d) alongside diet for 6 months significantly improved systolic and diastolic blood pressure, HOMA index, cholesterol, and triglycerides, while increasing HDL cholesterol (22%) compared to the diet and placebo groups [\[R\]](#).

In an 8-week trial, 92 obese NAFLD patients were randomly assigned to ALA, myo-inositol, propolis, or control groups. Myo-inositol led to significant improvements in cholesterol [\[R\]](#).

48



Pecans

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate about a handful of pecans (roughly 1 ounce or 28 grams) into your daily diet. You can eat them as a snack, sprinkle chopped pecans over salads, or blend them into smoothies. Aim to do this regularly as part of your daily dietary habits to enjoy their health benefits.

Description

Pecans are a type of nut derived from the hickory tree, primarily native to North America. They are rich in nutrients like healthy fats, protein, dietary fiber, and various vitamins and minerals, including vitamin E, manganese, and zinc.

Pecans are a good source of fiber, along with manganese, molybdenum, copper, thiamine, and zinc. A 1-ounce serving provides 1.1 mg of manganese or 48%DV.

How it helps

Pecans are rich in monounsaturated fats and contain fiber, both of which can help lower "bad" LDL cholesterol levels. This nut also contains antioxidants which can help improve heart health by decreasing the risk of high cholesterol-induced oxidative stress.

In various non-placebo-controlled trials on healthy volunteers, older adults, and individuals at risk of cardiovascular disease, pecan consumption had positive effects on cholesterol levels and heart health. When incorporated into the diet, pecans were associated with reductions in total cholesterol (by 0.8 mmol/L or 13.8-20.4 mg/dL), LDL cholesterol (by 0.26-0.32 mmol/L or 13.1-14.3 mg/dL), triglycerides (by 0.14 mmol/L or 13.9 mg/dL), TC/HDL ratio (by 3.92), non-HDL-C (by 14.5-15.1 mg/dL), LDL particle number (by 83 nmol/L), LDL medium (by 18 nmol/L), and apoB (by 0.99 mg/dL), while increasing HDL cholesterol (by 0.06 mmol/L). Pecan-enriched diets showed significant improvements in lipid profiles and cardiovascular risk factors compared to regular diets or dietary modifications. However, supplementing a healthy diet with pecans didn't further improve lipid profile in patients with coronary artery disease [\[R, R, R, R, R\]](#).

49



Kimchi

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Incorporate about a half cup of kimchi into one of your daily meals. This could be as a side dish or part of the meal for at least one month to observe potential health benefits such as improved digestion.

Description

Kimchi is a fermented vegetable dish commonly consumed in Korean cuisine. It's packed with probiotics and nutrients, which can promote gut health and boost the immune system.

How it helps

Kimchi, a fermented vegetable dish, contains probiotics and fiber that can help lower high cholesterol levels. It promotes the excretion of cholesterol and inhibits cholesterol synthesis in the body.

- In a [non-placebo-controlled trial of 100 healthy volunteers](#), consuming kimchi (15-210 g/day) for 7 days had a **dose-dependent lowering effect on fasting glucose, total glucose, TC, and LDL-C**. The lipid-lowering effects of kimchi were **stronger in people with TC above 190 mg/dL and LDL-C above 130 mg/dL** [\[R\]](#).
- In a [non-placebo-controlled trial of 22 overweight and obese participants](#), consuming kimchi (both fresh and fermented) for 4 weeks **lowered fasting glucose, fasting insulin, and total cholesterol, especially if fermented** [\[R\]](#).
- In a [non-placebo-controlled trial of 21 prediabetic participants](#), consuming fermented kimchi for 8 weeks **decreased insulin resistance and improved glucose tolerance** [\[R\]](#).
- In a [placebo-controlled trial of 40 prediabetic participants](#), supplementation with the kimchi-derived probiotic Lactobacillus plantarum HAC01 for 8 weeks **reduced 2h-PPG and HbA1c levels** [\[R\]](#).

50



Broccoli Sprouts

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Consume 2-4 tablespoons of fresh broccoli sprouts daily. They can be added to salads, sandwiches, or smoothies to make them easier to consume. Continue this practice daily for at least 3 months to potentially see benefits.

TYPICAL STARTING DOSE

2 tbsp

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.

How it helps

Broccoli sprouts are loaded with antioxidants and sulforaphane that promote heart health by reducing inflammation, promoting good cholesterol (HDL), and reducing bad cholesterol (LDL). Consuming them could, therefore, potentially aid in balancing cholesterol levels and enhancing overall health.

Seventeen studies primarily used broccoli sprouts as an intervention. Results were consistent for blood glucose, lipid profile, and oxidative stress improvement. Less evidence was found for decreased inflammation, Helicobacter pylori colonization, and cancer protection [R].

51



Myo-inositol

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 2 grams of myo-inositol supplement orally twice a day, preferably with meals to enhance absorption. This regimen should be followed daily for at least 6 months to observe significant benefits.

TYPICAL STARTING DOSE

4 g

Description

Myo-inositol is a naturally occurring compound that plays a role in various cellular functions. It is used in dietary supplements and is believed to have potential benefits for mental health, hormone regulation, and insulin sensitivity.

Inositol is a type of sugar that our bodies need to function. It was considered a vitamin (vitamin B8) until it was discovered that our bodies can make it from another common sugar, glucose [\[R\]](#).

[Myo-inositol](#) is the most common form of inositol. It plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart health
- Normal blood sugar levels
- Mental health
- Cognitive function
- Reproductive health

Myo-inositol can convert to [D-chiro-inositol](#) in the body. These two forms of inositol are often combined in supplements. People use them to improve blood sugar control and PCOS [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

In a double-blinded RCT with 48 obese NAFLD patients, myo-inositol (4g/day) led to significant weight loss, lower systolic BP, reduced insulin levels, improved lipid profile, liver enzymes, and NAFLD severity compared to placebo after 8 weeks [\[R\]](#).

In a 12-month study with 80 postmenopausal women and metabolic syndrome, myo-inositol (2 g, b.i.d) showed significant improvements in glucose, insulin, HOMA-IR, triglycerides, HDL cholesterol, and blood pressure compared to placebo, while BMI and waist circumference remained unchanged [\[R\]](#).

In a study of 80 postmenopausal women with metabolic syndrome, myo-inositol (2 g, b.i.d) alongside diet for 6 months significantly improved systolic and diastolic blood pressure, HOMA index, cholesterol, and triglycerides, while increasing HDL cholesterol (22%) compared to the diet and placebo groups [\[R\]](#).

In an 8-week trial, 92 obese NAFLD patients were randomly assigned to ALA, myo-inositol, propolis, or control groups. Myo-inositol led to significant improvements in cholesterol [\[R\]](#).

52



Chlorella

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 3 to 5 grams of chlorella in tablet or powder form daily, ideally before meals to improve digestion. Continue this supplementation for at least 2 to 3 months to observe benefits.

TYPICAL STARTING DOSE

3 g

Description

[Chlorella](#) is a microalga from freshwater. People consume chlorella in rice, pancakes, or tea. It can also be found as a supplement [\[R\]](#), [\[R\]](#).

Chlorella is **rich in protein** and several micronutrients. It may be useful to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce blood sugar
- Lower cholesterol
- Reduce blood pressure
- Improve immunity

How it helps

A meta-analysis of 19 trials and 797 participants concluded that administration of chlorella (over 4 g/day for at least 8 weeks) reduces LDL-cholesterol (by 8.32 mg/dL) [\[R\]](#).

In a 12-week placebo-controlled trial of 106 people with metabolic syndrome, the combination of chlorella, [red yeast rice](#), [bitter melon](#), soy protein, and [licorice](#) reduced LDL-cholesterol (by 0.7 mmol/L) [\[R\]](#).

In a placebo-controlled trial of 63 people with hypercholesterolemia, supplementation with chlorella (5 g/day) for 4 weeks reduced total cholesterol by 1.6%. Chlorella lowered the levels of VLDL, apoB-LDL, and [non-HDL cholesterol](#). LDL and HDL levels did not change significantly [\[R\]](#).

The same dose prevented increases in LDL and total cholesterol from a diet with 510 mg/day cholesterol in a placebo-controlled trial of 34 healthy volunteers [\[R\]](#).

Chlorella may help with hypercholesterolemia by altering the expression of genes involved in fat metabolism, as seen in a non-placebo-controlled trial of 34 people [\[R\]](#).

53



Vitamin D and Calcium

IMPACT2 / 5

EVIDENCE1 / 5

How to implement

Take 600 IU of vitamin D and 1000 mg of calcium daily. For adults over 70 years, the vitamin D intake should be increased to 800 IU daily. These supplements can be taken together or separately, usually with a meal to enhance absorption, and it is advisable to continue this regimen as part of your daily routine indefinitely unless advised otherwise by a healthcare provider.

Description

Vitamin D plus calcium supplements typically combine vitamin D, often sourced from sunlight exposure or dietary sources, with calcium, primarily found in dairy products and leafy greens. This combination is used to promote bone health, reduce the risk of osteoporosis, and support overall musculoskeletal well-being.

How it helps

In a trial of 70 women with gestational diabetes at 24-28 weeks of pregnancy, supplementation with vitamin D (500-1000 IU/day) and calcium (500-1000 mg/day) for 6 weeks reduced fasting glucose. The highest dose also lowered fasting serum insulin, LDL, and total cholesterol while raising HDL [\[R\]](#).

54



Broccoli

IMPACT2 / 5

EVIDENCE1 / 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 is high in fiber and antioxidants which can help lower "bad" LDL cholesterol levels and increase "good" HDL cholesterol. Additionally, the presence of sterols in broccoli helps in binding cholesterol in the gut, preventing its absorption, and thereby controlling high cholesterol levels.

55



Grapes

IMPACT

1 / 5

EVIDENCE

3 / 5

How to implement

Incorporate a serving of grapes, which is about 32 seedless grapes or approximately 1 cup, into your daily diet. You can eat them as a snack, add them to salads, or blend them into smoothies. Do this consistently for a period of at least 3 months to observe potential health benefits.

Description

Grapes are a nutrient-dense fruit rich in vitamins, fiber, and antioxidants like resveratrol. Regular consumption of grapes is associated with potential benefits for heart health, skin health, and overall well-being.

How it helps

Grapes are rich in antioxidants, including flavonoids and resveratrol, which can lower LDL (the "bad" cholesterol) levels and raise HDL (the "good" cholesterol) levels. This can promote heart health by reducing the overall cholesterol levels in your body.

A meta-analysis of 48 randomized controlled trials with 59 arms found that grape products significantly reduced total cholesterol, low-density lipoprotein, and triglyceride levels but had no significant effect on high-density lipoprotein [\[R\]](#).

56



Honey

IMPACT

1 / 5

EVIDENCE

3 / 5

How to implement

Consume 1-2 tablespoons of raw honey daily, either directly or by mixing it into warm water, tea, or yogurt. Continue this practice regularly to observe benefits.

Description

Honey is a natural sweetener known for its antimicrobial properties and potential benefits for wound healing. It contains antioxidants and may have soothing effects on sore throats and coughs.

[Honey](#) is a thick, sweet substance. It’s made by honeybees from the nectar of flowering plants. There are many different types of honey. Besides sugar, honey also contains amino acids (protein building blocks), vitamins, and minerals [\[R\]](#).

People use honey for its anti-inflammatory and antioxidant properties. It can potentially help with [\[R\]](#):

- Heart problems
- Gut problems
- Cough
- Burns

How it helps

Taking honey can help lower cholesterol as it contains antioxidants which help to reduce the level of bad LDL cholesterol and increase good HDL cholesterol. Always remember to take honey in moderation as excessive consumption could lead to weight gain, worsening cholesterol issues.

A [meta-analysis of 18 trials](#) found **low-certainty evidence** that honey, **especially Robinia, clover, and unprocessed raw honey, reduces total cholesterol (by 0.18 mmol/L), LDL-cholesterol (by 0.16 mmol/L), triglycerides (by 0.13 mmol/L), and ALT (by 9.75 U/L)** and **high-certainty evidence that it increases HDL-cholesterol (by 0.07 mmol/L)** [\[R\]](#).

However, a [meta-analysis of 23 studies](#) concluded that honey has **no significant effects on cholesterol and triglyceride levels** [\[R\]](#).

57



Avocado

IMPACT

1 / 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 (135-500 g/day) may help lower total and “bad” (LDL) cholesterol [\[R\]](#).

Note that the evidence is mixed. Some studies show that avocado only improves HDL cholesterol [\[R\]](#).

Avocado contains a compound that stops your gut from absorbing too much cholesterol. It’s also high in monounsaturated fat, which is a great replacement for saturated fat [\[R\]](#), [\[R\]](#).

58



Soy Isoflavones

IMPACT1 / 5

EVIDENCE3 / 5

How to implement

Take a soy isoflavone supplement containing 40 to 80 milligrams daily, ideally with food to improve absorption. This dosage can be continued on a daily basis for several months, but it's recommended to reevaluate its effectiveness and any potential side effects with a healthcare provider periodically.

TYPICAL STARTING DOSE

40 mg

Description

Soy isoflavones are natural compounds found in soybeans and soy products. They are phytoestrogens, which means they can mimic the effects of estrogen in the body and are associated with potential health benefits like menopausal symptom relief and improved heart health.

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 [\[R\]](#):

- Tofu
- Tempeh
- Edamame
- Miso
- Natto

Soy protein and soy isoflavones are also available as supplements.

How it helps

Soy isoflavones (around 100 mg/day for 1-3 months) may help lower “bad” (LDL) cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#).

Soy isoflavones may improve cholesterol levels by helping you burn fat. It's low in saturated fat and high in omega-3 fats and fiber [\[R\]](#), [\[R\]](#).

How to implement

TYPICAL STARTING DOSE

20 mg

Description

- Gut conditions
- Heart health
- Mental health

How it helps

We identified and analyzed 14 eligible studies in this meta-analysis. Our study found a significant reduction in cholesterol and TG following saffron intervention (-6.36 mg/d and -5.37 mg/dl, respectively). There was no significant effect on weight and LDL concentration [R].

60



Lactobacillus Paracasei

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Take a supplement containing Lactobacillus paracasei daily, with a dose of around 10 billion colony-forming units (CFUs). Consume the supplement with or without food, but consistently at the same time each day for at least 4 weeks to observe beneficial effects.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus paracasei is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

[Lactobacillus paracasei](#) is a type of bacteria naturally found in the intestine. It is considered a [probiotic bacteria](#), which means “good” bacteria that has health benefits when taken in adequate amounts [\[R\]](#).

L. paracasei is used in the production of the following fermented foods [\[R\]](#):

- Yogurt
- Cheese
- Sauerkraut

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

- Improve gut and skin health
- Boost immunity
- Fight allergies

How it helps

In a placebo-controlled trial of 130 participants with metabolic syndrome, supplementation with *L. paracasei* 8700: 2 (10 billion CFU) daily for 12 weeks reduced remnant cholesterol (by 0.16 mmol/L) [\[R\]](#).

Another strain, *L. paracasei* TISTR 2593, reduced LDL cholesterol in a placebo-controlled trial of 50 participants with hypercholesterolemia [\[R\]](#).

A probiotic drink with *L. paracasei* LPC37 combined with bread enriched with pentacalcium hydroxy-triphosphate lowered total and LDL cholesterol in a placebo-controlled trial of 32 women [\[R\]](#).

However, *L. paracasei* subsp. *paracasei* *L. casei* W8® only lowered triglyceride in a placebo-controlled trial of 64 healthy volunteers [\[R\]](#).

61



Whole-Body Cryotherapy

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

Participate in whole-body cryotherapy sessions by entering a cryotherapy chamber for 2-3 minutes, where temperatures drop to between -100°C to -140°C (-148°F to -220°F). These sessions should be performed 2-3 times a week for optimal benefits.

TYPICAL STARTING DOSE

2 minutes

Description

Whole-body cryotherapy involves brief exposure to extreme cold temperatures in a controlled chamber. It is used to reduce inflammation, alleviate muscle soreness, and promote recovery in athletes and individuals seeking pain relief.

How it helps

A meta-analysis of 7 studies found significantly lower levels of triglycerides after whole-body cryotherapy. Sensitivity analysis also demonstrated significantly lower levels of total cholesterol and LDL cholesterol after removing single studies. Meta-regression analysis showed that a lower baseline BMI was significantly associated with greater changes in the levels of total cholesterol and LDL [\[R\]](#).

Whole-body cryotherapy may boost metabolism and improve blood circulation, helping your body naturally reduce cholesterol levels. It could also contribute to weight loss, which often comes with improved cholesterol parameters.

Please note: *Rapid cold exposure can cause life-threatening changes to your breathing and heart rate. This is called the cold-shock response. Be cautious of any form of sudden temperature change to your environment, especially if you have heart disease or other health conditions [\[R\]](#).*

How to implement

Description

How it helps

Extra virgin olive oil (EVOO) contains monounsaturated fats and antioxidants, which can lower LDL cholesterol levels and increase HDL cholesterol. Thyme, on the other hand, has compounds that can also positively affect cholesterol levels.

63



Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

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

How it helps

A study of 2591 Korean adults found significant associations between increased blood lead and changes in serum lipid, as well as with a higher risk of dyslipidemia [\[R\]](#).

In a study of 43,196 participants from the NHANES database, high blood lead levels were significantly associated with a 41% higher risk of hyperlipidemia [\[R\]](#).

In another NHANES study, people in the highest lead quartile (>1.90 µg/dL) had higher risks of elevated total cholesterol, non-HDL cholesterol, LDL cholesterol, and ApoB [\[R\]](#).

How to implement

Description

How it helps

How to implement

TYPICAL STARTING DOSE

500 mg

Description

Olive leaf extract is derived from the leaves of the olive tree and contains bioactive compounds such as oleuropein. It is believed to have various health benefits, including antioxidant and anti-inflammatory properties that may contribute to improved immune function and overall well-being.

How it helps

Supplementation with olive leaf extract reduced total cholesterol, LDL cholesterol, and triglycerides in prehypertensive men. A beverage with olive leaf extract also lowered LDL cholesterol and triglycerides in prediabetic subjects. However, olive leaf extract had no effect on blood lipids in overweight and obese participants. A multi-ingredient supplement containing grapefruit, bitter orange, and olive extracts reduced total cholesterol and LDL cholesterol in healthy volunteers [R, R, R, R].

Olive leaf extract contains oleuropein and hydroxytyrosol, compounds known to reduce LDL cholesterol. It may also improve HDL-cholesterol, therefore supporting a healthier cholesterol balance overall.

66



Garlic Supplement

IMPACT1 / 5

EVIDENCE2 / 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

Garlic supplement (taken for at least 8 weeks) may help lower LDL cholesterol. Studied forms include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Garlic powder:** 600–5,600 mg/day
- **Garlic oil:** 9–18 mg/day
- **Aged garlic extract:** 1,000–7,200 mg/day

However, many studies didn’t find this benefit [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

The effects may be greater for garlic powder [\[R\]](#).

Garlic seems to help by reducing the:

- Production and storage of cholesterol [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#)
- Amount of cholesterol absorbed from the gut [\[R\]](#)

Please note: *Garlic can interact with blood thinners (such as aspirin, Plavix, and Coumadin). In addition, garlic can irritate the stomach in some people. Talk to your doctor before taking garlic [\[R\]](#), [\[R\]](#).*

67



American Ginseng

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 200-400 mg of American ginseng extract daily, preferably with a meal to enhance absorption. This regimen can be followed continuously for up to 12 weeks, after which a break or reassessment of the need to continue should be considered.

TYPICAL STARTING DOSE

200 mg

Description

American ginseng is a perennial herb native to North America, particularly regions of the United States and Canada. It is valued for its potential health benefits, including immune system support, stress reduction, and enhanced cognitive function, with the primary active compounds being ginsenosides.

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

- Sexual function
- Immunity
- Fatigue
- Attention

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

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

How it helps

American Ginseng is credited with antioxidant and anti-inflammatory benefits. These properties could reduce LDL "bad" cholesterol levels, contributing to better overall heart health.

In a [placebo-controlled trial of 24 patients with type 2 diabetes](#), American ginseng (3 g/day for 8 weeks) **increased the HDL:LDL ratio** [\[R\]](#).

The coadministration of American ginseng (3 g/day) and konjac fiber taken for 12 weeks **reduced LDL-cholesterol (by 8.3%), non-HDL cholesterol (by 7.5%), total cholesterol (by 5.7%), total cholesterol:HDL ratio (by 4.1%), ApoB (by 9%), and ApoB:ApoA1 ratio (by 14.6%)** in a [placebo-controlled trial of 30 patients with type 2 diabetes](#) [\[R\]](#).

In a [non-placebo-controlled trial of 84 patients with coronary heart disease and blood glucose abnormality](#), American ginseng used as an add-on to conventional medicine was **more effective at lowering total cholesterol and LDL-cholesterol than conventional medicine alone** [\[R\]](#).

68



Apples

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate at least one whole apple into your daily diet, either as a snack or part of your meals, ensuring to eat them consistently every day for an ongoing period to derive potential health benefits.

Description

Apples are a nutritious fruit known for their fiber content and antioxidant-rich skin. They support overall health by aiding digestion, reducing the risk of chronic diseases, and promoting heart health.

Apples (*Malus domestica Borkh.*) are one of the most widely consumed fruits in the world. They have a high nutritional value and content of antioxidants [\[R\]](#) [\[R\]](#).

Eating apples is associated with a lower risk of [\[R\]](#) [\[R\]](#):

- Heart disease
- Asthma
- Diabetes

How it helps

Apples are rich in dietary fiber, particularly soluble fiber, which can bind to dietary cholesterol and remove it from the body, thus lowering total cholesterol levels. Also, they contain beneficial antioxidants like quercetin, which can help prevent low-density lipoprotein oxidation, reducing your risk of atherosclerosis and heart disease.

Consuming two apples daily reduced total and LDL cholesterol, triglycerides, and cell adhesion molecules while increasing uric acid and microvascular vasodilation in mildly hypercholesterolemic volunteers. No impact on blood pressure or other cardiovascular markers was observed [\[R\]](#).

A 5x4 weeks dietary crossover study with 23 healthy volunteers investigated apple-related supplements' effects on lipoproteins and blood pressure. Whole apples, pomace, and cloudy juice showed potential LDL-cholesterol reduction, while clear juice increased LDL-cholesterol. No impact on other parameters was observed [\[R\]](#).

A randomized crossover trial with 30 healthy participants found that apple, spinach, and apple+spinach treatments improved blood vessel function and lowered blood pressure compared to the control, with apple and spinach also reducing systolic blood pressure significantly. No significant impact on diastolic blood pressure was observed [\[R\]](#).

Out of 22 eligible studies (7 randomized controlled trials, 1 nonrandomized trial, and 14 prospective observational studies), apple intake in RCTs lowered BMI but had no notable impact on body weight, serum lipids, blood glucose, or blood pressure [\[R\]](#).

However, a double-blind study with 30 hypercholesterolemic volunteers found no difference in vascular function or cardiovascular risk factors after consuming polyphenol-rich and polyphenol-poor apples for 4 weeks each [\[R\]](#).

69



Coconut

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate coconut into your diet by adding 1-2 tablespoons of unsweetened coconut flakes to your breakfast cereal or smoothie daily. You can also replace cooking oils with virgin coconut oil when sautéing or baking, not exceeding 2 teaspoons per day to maintain a balanced intake of dietary fats.

Description

Coconut is a versatile fruit with potential health benefits, including providing healthy fats and dietary fiber. It can support satiety, digestion, and overall nutritional wellness when incorporated into a balanced diet.

How it helps

Coconut flakes are high in saturated fats, which can raise your blood cholesterol levels. Therefore, they are not recommended for preventing or managing high cholesterol.

Different test foods were evaluated, including corn flakes, oat bran flakes, and corn flakes with 15% and 25% dietary fiber from coconut flakes. Results showed that all test foods, except cornflakes, significantly reduced serum total and LDL cholesterol levels. Additionally, serum triglycerides were reduced for all test foods, particularly in individuals with moderately raised cholesterol levels. In conclusion, both 15% and 25% coconut flakes effectively lowered cholesterol and triglycerides in these individuals [R].

70



Ecklonia Cava

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a supplement of Ecklonia Cava extract, typically available in capsule format, with a standard dose ranging between 100-400 mg daily. It can be taken with or without food, but consistency in timing can help maintain stable levels in your body. It's generally recommended to start with the lower end of the dosing spectrum and adjust based on personal tolerance and efficacy. Continue taking daily for at least a few weeks to gauge the full effect.

TYPICAL STARTING DOSE

100 mg

Description

Ecklonia cava is a type of brown seaweed often used in supplements for its potential antioxidant and anti-inflammatory properties, which may support cardiovascular health and overall well-being.

Ecklonia cava, also known as “sea trumpet”, is a brown seaweed that grows along the coasts of Korea and Japan. People use it as a food, fertilizer, and supplement [\[R\]](#), [\[R\]](#).

Ecklonia cava is traditionally used to fight [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Urinary diseases
- Hemorrhoids
- Constipation

How it helps

According to one study, supplementation with Ecklonia cava extract (72-144 mg/day for 12 weeks) may lower total and “bad” (LDL) cholesterol by reducing cholesterol absorption in the gut [\[R\]](#).

71



Chromium

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a 200 mcg chromium supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

200 mcg

Description

Chromium is a trace mineral that plays a role in insulin sensitivity and glucose metabolism. Adequate chromium intake through diet or supplements may help support blood sugar control and overall metabolic health.

[Chromium](#) (Cr) is a trace element. It helps regulate carb, fat, and protein breakdown [\[R\]](#).

Women need 20-25 micrograms (mcg) of chromium per day, while men need 30-35 mcg [\[R\]](#).

It’s easy to get chromium from your diet. Good sources include [\[R\]](#):

- Grape and orange juice
- Ham
- Beef
- Lettuce

You can also get chromium from supplements [\[R\]](#).

How it helps

Chromium is believed to enable insulin to function better, which can lower levels of bad LDL cholesterol and triglycerides and increase heart-healthy HDL cholesterol. This can help manage high cholesterol, providing a beneficial impact on heart health.

In a double-blind crossover study, 28 volunteers received either chromium picolinate or a placebo for 42 days, with a 14-day break between treatments. Chromium picolinate significantly reduced total cholesterol, LDL cholesterol, and apolipoprotein B levels, while increasing apolipoprotein A-I levels and slightly raising HDL cholesterol [\[R\]](#).

72



Sulforaphane

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a sulforaphane supplement, typically available in capsule form, with a dosage ranging from 30 to 60 milligrams per day. It is generally taken once daily, with or without food, according to the product's label instructions or a healthcare provider's advice. Continue this regimen daily for as long as you seek its benefits, but consult a healthcare provider for long-term use guidance.

TYPICAL STARTING DOSE

30 mg

Description

Sulforaphane is a natural compound found in cruciferous vegetables like broccoli and cauliflower. It is known for its potent antioxidant and anti-inflammatory properties, potentially offering protective effects against chronic diseases and promoting overall health.

How it helps

In a [placebo-controlled trial of 130 volunteers](#), high-sulforaphane broccoli (400 g, taken for 12 weeks) was **more effective than standard broccoli at lowering LDL cholesterol (by 5.1-7.1% vs 1.8-2.5%)** [\[R\]](#).

73



Lactobacillus Gasseri

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a Lactobacillus gasseri supplement containing around 10 billion colony-forming units (CFUs) daily, ideally with a meal, for at least 2 weeks to 4 months to observe benefits. Continuous daily intake is recommended for ongoing support.

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus Gasseri is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

How it helps

In a placebo-controlled trial of 32 hypercholesterolemic patients, ingesting a synbiotic with *L. gasseri* CHO-220 and inulin for 12 weeks reduced total cholesterol by 7.84% and LDL cholesterol by 9.27% [\[R\]](#).

L. gasseri may help by reducing the amount of cholesterol absorbed from your diet. It works in your gut to break down cholesterol and prevent it from getting into your bloodstream.

74



Tart Cherries

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume about 200 grams (7 ounces) of tart cherries or drink 240 ml (8 ounces) of tart cherry juice daily. This can be done at any time of the day but consuming it in the evening might improve sleep quality. It is recommended to continue daily consumption for at least 4 weeks to observe benefits such as reduced muscle pain, improved sleep, and potential reduction in inflammation.

Description

Tart cherries, often available in the form of juice or supplements, has vitamin C, as well as anthocyanins and melatonin, known for their potential to reduce inflammation and improve sleep quality. They are rich in antioxidants and may aid in recovery from exercise-induced muscle soreness.

Cherries are stone fruits with numerous species. Tart or “sour” cherries (*Prunus cerasus*) are native to parts of Europe and Asia [\[R\]](#), [\[R\]](#).

They are close to regular, sweet cherries (*Prunus avium*) but more acidic. Hence, people do not eat them fresh but dried or in syrups, salads, pies, or liqueurs.

People consume tart cherries to help with [\[R\]](#):

- Gout
- Exercise recovery
- Blood sugar control
- Blood pressure

How it helps

Tart cherries are packed with antioxidants called anthocyanins, which help reduce inflammation and lower both total cholesterol and "bad" LDL cholesterol. This makes tart cherries potentially beneficial for managing high cholesterol levels.

Consuming tart cherry juice (480 mL/day) for 12 weeks **lowered total cholesterol and LDL-cholesterol** in a [placebo-controlled trial of 37 participants](#) [\[R\]](#).

In a [placebo-controlled trial of 12 participants with metabolic syndrome](#), consuming tart cherry juice for 7 days **lowered total cholesterol and total cholesterol:HDL ratio** [\[R\]](#).

75



Alpha-Linolenic Acid (ALA)

IMPACT

1 / 5

EVIDENCE

1 / 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

Taking Alpha-Linolenic Acid (ALA), a type of omega-3 fatty acid, can help lower cholesterol levels as it increases the rate of bad cholesterol (LDL) removal from the body and decreases the production of LDL in the liver. This can lead to an overall reduction in high cholesterol.

Dietary ALA has positive effects on cholesterol, blood pressure, and inflammation, contributing to cardiovascular benefits. It may also reduce diabetes risk and potentially counteract cognitive impairment. Inconclusive evidence exists for metabolic syndrome and obesity benefits [\[R\]](#).

In a study involving 1305 individuals in the ALA group and 1325 in the control group, dietary ALA intake significantly reduced TG, TC, LDL-C, VLDL-C, TC/HDL-C ratio, and LDL-C/HDL-C ratio, but had no effect on HDL-C levels [\[R\]](#).

In a review of 14 studies, ALA had a significant effect on three out of 32 outcomes. It reduced fibrinogen levels (0.17 micromol/l) and fasting plasma glucose (0.20 mmol/l) but did not significantly impact other factors like total cholesterol, triglycerides, weight, BMI, LDL, blood pressure, VLDL, and apolipoprotein B [\[R\]](#).

In kidney disease patients, a meta-analysis of 19 studies revealed that ALA supplementation significantly reduced C-reactive protein (CRP) levels (WMD: -1.32), indicating anti-inflammatory effects. However, it had no significant impact on total cholesterol, high-density lipoprotein, low-density lipoprotein, and triglyceride levels [\[R\]](#).

76



White Kidney Bean Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing 500 to 1500 mg of white kidney bean extract before meals containing carbohydrates, once to twice daily. It's advisable to start with the lower dose to assess tolerance and gradually increase to the desired dose as directed on the product label or by a healthcare provider.

TYPICAL STARTING DOSE

500 mg

Description

White kidney bean extract contains compounds that inhibit the digestion of carbohydrates, potentially supporting weight management by reducing the absorption of calories from starchy foods.

[White kidney bean](#) is a variety of the common bean (*Phaseolus vulgaris*), which is native to South America. People use the extract of white kidney bean to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Decrease appetite
- Support weight loss

How it helps

In a non-placebo-controlled trial of 73 adults with elevated LDL cholesterol, consuming 180 g/day of canned beans (daily rotation of black, navy, pinto, dark red kidney, and white kidney beans) lowered total and LDL cholesterol [\[R\]](#).

Bean extract contains soluble fiber that binds to cholesterol and bile acids, facilitating their removal from the body. Additionally, it may also inhibit cholesterol production in the liver.

77



Selenium Supplements

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 50 mcg of selenium supplements once daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

50 mcg

Description

Selenium is a trace mineral found in Brazil nuts and many other foods as well as supplements. It is an essential nutrient that plays a crucial role in maintaining the body's antioxidant defenses and supporting thyroid function.

[Selenium](#) supports [\[R\]](#):

- Reproduction
- Thyroid function
- DNA production
- Immune response

Adults should be getting **55 micrograms** of selenium per day. Selenium supplements are available for people who can't meet their needs with a balanced diet [\[R\]](#).

How it helps

Genetically higher selenium levels may be causally associated with lower LDL and HDL cholesterol [\[R\]](#).

Selenium supplementation may lead to a slight reduction in total cholesterol by 0.13-0.71%, triglycerides by 0.19%, and very low-density lipoprotein (VLDL) by 0.34%. However, it may not significantly impact LDL cholesterol or HDL cholesterol [\[R, R, R, R\]](#).

78

Avoid Mercury Exposure

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Limit consumption of large fish such as shark, swordfish, king mackerel, and tilefish, which are known to have higher mercury levels. Opt for smaller fish like salmon, shrimp, pollock, and catfish, and limit seafood intake to 8-12 ounces (two to three servings) per week. Check and follow local advisories regarding the safety of fish caught by family and friends in your local lakes, rivers, and coastal areas.

Description

Avoiding exposure to mercury, a toxic heavy metal found in certain seafood and environmental sources, is essential to prevent adverse health effects, including neurological damage and developmental issues.

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

A major source of mercury exposure is seafood, especially large fish such as [\[R\]](#):

- Tuna
- Shark
- Swordfish

How it helps

Avoiding mercury exposure is good in general, but it doesn't directly impact your high cholesterol. High cholesterol is more directly influenced by dietary intake and physical activity.

A representative sample of 2591 Korean adults from the Korean National Environmental Health Survey; After adjusting for demographic and socioeconomic factors, the proportional changes in serum lipid levels were significantly associated with increases in BPb, BHg, and UHg levels (p for trend < 0.05). Overall, BPb, BHg, and Uhg levels positively correlated with dyslipidemia [\[R\]](#).

MIXED: This study analyzed the mercury (Hg) exposure and cholesterol profiles in 3951 adults based on fish consumption frequency. Blood Hg levels were higher in groups with high cholesterol, low HDL-C, and high triglycerides (TG). Blood Hg levels increased with more frequent fish consumption, but cholesterol profiles didn't consistently follow this trend. Elevated blood Hg levels were linked to higher total cholesterol (TC) and LDL-C levels, but this effect waned in groups with frequent fish consumption [\[R\]](#).

79



Sage Extract

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take sage extract in supplement form, ideally in doses ranging from 300 to 600 mg daily, divided into 2 or 3 doses throughout the day. It is recommended to follow this regimen for at least 1 to 2 months to evaluate its effects on cognitive function and mood improvements.

TYPICAL STARTING DOSE

300 mg

Description

Common sage (*Salvia officinalis*) is an herb from the mint family. It is native to the Mediterranean region. The main compounds in sage extract include essential oils like thujone and cineole, which contribute to its flavor and potential benefit for sore throats and digestive issues [R].

People commonly use sage as a spice and a traditional remedy for [R, R]:

- Sore throat
- Mood
- Blood sugar and cholesterol control
- Heavy sweating

How it helps

In a placebo-controlled trial of 67 hyperlipidemic participants, supplementation with sage extract lowered total cholesterol, LDL cholesterol, VLDL cholesterol, and triglycerides while increasing HDL cholesterol [R].

Similarly, drinking sage tea lowered total cholesterol and LDL cholesterol while increasing HDL cholesterol in an uncontrolled trial of 6 women [R].

Please note: *rosmarinic acid from sage 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 sage extract and always consult with a healthcare provider before taking this supplement* [R].

80

Royal Jelly

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

300 mg

Description

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

How it helps

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

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

81

Theaflavins

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing 100-200mg of theaflavins daily, preferably with a meal to enhance absorption. This regimen should be maintained consistently for at least 3 to 6 months to evaluate its benefits on health.

Description

Theaflavins are antioxidants found in black tea, particularly after fermentation. They are associated with various potential health benefits, including supporting heart health and reducing oxidative stress.

How it helps

Consuming theaflavin-enriched green tea as an add-on to a low-fat diet for 12 weeks decreased total cholesterol (by 11.3%) and LDL cholesterol (by 16.4%) while increasing HDL cholesterol (by 2.3%) in a placebo-controlled trial of 240 participants. However, purified black tea theaflavins (77.5 mg/day, taken for 11 weeks) failed to lower total or LDL cholesterol in moderately hypercholesterolemic subjects [\[R\]](#), [\[R\]](#).

Theaflavins may help lower total cholesterol by blocking cholesterol absorption in the intestine and enhancing its excretion from the body.

82



Colostrum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take colostrum supplements orally, typically 20 to 60 grams daily, split into two to three doses. It is recommended to start with a lower dose and gradually increase as needed. This supplement can be taken for varying durations, from a few weeks to several months, depending on the health goals and responses observed.

TYPICAL STARTING DOSE

20 g

Description

Colostrum is the first milk produced by mammals, including humans, after giving birth. It is rich in nutrients and antibodies and is believed to support newborns' immune systems and overall health.

Colostrum, or “first milk,” is the very first type of milk produced right after a mammal gives birth. It supports the newborn’s immune system and provides a rich source of nutrients and growth factors [R].

People take colostrum to boost immunity and exercise performance [R].

How it helps

Colostrum can potentially lower high cholesterol levels by decreasing LDL (bad cholesterol) and increasing HDL (good cholesterol). It's also beneficial because it contains heart-healthy omega-3 fatty acids.

This study investigated the effects of bovine colostrum (BC) on Type 2 diabetes patients. BC supplementation for 4 weeks reduced blood glucose, cholesterol, and triglyceride levels, potentially benefiting diabetic patients by improving these parameters [R].

83



Chamomile

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take chamomile supplements in the form of capsules or tablets, usually ranging from 300 to 400 mg, up to three times daily between meals. If using chamomile tea as a supplement, drink 1 to 4 cups daily.

TYPICAL STARTING DOSE

300 mg

Description

Chamomile is an herbal remedy derived from the dried flowers of the chamomile plant. It is widely used for its calming and soothing properties

Chamomile is an herb native to Africa, Asia, and Europe. It was used as a traditional herbal remedy in ancient Greece, Rome, and Egypt. Today, chamomile is used in cosmetics, aromatherapy, tea, and supplements. It may help with [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Skin problems
- Period cramps
- Gut problems
- Sleep quality
- Mood

How it helps

Chamomile, known for its antioxidant and anti-inflammatory properties, may indirectly support cholesterol management by reducing inflammation. However, it's not directly linked to lowering cholesterol levels.

In a placebo-controlled trial of 64 subjects with type 2 diabetes, drinking chamomile tea (3 g/150 mL hot water) 3x/day after meals for 8 weeks lowered HbA1c, serum insulin, insulin resistance, total cholesterol, LDL cholesterol, triglycerides, and MDA [\[R\]](#), [\[R\]](#).

84



Brazil Nuts

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Consume 1-2 Brazil nuts daily to meet your selenium needs and potentially improve heart health and thyroid function. Do not exceed this amount to avoid selenium toxicity.

Description

Brazil nuts are a nutritious snack rich in selenium, a mineral essential for various bodily functions, including thyroid health and immune support.

Brazil nuts have an enormous amount of selenium along with other minerals like magnesium, phosphorus, and copper, and vitamins E and B1. A 1-ounce (6–8 nuts) serving provides 544 mcg of selenium or 989%DV.

How it helps

Brazil nuts are rich in selenium and unsaturated fats which can increase the levels of 'good' cholesterol (HDL) while decreasing 'bad' cholesterol (LDL), thereby reducing the risk of heart diseases. However, they must be consumed in moderation due to their high calorie content.

In a placebo-controlled trial of 77 dyslipidemic and hypertensive patients already receiving lipid-lowering drugs, consuming partially defatted Brazil nut flour (13 g/day) for 90 days **lowered TC (by 20.5 mg/dL), non HDL-C (by 19.5 mg/dL), and Apo A-1 (by 10.2 mg/dL)** [\[R\]](#).

85



Activated Charcoal

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500-1000 mg of activated charcoal with a full glass of water at least 1 hour before a meal or 2 hours after a meal. Do not consume it daily for long periods; use it for short-term detoxification or occasional upset stomach only.

TYPICAL STARTING DOSE
500 mg

Description

Activated charcoal is a porous substance that is highly effective at absorbing and trapping toxins and chemicals in the digestive tract. It is sometimes used in emergency medical settings for poisoning treatment and in certain beauty and wellness products.

How it helps

In a non-placebo-controlled trial of 17 patients with hypercholesterolemia, ingesting activated charcoal (4-32 g/day) for 3 weeks decreased LDL cholesterol (by 23-41%) while increasing the HDL:LDL ratio (by 77-121%). However, activated charcoal had no added benefits when combined with cholestyramine [\[R\]](#).

Activated charcoal can bind to cholesterol in the gut, potentially reducing its absorption and aiding in lowering high cholesterol levels.

86



Cabbage

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate fresh cabbage into your diet by adding it to salads, soups, stews, or as a side dish steamed or lightly sautéed. Aim for at least 2-3 servings of cabbage per week, where one serving is approximately one cup chopped or two leaves.

Description

Cabbage is a cruciferous vegetable rich in vitamins, fiber, and antioxidants. It's known for its potential to support digestive health, provide essential nutrients, and contribute to a balanced diet.

Cabbage is a great source of vitamins C and K, with decent amounts of other vitamins and minerals like folate and manganese. A ½ cup serving provides 16 mg of vitamin C or 18%DV.

How it helps

Cabbage is high in fiber and contains antioxidants like vitamin C, which can help lower your 'bad' LDL cholesterol levels. Additionally, cabbage's sterol content can hinder the absorption of cholesterol in your body, helping to prevent high cholesterol.

In a study with 49 participants with mild to moderate hypercholesterolemia, those in the test group, receiving a sample containing B&C, experienced a significant reduction in LDL-C levels (8.5%) at 9 weeks, while the control group showed no significant reduction. Significant differences were observed between the groups in LDL-C levels at 6 and 9 weeks, as well as total cholesterol levels at 9 weeks [\[R\]](#).

87



Okra

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take okra supplements in the form of capsules or powder. If using capsules, consume 1-2 capsules daily with water, preferably with a meal. If using powder, mix one teaspoon into a glass of water or into a smoothie once daily. Continue this routine for at least 8-10 weeks to observe potential health benefits.

Description

Okra is a flowering plant of the mallow family, rich in vitamins, minerals, and fiber, offering potential benefits for digestive health, blood sugar control, and overall nutrition.

How it helps

In a placebo-controlled trial with 60 type 2 diabetes patients, consuming okra powder blended with yogurt for 8 weeks reduced total cholesterol, LDL-cholesterol, and the LDL:HDL ratio. Another placebo-controlled trial involving overweight and obese participants found that a combination of dehydrated okra pods and inulin lowered total and LDL-cholesterol levels in those with high baseline levels over 6.2 mmol/L after 12 weeks of supplementation [\[R\]](#), [\[R\]](#).

Okra contains dietary fiber, which reduces the body's absorption of cholesterol.

88



Brewer's Yeast

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 1 to 2 tablespoons of brewer's yeast daily, mixing it into water, juice, smoothies, or food. It can be consumed at any time of day, but incorporating it into a regular, daily routine ensures consistent intake. Continuation can be long-term if it agrees with your system and you're seeing desired outcomes.

Description

Brewer's yeast is a nutritional supplement rich in B vitamins, minerals, and protein. It's often used to support energy levels, boost metabolism, and promote overall health, particularly for individuals with dietary restrictions or specific nutritional needs.

Brewer's yeast is a great source of B-vitamins and minerals like chromium, iron, zinc, and selenium. A 1 tablespoon serving provides 3.3 mcg of chromium or 9%DV.

How it helps

Brewer's yeast is rich in chromium, which can help control your body's cholesterol levels. It may assist in decreasing 'bad' LDL cholesterol and increasing 'good' HDL cholesterol.

89



Ubiquinol

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 100 to 200 mg of ubiquinol daily, preferably with a fatty meal to enhance absorption. This dosage can be adjusted based on individual health needs and under the guidance of a healthcare professional. Continue this supplementation daily for ongoing support of heart health and energy levels.

TYPICAL STARTING DOSE

100 mg

Description

Ubiquinol is the reduced form of coenzyme Q10 (CoQ10), a compound that plays a crucial role in energy production within cells. It is used as a supplement to support heart health, improve energy levels, and combat oxidative stress.

How it helps

Ubiquinol, a form of Coenzyme Q10, helps lower LDL ("bad") cholesterol levels while increasing HDL ("good") cholesterol, hence potentially reducing risk of heart disease. It also acts as an antioxidant, helping to neutralize harmful free radicals in the body synthesized when the body breaks down fats.

In fibromyalgia patients, 100 mg/day ubiquinol-10 supplementation for 12 weeks increased CoQ10 levels, improved cholesterol metabolism, and reduced chronic fatigue scores, as measured by the Chalder Fatigue Scale [\[R\]](#).

90



Barley

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

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

How it helps

Barley is high in soluble fiber, which binds to cholesterol in the digestive system and helps to remove it from the body.

91



Canola Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate canola oil into your diet as a cooking oil or a salad dressing base. Use it in place of other fats such as butter or margarine when baking, frying, or preparing meals to help lower bad cholesterol levels. Aim for using canola oil in 1-2 meals per day, everyday, for consistent dietary benefits.

Description

Canola oil is a heart-healthy cooking oil rich in unsaturated fats and low in saturated fats. Incorporating canola oil into your diet can help lower cholesterol levels and reduce the risk of cardiovascular disease.

How it helps

Canola oil contains healthy monounsaturated fats and is low in saturated fat, which can help to reduce bad cholesterol levels. Also, it's rich in omega-3 fatty acids that contribute to heart health by decreasing inflammation and improving cardiovascular function.

92



Tree Turmeric and Milk Thistle

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500mg of tree turmeric extract and 150mg of milk thistle extract daily, preferably with a meal to enhance absorption. It's generally recommended to continue this supplementation routine for at least 3 months to evaluate its benefits on liver health.

Description

Tree turmeric, a type of wild turmeric, and milk thistle are both herbal remedies traditionally used to support liver health and digestive function. They contain various phytochemicals like curcumin and silymarin, respectively, which are known for their antioxidant and liver-protective properties.

How it helps

Tree Turmeric contains berberine which improves cholesterol levels by increasing the body's use of fats for energy. Milk Thistle supports the liver, the organ that metabolizes and removes excess cholesterol from your body.

93



Buckwheat

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate buckwheat into your diet by adding it to meals 2-3 times per week. You can use buckwheat flour for pancakes or bread, include buckwheat groats in soups, salads, or as a side dish instead of rice or pasta.

Description

Buckwheat is a gluten-free whole grain that provides essential nutrients, including protein, fiber, and minerals. It can contribute to heart health, digestive regularity, and balanced nutrition.

How it helps

Buckwheat is packed with fiber and plant-based proteins which can both lower your high cholesterol levels. Moreover, these components prevent the quick absorption of sugar into your bloodstream, aiding in maintaining your cholesterol levels within a healthy range.

94



Morning Sunlight Exposure

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Expose yourself to natural sunlight for at least 20 to 30 minutes immediately after waking up. Try to do this consistently every day to help regulate your body's internal clock.

TYPICAL STARTING DOSE

30 minutes

Description

Exposure to natural morning light can help regulate circadian rhythms, improve mood, and enhance wakefulness, as it signals the body to produce serotonin, a hormone associated with well-being and alertness.

How it helps

Exposure to morning light helps regulate your body's internal clock, which, in turn, improves sleep and reduces stress. Lower stress levels can contribute to lower cholesterol levels, as stress has been linked with increased levels of 'bad' LDL cholesterol.

In a systematic review of 39 observational studies with 377,797 subjects, evening-oriented individuals had higher blood glucose, glycated hemoglobin, LDL cholesterol, and triglycerides. They also had an increased risk of diabetes, cancer, and depression [R].

A meta-analysis of 27 studies found that individuals with evening chronotype had higher BMI, fasting blood glucose, and total cholesterol levels, as well as lower HDL-C levels compared to morning chronotype individuals [R].

95



Bergamot

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500-1000mg of bergamot extract supplements once daily, preferably in the morning with a meal for better absorption.

Description

Bergamot is a citrus fruit known for its aromatic peel, which is used to make essential oils and flavorings. It is sometimes used in aromatherapy and may have potential mood-enhancing effects when diffused or applied topically.

Bergamot (*Citrus bergamia*) is a bitter citrus fruit native to southern Italy. The fruit is inedible due to its sour taste. The peel is used to make essential oil, and the juice is used to make extracts. People use bergamot in food, supplements, and cosmetics [R].

How it helps

Bergamot, a type of citrus fruit, has bioactive compounds that have been shown to help lower LDL ("bad") cholesterol and increase HDL ("good") cholesterol. It achieves this by blocking an enzyme in your body that creates cholesterol, thereby reducing overall cholesterol levels.

96



Polyunsaturated Fatty Acids (PUFAs)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate foods rich in polyunsaturated fatty acids (PUFAs) into your daily diet. Examples include eating fatty fish like salmon, mackerel, or sardines two to three times a week, using plant-based oils like flaxseed, soybean, and canola oil in cooking and salads, and adding nuts and seeds such as walnuts and flaxseeds to your meals or snacks daily.

Description

Polyunsaturated fatty acids (PUFAs) are fatty acids with at least two double bonds. They are considered "healthy fats" and include **omega-3 and omega-6** fatty acids [\[R\]](#).

[Omega-3 fatty acids](#) help [\[R\]](#), [\[R\]](#):

- Lower inflammation and blood sugar
- Protect the heart, brain, and eyes

Omega-6 fatty acids play important roles in [\[R\]](#):

- Skin health
- Energy production
- Immunity

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

- Fish and seafood
- Plant oils (e.g., flaxseed, corn, sunflower, soybean, and grapeseed oil)
- Seeds (e.g., safflower, sunflower, and pumpkin seeds)
- Walnuts
- Tofu

How it helps

Polyunsaturated Fatty Acids (PUFAs) help lower bad cholesterol levels (LDL) in the body, reducing the risk of heart disease. They also provide necessary fats that your body can't produce itself.

97



Lycopene

IMPACT

0 / 5

EVIDENCE

0 / 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

Lycopene, found in fruits like tomatoes, can help reduce high cholesterol. It works by preventing the oxidation of fats in your blood, which ultimately lowers your overall cholesterol levels.

98



Curcumin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

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

How it helps

Curcumin, the active ingredient in turmeric, can help lower high cholesterol by interrupting the transport of cholesterol in the body, potentially reducing its overall levels. It also has anti-inflammatory and antioxidant properties that can improve your cardiovascular health.

99



Basketball

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in playing basketball for at least 30 minutes to an hour, three to four times a week. Ensure to warm up with stretches or light jogging for 5-10 minutes before playing to reduce the risk of injury.

TYPICAL STARTING DOSE

30 minutes

Description

Playing basketball is a fun and active way to improve cardiovascular fitness, coordination, and teamwork skills. It promotes physical fitness and can be an enjoyable form of exercise.

How it helps

Playing basketball can act as an aerobic exercise that improves heart health and aids in cholesterol management through physical activity.

100



Aquatic Exercise

IMPACT

0 / 5

EVIDENCE

0 / 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 can aid in reducing high cholesterol by boosting circulation and promoting weight loss, both of which can lower cholesterol levels. The water's resistance during exercise helps to build muscle, increasing your metabolic rate to burn more fat, helping to lower cholesterol.

101



Prickly Pear (Nopal Cactus)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate prickly pear into your diet by eating the fruit raw, grilling or boiling the pads (nopales) as a vegetable side dish, or adding them to smoothies. Aim to consume prickly pear 2-3 times per week for ongoing health benefits.

Description

Prickly pear, a plant native to North and South America. Its pads and fruit are rich in nutrients like vitamin C and fiber. Prickly pear oil and extracts are valued for their high content of antioxidants, such as betalains and vitamin E, which benefit skin health. Prickly pear supplements are utilized for their potential health benefits, including blood sugar control and cholesterol reduction.

How it helps

Prickly Pear (Nopal Cactus) is high in fiber and sterols, which can help reduce cholesterol levels by preventing the absorption of 'bad' LDL cholesterol. It also contains antioxidants that can protect the heart and blood vessels.

102



Lactobacillus Acidophilus

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a probiotic supplement containing Lactobacillus acidophilus. Look for products that offer around 10 billion CFUs (colony-forming units) and take it once daily, preferably on an empty stomach, either first thing in the morning or right before bed.

TYPICAL STARTING DOSE
10 billion CFU

Description

[Lactobacillus acidophilus](#) is a [probiotic](#) bacterium that has been traditionally and widely used in the dairy industry to make yogurt [\[R\]](#).

More recently, *L. acidophilus* has been used as a probiotic. People take it to help with [\[R, R, R, R\]](#):

- High cholesterol
- Gut diseases
- Allergies
- Vaginal infections

How it helps

Lactobacillus Acidophilus, a probiotic, may help lower cholesterol by breaking down bile in the gut, thus preventing it from being reabsorbed, where it can enter the blood as cholesterol. However, more research is needed to confirm these effects.

103



Lactobacillus Salivarius

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a probiotic supplement containing Lactobacillus salivarius daily, preferably with a meal to enhance absorption. The exact dosage can vary, but a common amount is around 10 billion CFUs (colony forming units). It is generally recommended to continue taking the probiotic for at least four weeks to observe benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus saliverius is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

How it helps

Lactobacillus Salivarius, a type of probiotic, can help decrease cholesterol levels by breaking them down in the gut before they get absorbed into the bloodstream. This can in turn help reduce the risk of heart disease associated with high cholesterol.

104



Berries

IMPACT

0 / 5

EVIDENCE

0 / 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

Berries are rich in antioxidants and fibers which can help to reduce cholesterol levels.

105



Inulin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 5 grams of inulin supplement daily, mixing it with water, other beverages, or food. It can be taken all at once or divided into smaller doses throughout the day. Start with a lower dose to assess your tolerance and gradually increase. Continue taking inulin daily for at least 4-8 weeks to assess its benefits on gut health.

TYPICAL STARTING DOSE

5 g

Description

Inulin is a type of dietary fiber found in certain plants. It can support digestive health by promoting the growth of beneficial gut bacteria and aiding regular bowel movements.

How it helps

Inulin is a type of dietary fiber that helps in weight control and reducing cholesterol. It assists in the reduction of LDL (bad cholesterol) while increasing HDL (good cholesterol), ultimately promoting heart health.

106



Beta-Glucans

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a beta-glucan supplement daily, with a dosage ranging from 250mg to 500mg. It is best consumed with a meal to enhance absorption. Continue this routine daily to support immune health.

Description

Beta-glucans are types of soluble fiber found in foods like oats and barley. They have been associated with immune system support and may help lower cholesterol levels when consumed as part of a heart-healthy diet.

Beta-glucan is a type of soluble fiber with antioxidant properties. It is abundant in [\[R\]](#), [\[R\]](#):

- Baker's yeast
- Cereals (e.g., oats, barley)
- Mushrooms (e.g., maitake)
- Seaweeds

People use beta-glucans to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Improve immunity (e.g., fight infections)
- Reduce blood sugar
- Reduce cholesterol

How it helps

Beta-Glucans, found in sources like oats and barley, may help lower high cholesterol by binding to cholesterol-rich bile acids in your gut and expelling them through feces, which then forces your body to use excess cholesterol to make more bile acid. This could effectively lower your overall cholesterol levels.

107

Strength Training

IMPACT

0 / 5

EVIDENCE

0 / 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

Strength training helps in improving your body's metabolism, which aids in burning more calories and reducing body fat, thus lowering your high cholesterol. It also helps increase HDL ("good" cholesterol) and decrease LDL ("bad" cholesterol).

108



Lactobacillus Reuteri

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a supplement containing Lactobacillus reuteri daily, ideally choosing a product that specifies CFU (colony-forming units) to ensure you receive an effective dose. Dosage can vary depending on the specific product, but it's typically around 10 billion CFUs. Continue taking the supplement for at least 4 to 8 weeks to evaluate its benefits for your gut health.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus reuteri is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

[Lactobacillus reuteri](#) is a [probiotic](#) bacterium that is part of the normal [microbiome](#) of the gut, skin, urinary tract, and, occasionally, the stomach [\[R\]](#).

L. reuteri is also used as a probiotic. People take it to help with [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- High cholesterol
- Gut diseases
- Constipation
- Helicobacter pylori infections

In the 1960s, **30-40 percent** of people had *Lactobacillus reuteri* as a part of their microbiome. Today, estimates suggest it is found in only **10-20 percent** [\[R\]](#), [\[R\]](#).

How it helps

Lactobacillus Reuteri is a probiotic bacteria that can help lower high cholesterol by absorbing and breaking down cholesterol in the intestines before it's absorbed into your bloodstream. Thus, it can potentially help control and reduce high cholesterol levels.

109



Avocado Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate avocado oil into your diet by using it as a salad dressing, for cooking, or as a base for sauces. Aim to replace other cooking oils with avocado oil, using it in at least one meal per day. Ensure to not exceed the daily calorie intake recommended for your diet by adjusting the quantity of oil used.

Description

Avocado oil has some vitamin E, other fatty acids, and antioxidant properties. The fat content is 65-70% oleic acid.

How it helps

Avocado oil is rich in monounsaturated fats, which can help reduce LDL cholesterol levels and increase HDL cholesterol.

110



Pectin

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a pectin supplement daily, with a typical dose ranging from 500 mg to 1,000 mg. It is best taken with water and ideally before meals. Continue this regimen as part of your dietary supplement routine or as directed by a healthcare provider.

TYPICAL STARTING DOSE
500 mg

Description

Pectin is a natural substance found in the cell walls of fruits, particularly apples and citrus fruits. Its health benefits include aiding digestion by promoting regular bowel movements and potentially helping to lower cholesterol levels due to its ability to bind to dietary fats.

How it helps

Pectin, a type of fiber found in fruits, can aid in lowering high cholesterol. It does so by binding to cholesterol in the gut and preventing its absorption into the bloodstream.

111



Rice Bran Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate rice bran oil into your diet by using it as a cooking oil for frying, sautéing, or salad dressings. Aim for replacing other cooking oils with rice bran oil, using it approximately 1-3 tablespoons daily, depending on your total calorie intake and dietary needs.

Description

Rice bran oil is a cooking oil extracted from rice bran and is known for its high smoke point and heart-healthy monounsaturated fats. It's a good source of vitamin E and may provide benefits for blood sugar and cholesterol.

Rice bran is the layer that surrounds a grain of rice. The oil from rice bran is used in cooking or supplements [\[R\]](#).

Rice bran oil may help [\[R\]](#):

- Decrease cholesterol levels
- Maintain healthy blood sugar levels

How it helps

Rice Bran Oil is rich in healthy fats and antioxidants that can help lower your "bad" LDL cholesterol levels while boosting your "good" HDL cholesterol. By doing so, it aids in maintaining a healthier balance of cholesterol, thus reducing the risk of cardiac diseases.

112



Limit Trans Fats

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

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

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

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

How it helps

Limiting trans fats aids in managing high cholesterol by reducing LDL (bad) cholesterol levels and increasing HDL (good) cholesterol levels. This can help prevent blockages in your blood vessels, reducing your risk of heart disease.

113



Oats

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

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

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

How it helps

Oats contain soluble fiber, which reduces your low-density lipoprotein (LDL), the "bad" cholesterol. This soluble fiber blocks the absorption of cholesterol into your bloodstream, helping to lower your overall cholesterol levels.

114



Green Tea Extract

IMPACT

0 / 5

EVIDENCE

0 / 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 might help improve cholesterol levels by decreasing the absorption of cholesterol in the gut and increasing its excretion.

115



Pistachios

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate a handful of pistachios (about 1-2 ounces) into your daily diet. You can add them to your breakfast cereals, salads, or simply snack on them throughout the day. Do this regularly for ongoing heart health benefits and to aid in maintaining a balanced diet.

Description

Pistachios are a type of nut native to Asia but grown extensively in the Mediterranean. They are packed with healthy fats, fiber, protein, and various vitamins and minerals, like vitamins C, B6, and E, as well as potassium, copper, and iron. They are also rich in antioxidant and anti-inflammatory compounds, which can help lower cholesterol levels and support weight management.

The pistachio (*Pistacia vera L*), known as **the “green nut”**, is a nut native to Asia but widely cultivated in the Mediterranean. Pistachios have **low fat content** and high levels of [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Unsaturated fats
- Vitamins (C, B6, E, K, thiamin)
- Minerals (Potassium, copper, iron, and magnesium)

Pistachios also have a high **antioxidant and anti-inflammatory** effect [\[R\]](#).

How it helps

Pistachios are rich in healthy fats and fiber, which help to reduce bad cholesterol levels (LDL cholesterol). They also contain plant sterols that can block cholesterol absorption in your body, helping you maintain healthier cholesterol levels.

116



Maintain Optimal Vitamin D Levels

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

TYPICAL STARTING DOSE

1000 iu

Description

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

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

- Mood
- Immunity
- Heart health
- Blood sugar control

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

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

How it helps

In a trial of 70 women with gestational diabetes at 24-28 weeks of pregnancy, supplementation with vitamin D (500-1000 IU/day) and calcium (500-1000 mg/day) for 6 weeks decreased fasting glucose. The highest dose also lowered fasting serum insulin, LDL, and total cholesterol while increasing HDL [\[R\]](#).

How to implement

TYPICAL STARTING DOSE
10 billion

Description

Probiotics are live beneficial bacteria and yeasts that can support gut health and digestive function when consumed as supplements or found in fermented foods like yogurt and sauerkraut. They may be beneficial to gut health, immune function, blood sugar, and mood.

- Maintaining gut health
- Supporting a healthy immune system
- Improving your mood
- Helping to maintain healthy blood sugar

Prebiotics are certain types of fiber and other complex carbs that serve as food for gut bacteria. **They support gut health by helping boost the activity and growth of “good” bacteria** [R, R].

- Oligo-fructose
- Oligo-galactose
- Inulin

Mixtures of probiotics and prebiotics are known as **synbiotics** [R].

How it helps

Probiotics can help maintain a healthy balance of gut bacteria, which can boost overall health and promote a healthy level of cholesterol. Some specific strains may also consume cholesterol in the digestive tract, reducing the amount that gets into the blood.

118



African Mango Seed Extract

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 150 mg of African mango seed extract twice daily, 30 minutes before meals with a glass of warm water. Continue this regimen for 10 weeks for optimal results.

TYPICAL STARTING DOSE

300 mg

Description

African mango (*Irvingia gabonensis*) is a tropical fruit native to West Africa. It is renowned for its potential health benefits, primarily attributed to its high fiber content and the presence of an extract known as Irvingia, which is believed to support weight management and improve metabolic health. African mango supplements are commonly used to aid in weight loss efforts and may help reduce cholesterol levels and improve blood sugar control.

[African mango](#) (*Irvingia gabonensis*), also known as wild mango, bush mango, dika, and ogbono, is a tree found in the rainforests of West Africa. African mango owes its name to its similarity to mangoes [\[R\]](#).

All parts of the African mango tree are used for a variety of purposes [\[R\]](#):

- The pulp is consumed as food or used to make jams, juice, and wine
- The seeds are eaten raw or used to prepare foods and supplements
- The roots, bark, leaves, and seeds are used to make traditional medicines

How it helps

African Mango Seed Extract is thought to help lower high cholesterol levels because it contains high fiber content, which can bind to cholesterol in the digestive system and prevent its absorption. As a result, the overall amount of cholesterol in the body could decrease, particularly the "bad" LDL cholesterol.

119



Flaxseed

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

TYPICAL STARTING DOSE

2 tbsp

Description

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

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

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

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

How it helps

Flaxseed oil is rich in omega-3 fatty acids, which can help lower high cholesterol. The dietary fiber in flaxseed can also bind with cholesterol in the intestine and prevent it from being absorbed into your body.

120



Swimming

IMPACT

0 / 5

EVIDENCE

0 / 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

Swimming is an excellent aerobic exercise that can improve cardiovascular health and help lower cholesterol.

121



Psyllium

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 5 grams of psyllium husk powder with at least 8 ounces of water. Do this once daily, preferably in the morning before breakfast. Continue this regimen daily for ongoing digestive health benefits.

TYPICAL STARTING DOSE
5 g

Description

Psyllium is a plant-based dietary fiber derived from the seeds of the Plantago ovata plant. It is primarily used both traditionally and today, as a dietary supplement due to its high soluble fiber content, aiding in digestive health and regulating bowel movements. The main compounds in psyllium are soluble fiber and mucilage.

[Psyllium husk](#) might be beneficial for gut health and heart health. But what exactly is this supplement and how does it work?

Psyllium is an herb that grows around the world. Its “husk,” the outer coating of the psyllium seed, is full of fiber. The health benefits of psyllium husk are due to this fiber.

How it helps

Psyllium is a form of fiber made from the husks of the Plantago ovata plant seeds. It works by binding with cholesterol in your digestive system and removing it from your body before it can be absorbed, thereby reducing your overall cholesterol levels.

122



Locust Bean Gum

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take carob gum as a supplement by consuming 5 grams per day, mixed into a glass of water or any other beverage of your choice. This should be done daily for a period of at least 3 weeks to observe potential benefits.

TYPICAL STARTING DOSE

5 g

Description

Carob gum, also known as locust bean gum, is a food additive used as a thickener and stabilizer in various products. It helps improve texture and consistency of foods and also may help reduce cholesterol.

How it helps

Carob gum is high in fiber which helps reduce the amount of cholesterol your body absorbs from food. It binds with cholesterol and bile in your intestines, which your body then eliminates, leading to lower cholesterol levels.

123



Almonds

IMPACT

0 / 5

EVIDENCE

0 / 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

Almonds are rich in monounsaturated fats and fiber, which lower bad LDL cholesterol levels while keeping good HDL cholesterol stable. They also contain phytosterols, which can block cholesterol absorption in the stomach, reducing total cholesterol levels.

124



Meditation

IMPACT

0 / 5

EVIDENCE

0 / 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

Meditation can help reduce stress and anxiety, which are known to contribute to high cholesterol levels. It promotes a healthier lifestyle which can indirectly lead to a balanced diet and increased physical activity, thus lowering bad cholesterol levels.

125



Hazelnuts

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate a handful of hazelnuts (about 1 ounce or 28 grams) into your diet daily. You can eat them as a snack, sprinkle chopped hazelnuts over salads, or use hazelnut butter in smoothies. Ensure they are unsalted to keep your sodium intake low.

Description

Hazelnuts are a nutrient-dense nut rich in healthy fats, fiber, and essential vitamins and minerals. Incorporating hazelnuts into your diet can support heart health, provide energy, and contribute to overall nutritional wellness.

Hazelnuts are a good source of manganese, magnesium, as well as being really good for vitamin E, B6, and healthy fats. A 1-ounce serving provides 1.6 mg of manganese or 70%DV.

How it helps

Hazelnuts are rich in monounsaturated fats and dietary fiber which help lower bad LDL cholesterol and increase good HDL cholesterol. They also contain plant sterols which block cholesterol absorption in the body, effectively reducing total cholesterol levels.

126



Paleo Diet

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Adopt a diet that includes lean meats, fish, fruits, vegetables, nuts, and seeds, resembling the diet of our hunter-gatherer ancestors. Exclude all dairy products, legumes, grains, added sugar, and processed foods. This should be a consistent dietary approach, not a short-term diet, to observe its benefits on health and well-being.

Description

The paleo diet, also known as the caveman diet, emphasizes whole foods such as lean meats, fish, fruits, vegetables, nuts, and seeds while excluding processed foods, grains, and dairy. It is believed to support weight management and reduce the risk of chronic diseases by focusing on foods more in line with our ancestors' diets.

How it helps

The Paleo diet is low in carbs and rich in lean proteins, fruits, vegetables, and healthy fats, which can help to lower high cholesterol levels. Its reduction in processed foods and sugars also aids in the decrease of LDL ("bad" cholesterol) and increase of HDL ("good" cholesterol), thereby balancing overall cholesterol.

127



Prickly Pear (Nopal Cactus) Extract

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500 mg of prickly pear extract in capsule form, preferably with water, once daily. This should be done in the morning or before a meal for better absorption. Continue this regimen daily for a period of at least 8 weeks to evaluate its effectiveness.

TYPICAL STARTING DOSE

500 mg

Description

Prickly pear extract is derived from the fruit of the prickly pear cactus and is often used in dietary supplements for its potential to lower blood sugar levels and provide antioxidant protection. This is due to antioxidants like betalains and vitamin E.

How it helps

Prickly Pear extract has fiber and antioxidants, which can help your body decrease the amount of harmful LDL cholesterol absorbed. It also promotes the production of beneficial HDL cholesterol, leading to improved cholesterol balance.

128



Artichoke

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate fresh or cooked artichoke into your diet 2-3 times per week. Each serving should include approximately one medium-sized artichoke or about 120 grams if using hearts. This can be included in meals such as salads, pastas, or as a steamed side dish.

Description

Artichokes are a vegetable known for their unique flavor and potential health benefits. They are a good source of fiber, vitamins, and minerals, and may support digestion, liver health, and antioxidant protection.

How it helps

Artichoke is known for its ability to help lower blood cholesterol levels due to its high content of luteolin, which can prevent cholesterol formation.

How to implement

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

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

How it helps

Vitamin C acts as an antioxidant, protecting your cells against damage, and it can also help your body absorb dietary cholesterol, which can lower overall levels. However, while it may offer some benefits, it should not replace medical treatments for high cholesterol.

130



Guggul

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a guggul supplement, usually in capsule form, at a dosage of about 500-1000 mg per day, divided into 2-3 doses. This should be taken with meals and continued for a minimum of 3 months to evaluate its effectiveness.

TYPICAL STARTING DOSE

500 mg

Description

Guggul is an herbal resin used in traditional Ayurvedic medicine for various health concerns, including cholesterol management. It may have potential benefits for lipid profiles and overall cardiovascular health.

How it helps

Guggul, a plant-based supplement, can decrease your high cholesterol by blocking the formation of cholesterol in your liver. Also, it increases your body's ability to remove bad cholesterol, helping in overall cholesterol management.

131



Safflower Oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate safflower oil into your diet by using it as a cooking oil for sautéing or frying, or add it to salad dressings and dips. Aim for about 1-2 tablespoons daily. Keep in mind, like all oils, safflower oil is high in calories, so use it in moderation within a balanced diet.

Description

Safflower oil is a cooking oil derived from the safflower plant's seeds. It is known for its heart-healthy properties, as it is high in monounsaturated fats and low in saturated fats.

How it helps

Safflower oil is rich in unsaturated fats, which can help to lower your "bad" LDL cholesterol and raise your "good" HDL cholesterol. It thereby lessens blockages in your arteries and reduces your risk of heart disease.

132



Orange Juice

IMPACT

0 / 5

EVIDENCE

0 / 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, especially when fortified with sterols, can help lower high cholesterol levels. The sterols prevent cholesterol from being absorbed into the bloodstream; thereby reducing overall cholesterol.

133



Guar Gum

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 5-10 grams of guar gum with at least 8 ounces of water. Start with a lower dose to assess your tolerance, then gradually increase as needed. It is best taken before meals, up to three times a day.

TYPICAL STARTING DOSE

5 g

Description

Guar gum is a soluble fiber derived from guar beans and is commonly used as a food thickener and stabilizer. Its ability to slow down digestion and promote a feeling of fullness can be beneficial for managing appetite and supporting digestive health when consumed as part of a balanced diet.

Guar gum is a fiber made from the seeds of the Indian cluster bean (*Cyamopsis tetragonolobus*). It is used in food products to help bind and thicken them [\[R\]](#).

Guar gum may help with blood pressure control and support the immune system [\[R\]](#).

How it helps

Guar gum, a type of fiber, can help lower cholesterol levels by binding to bile in your gut and preventing it from being reabsorbed. This process helps remove cholesterol from your body, potentially reducing your total cholesterol and 'bad' LDL cholesterol levels.

134



Chitosan

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500 mg of chitosan supplement with water just before meals, up to three times daily. For best results, use consistently before lunch and dinner.

TYPICAL STARTING DOSE

500 mg

Description

Chitosan is a dietary supplement derived from the shells of crustaceans like shrimp and crabs. It's sometimes used to support weight management by potentially reducing fat absorption in the digestive tract

[Chitosan](#) is made from chitin, a compound found in shellfish, fungi, and insects. Doctors mainly use products with chitosan to heal wounds [\[R\]](#).

Chitosan may help [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lower blood pressure
- Promote weight loss
- Control cholesterol levels
- Support oral health

How it helps

Chitosan is a type of fiber derived from shellfish that absorbs fat in the body. It can help reduce cholesterol by absorbing it from your diet and preventing it from being absorbed into your bloodstream.

135



DASH Diet

IMPACT

0 / 5

EVIDENCE

0 / 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

The DASH diet, rich in fruits, vegetables, lean protein, and whole grains, can help lower high cholesterol by reducing the amount of saturated fats and trans fats you consume. These unhealthy fats raise your cholesterol levels, hence a diet low in them and high in fiber like the DASH diet helps maintain a healthy cholesterol level.

136



Amla

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate 1-2 teaspoons (approximately 4-8 grams) of amla powder into your daily diet. You can mix it into a glass of water, blend it into a smoothie, or sprinkle it over salads or cooked meals. Do this consistently every day for best results.

Description

Amla, also known as Indian gooseberry, is a fruit known for its high vitamin C content and antioxidant properties. It is used in traditional Ayurvedic medicine for various health benefits, including immune support and skin health.

How it helps

Amla, or Indian gooseberry, contains compounds called tannins that can help reduce cholesterol levels. Regularly consuming Amla can help increase the level of good cholesterol (HDL), and decrease the level of bad cholesterol (LDL) in your body, improving overall heart health.

Two meta-analyses (the largest one with 9 trials) concluded that supplementation with amla (500-1500 mg/day for 14-84 days) **lowers total cholesterol, LDL-C (by 15.08 mg/dL), and VLDL-C (by 5.43 mg/dL) while increasing HDL-C** [\[R, R\]](#).

137



Almond oil

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate almond oil into your daily diet by using it as a salad dressing or substituting it for other oils in your cooking. Aim for a serving size of about 1 tablespoon per day to gain its nutritional benefits without adding too many extra calories.

Description

Almond oil is a natural oil extracted from the nuts of the almond tree (*Prunus dulcis*). It is rich in vitamin E, healthy fats, and antioxidants, making it a popular choice for skincare and haircare, promoting moisturized and nourished skin, reducing inflammation, and supporting hair health.

Almond oil is a great source of omega-3 fatty acids, magnesium, phosphorus, copper, and vitamin E. It has antioxidant and anti-inflammatory properties. The fat content is 80% oleic acid.

How it helps

Almond oil is a rich source of monounsaturated fats, which have been associated with lower levels of bad cholesterol (LDL) and increased levels of good cholesterol (HDL). By substituting unhealthy fats in your diet with almond oil, it can assist in balancing your cholesterol profile.

138



Green Tea

IMPACT

0 / 5

EVIDENCE

0 / 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

Green tea contains compounds known as catechins which are known for their antioxidant properties. Studies suggest these catechins can help reduce LDL cholesterol (the "bad" cholesterol), thereby aiding in the management of high cholesterol.

139



Legumes

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

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

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

Common legumes include:

- Peanuts
- Beans
- Chickpeas
- Peas
- Lentils

How it helps

Legumes such as beans, peas and lentils are high in soluble fiber, which can help to lower cholesterol levels.

140



Lactobacillus Plantarum

IMPACT

0 / 5

EVIDENCE

0 / 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

Lactobacillus Plantarum is a probiotic known to lower bad cholesterol levels in the body. It works by absorbing and breaking down cholesterol, resulting in less being absorbed in the bloodstream.

141



Lupin Fiber

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a lupin fiber supplement daily, preferably with a meal to aid in digestion and absorption. Start with a lower dose, such as 5 grams per day, and monitor your body's response. If well-tolerated, you can gradually increase the dose up to 25 grams per day as per your dietary fiber needs or as advised by a healthcare provider.

TYPICAL STARTING DOSE
5 g

Description

Lupin fiber is derived from lupin beans and is rich in soluble fiber. It can contribute to digestive health, support blood sugar control, and promote satiety when included in the diet.

How it helps

Lupin fiber works as a soluble fiber which binds cholesterol in the digestive system, preventing its absorption. Consequently, this reduces the overall cholesterol levels in your body.

142



Ginger

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a 500 mg ginger supplement daily, preferably with a meal to enhance absorption and minimize potential stomach discomfort.

TYPICAL STARTING DOSE

500 mg

Description

Ginger is a versatile spice known for its potential anti-inflammatory and digestive benefits. It may help alleviate nausea, reduce muscle soreness, and support gastrointestinal comfort when consumed as part of a balanced diet.

[Ginger root](#) is a cooking spice and a traditional remedy. People mostly use it to relieve [\[R\]](#):

- Nausea
- Menstrual cramps
- Joint pain

How it helps

Ginger contains compounds like gingerols and shogaols which are known to help lower cholesterol by inhibiting cholesterol absorption in the blood and liver. Consistent consumption of ginger can thus improve heart health by reducing overall cholesterol levels.

143



Calcium Supplements

IMPACT

0 / 5

EVIDENCE

0 / 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 randomized controlled trial at a teaching hospital, 70 women with gestational diabetes at 24-28 weeks of pregnancy were divided into two groups. Group A received vitamin D 1000 IU and calcium 1000 mg daily, while group B received vitamin D 250 IU and calcium 500 mg daily for 6 weeks. Group A showed significant reductions in fasting glucose, fasting serum insulin, LDL, and total cholesterol levels, and an increase in HDL levels. Group B only showed a significant decrease in fasting glucose after 6 weeks of supplementation [\[R\]](#).

However, genetically predicted higher serum calcium levels may be associated with an increased risk for diabetes [\[R\]](#).

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.

144



Extra Virgin Olive Oil (EVOO)

IMPACT

0 / 5

EVIDENCE

0 / 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

Extra virgin olive oil (EVOO) is rich in monounsaturated fats which help lower your levels of "bad" LDL cholesterol while boosting "good" HDL cholesterol. Additionally, EVOO contains antioxidants that can prevent LDL cholesterol from oxidizing, thus reducing its damaging effects on the body.

145



Tai Chi

IMPACT

0 / 5

EVIDENCE

0 / 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

Practicing Tai Chi, a form of gentle exercise, helps reduce stress and lower blood pressure, contributing to overall heart health. It may indirectly assist in lowering cholesterol levels by promoting weight loss and improving the body's ability to metabolize fats.

Next Steps

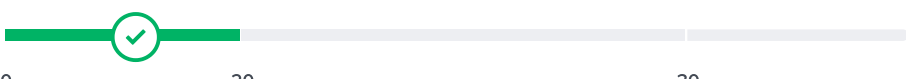
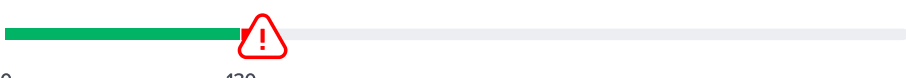
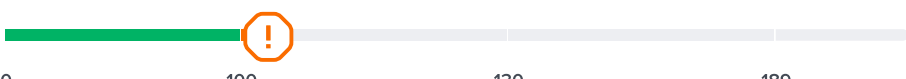
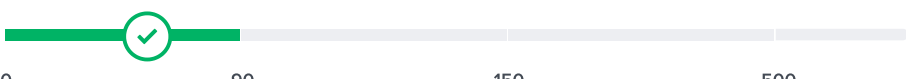
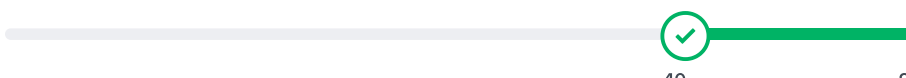
Remember, your genes only tell one important part of your health story!

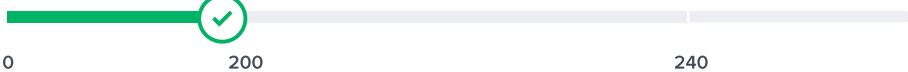
Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

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.

	Apolipoprotein A1	119.5 mg/dL		9 Nov 2025
	ALP	68 IU/L		9 Nov 2025
	VLDL Cholesterol	11 mg/dL		9 Nov 2025
	SHBG	39.3 nmol/L		9 Nov 2025
	Non-HDL Cholesterol	140 mg/dL		9 Nov 2025
	LDL Cholesterol	103 mg/dL		9 Nov 2025
	Triglycerides	54 mg/dL		9 Nov 2025
	HDL Cholesterol	42 mg/dL		9 Nov 2025
	Homocysteine	12.84 umol/L		9 Nov 2025

	Lipoprotein(a)	85.6 mg/dL		9 Nov 2025
	Cholesterol, Total	182 mg/dL		9 Nov 2025
	ApoB	108 mg/dL		9 Nov 2025

Your Lifestyle Assessments

Ever heard of the term Nature vs. Nurture?

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

✓

LIFESTYLE

You have a **reduced risk** of high cholesterol based on the answers you provided.

Your Lifestyle Risk

LowDecreasedAverageIncreasedHigh

Factors impacting your risk:

Do you have a parent or sibling who has ever been diagnosed with high cholesterol?	Increasing Risk	!
Yes		
In a typical week, how many times do you participate in any physical activities or exercise for 30 minutes at a time? (such as walking, running, bike riding, weight training, yoga, etc.)	Decreasing Risk	✓
*Note: longer exercise equals more sessions (e.g., 1 hour = 2 sessions)		
8 or more		
What is your waist size?	Decreasing Risk	✓
Less than 35 (less than 89 cm)		
How many times in a typical day do you eat refined grains (e.g., white pasta, white rice, white bread, etc.)?	Decreasing Risk	✓
0-2		
Do you regularly eat 5 or more servings of fruit or vegetables a day?	Decreasing Risk	✓
Yes		
How many times a week do you eat processed meat (e.g., ham, sausage, beef jerky, etc.)?	Decreasing Risk	✓
0-2		
On a scale of 1 to 5, how would you rate the amount of stress in your life in the past month (at home and at work)?	Decreasing Risk	✓
2		
Your BMI:	Decreasing Risk	✓
22.77		
What is your age?	No impact	—
41		
What is your height?	No impact	—
165 cm		
What is your current weight?	No impact	—
62.0 kg		

What is your sex?

Male

No impact 