



Lipoprotein(a)

DNA Health Report

REPORT CATEGORY —



HEART & BLOOD
VESSELS

Sample Client

Report date: 03 September 2025

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

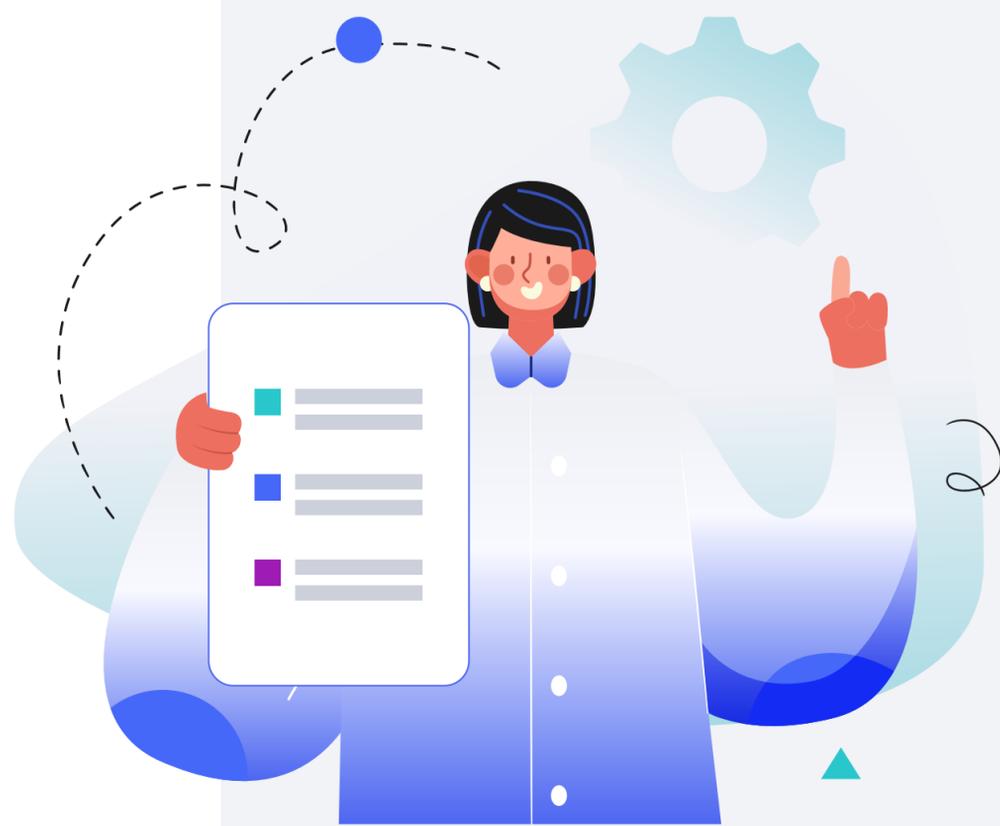
5ft 9" 175.0cm

WEIGHT

165lb 75.0kg

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.



Introduction

Lipoprotein(a), or Lp(a), is a type of [LDL](#)—a small protein that carries “bad cholesterol”.

Lp(a) is crucial for fat transport. It is made in the liver and carries fats such as cholesterol around the body [[R](#), [R](#)].

Lp(a) may deposit on the artery walls. This may lead to the formation of plaques that narrow the arteries. In line with this, higher Lp(a) levels have been associated with heart disease and stroke [[R](#), [R](#), [R](#), [R](#), [R](#), [R](#)].

Lipoprotein(a) test is not a routinely ordered test. Your doctor will usually order it if you have other risk factors for heart disease [[R](#)].

Factors Affecting Lipoprotein(a)

Lipoprotein(a), or Lp(a), is a type of LDL. It is made in the liver and carries fats such as cholesterol around the body. **Lp(a) may deposit on the artery walls.** This may lead to the formation of plaques that narrow the arteries. In line with this, higher Lp(a) levels have been associated with heart disease and stroke [R, R, R, R, R, R, R, R].

Genetics strongly influence Lp(a) levels. Up to **90%** of differences in people’s Lp(a) levels may be due to genetics [R, R].

Genetically higher Lp(a) levels may be causally associated with:

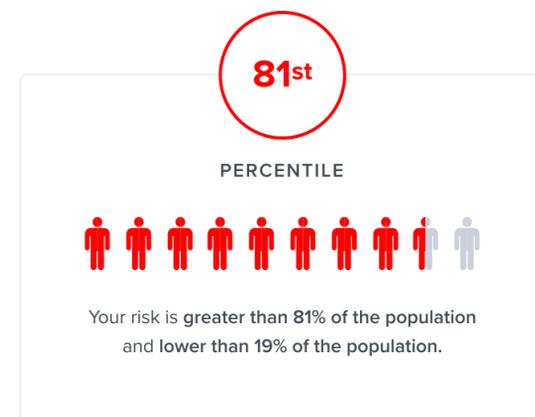
- Heart health (cardiovascular diseases) [R, R, R, R, R]
- Stroke [R, R, R]
- Longevity (reduced) [R]
- Atrial fibrillation [R, R]
- Anemia [R]
- Prostate cancer [R]

The effect of diet on Lp(a) is still a matter of research [R].



HIGHER LEVELS

Predisposed to higher Lipoprotein(a) levels based on 839 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LPA	rs41267819	GG
FADS2	rs1535	AA
LPA	rs76144756	GG
LPA	rs143431368	TT
SLC22A1	rs182980975	CC
LPA	rs41267809	AA
LPA	rs73596816	AG
PLG	rs145535174	AA
LPA	rs41272114	CC
LPA	rs4708871	TT
CETP	rs5882	AG
APOB	rs693	AG
TCF7L2	rs7903146	CT
GCKR	rs780094	TC
SLC22A3	rs6919346	CT
LPA	rs74617384	AA
SLC22A3	rs3918291	TT
/	rs151135411	GG
LPA	rs142720914	GG
SLC22A3	rs117446263	GG

GENE	SNP	GENOTYPE
LPA	rs3798220	TT
AGPAT4	rs61735260	GG
MRPL18	rs146888147	GG
SIDT2	rs964184	CC
PCSK7	rs662799	AA
APOA5	rs3135506	GG
LPA	rs10455872	AA
SLC22A1	rs146534110	GG
SLC22A3	rs118133674	GG
PLG	rs4252152	TT
/	rs200865946	CC
LPA	rs41272112	CC
LPA	rs200376184	GG
SLC22A3	rs8187722	AA
PLG	rs41272078	CC
LPA	rs41264848	GG
SLC22A3	rs3127573	AA
PLG	rs4252128	CC
SLC22A1	rs2282143	CC
LPA	rs140306630	CC
IGF2R	rs12207188	CC
MRPL18	rs73020718	AA

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

Your Recommendations

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

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

	DOSAGE		DOSAGE		
1	Niacin Supplements	20 mg	2	L-Carnitine	500 mg
3	Coenzyme Q10 (CoQ10)	100 mg	4	Flaxseed	2 tbsp
5	Vitamin D and Calcium		6	Coffee	
7	Plant Sterols & Stanols	300 mg	8	Choose Healthy Fats	
9	Nuts	3 oz	10	Avoid Low-Fat High-Carb Diets	
11	Deep Seawater		12	Red Clover	40 mg
13	Tea		14	Inulin	5 g
15	Curcumin	500 mg			

1



Niacin Supplements

IMPACT

 3 / 5

EVIDENCE

 3 / 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

Niacin, or Vitamin B3, works by reducing the production of Lipoprotein(a) from your liver. This results in lowering the levels of this protein in your blood, which can help control your condition.

2



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

Taking L-carnitine supplements may help reduce the levels of this bad cholesterol. By doing so, it might decrease the risk of developing heart diseases related to high cholesterol.

A meta-analysis of five studies on oral L-carnitine supplementation revealed a significant reduction in Lp(a) levels. Subgroup analysis showed a decrease with oral but not intravenous L-carnitine [\[R\]](#).

A meta-analysis of 24 randomized trials investigated L-carnitine's impact on adults with cardiovascular risk factors. It found significant improvements in total cholesterol, LDL cholesterol, HDL cholesterol, **Lp(a)**, fasting blood glucose, HbA1C, and HOMA-IR levels with doses over 1500 mg/day, but no significant effects on triglycerides, Apo A-I, and Apo B 100 [\[R\]](#).

3  **Coenzyme Q10 (CoQ10)**

IMPACT  **EVIDENCE** 

How to implement

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

TYPICAL STARTING DOSE**100 mg**

Description

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

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

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

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

- Organ meats
- Fatty fish
- Whole grains

How it helps

Coenzyme Q10, an antioxidant, may help to decrease the levels of lipoprotein(a), thus supporting cardiovascular health. It's believed to do this by reducing oxidative stress and improving endothelial function, making it easier for the heart to pump blood.

4  **Flaxseed**

IMPACT
●●○○○○ 2 / 5

EVIDENCE
●●○○○○ 2 / 5

How to implement

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

TYPICAL STARTING DOSE**2 tbsp**

Description

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

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

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

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

How it helps

Supplementation with flaxseed may lower lipoprotein(a) levels (by 2.06 mg/dL) in people at risk of cardiovascular disease [\[R, R\]](#).

Flaxseed is rich in omega-3 fatty acids and dietary fiber, which help improve blood lipid profile.

5  **Vitamin D and Calcium**

IMPACT
 2 / 5

EVIDENCE
 1 / 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

Vitamin D and Calcium have no direct impact on Lipoprotein(a) levels. However, they can support overall heart health since adequate amounts may decrease the risk of cardiovascular diseases.

6  **Coffee**

IMPACT 1 / 5

EVIDENCE 2 / 5

How to implement

Drink 1 to 3 cups of black coffee daily, preferably in the morning to minimize potential sleep disturbances. Avoid adding sugar or cream to keep it healthy. Continue this habit daily for long-term benefits.

Description

Coffee is a drink extracted from the roasted seeds (beans) of the coffee plant. Coffee consumption, in moderation, has been associated with potential health benefits, including improved alertness, cognitive function, and reduced risk of certain chronic diseases like Parkinson's and type 2 diabetes.

People drink coffee for an energy and mood boost. [Caffeine](#) is the main ingredient responsible for these effects [\[R, R\]](#).

Drinking moderate amounts of coffee may also [\[R, R, R\]](#):

- Improve heart health
- Improve mood
- Help reduce blood sugar

How it helps

A systematic review of 152 studies identified coffee intake among the dietary interventions lowering Lp(a) levels. In a meta-analysis of data from 640 participants, the consumption of coffee or coffee diterpenes was associated with either a reduction in serum Lp(a) of 11 mg/dL or no effect [\[R\]](#).

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.

7



Plant Sterols & Stanols

IMPACT

 1 / 5

EVIDENCE

 2 / 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.

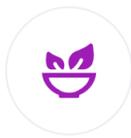
Sterols and stanols are compounds in plants that are similar to cholesterol [\[R, R\]](#).

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

Taking Plant Sterols can help lower your Lipoprotein(a) levels because they reduce the absorption of cholesterol in the intestine. Over time, this can help reduce the risk of heart disease, as high Lipoprotein(a) levels contribute to the build-up of plaques in your arteries.



Choose Healthy Fats

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

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

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

- Nuts
- Seeds
- Fish

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

How it helps

Choosing healthy fats can help to lower Lipoprotein(a) levels by reducing overall cholesterol, as these fats are less likely to contribute to the buildup of fatty deposits in arteries. This makes your blood less "sticky" and reduces the likelihood of clots, mitigating the risk associated with high Lipoprotein(a) levels.

9



Nuts

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a variety of nuts such as almonds, walnuts, and cashews into your daily diet, aiming for a serving size of about 1 ounce (28 grams), which is roughly a handful, every day.

TYPICAL STARTING DOSE

3 oz

Description

Nuts are nutrient-dense foods rich in healthy fats, protein, fiber, vitamins, and minerals. They are associated with numerous health benefits, including heart health, weight management, and reduced risk of chronic diseases when consumed as part of a balanced diet.

Nuts are a healthy source of both energy and nutrients. They are rich in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Protein
- Dietary fiber
- Vitamins ([folate](#), [niacin](#), [vitamin E](#), [vitamin B6](#))
- Minerals ([calcium](#), [magnesium](#), [potassium](#))
- Healthy fats
- Plant sterols

Most of the energy in nuts comes from healthy *unsaturated fats*. Some nuts, like walnuts and pine nuts, are very rich in *polyunsaturated fats* (PUFAs). These are considered some of the healthiest fats we can eat [\[R\]](#).

People who eat a lot of nuts may be less likely to develop [\[R\]](#):

- High cholesterol
- High blood pressure
- High blood sugar

How it helps

Nuts are rich in monounsaturated fats which could help lower Lipoprotein(a) levels in the body. They also contain fiber and plant sterols that curb the absorption of cholesterol, contributing to overall heart health.

10



Avoid Low-Fat High-Carb Diets

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Opt for a diet that balances macronutrients rather than focusing on low fat and high carbohydrates. Include moderate to high amounts of healthy fats and proteins while choosing complex carbohydrates over simple ones. Aim to make this dietary adjustment a permanent part of your eating habits rather than a temporary diet.

Description

Avoiding low-fat-high-carb diets can help promote a balanced macronutrient intake and better blood sugar control. Incorporating healthy fats into the diet supports satiety, hormone production, and overall nutritional well-being.

How it helps

A diet high in carbs, especially refined carbs, can increase your Lipoprotein(a) levels, leading to risks for heart disease. Shifting to a diet with balanced macronutrients can help regulate these levels and safeguard your heart health.

11



Deep Seawater

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Incorporate deep seawater into your diet by drinking 1-2 glasses per day, preferably one in the morning and another in the evening. Deep seawater can also be used as an alternative to regular water for cooking, such as in soups or for boiling rice, to enhance mineral intake.

Description

Deep seawater is water found really deep in the ocean where light can't reach. It is very pure and filled with healthy minerals due to lack of pollution. Because of these benefits, it can be used to improve health and wellness.

How it helps

A study in 42 hypercholesterolemic volunteers found that drinking filtered deep seawater (1050 mL/day for 6 weeks) decreased total cholesterol, LDL cholesterol, and TBARS levels. In a study of 78 participants with hypercholesterolemia, drinking deep sea water for 8 weeks reduced total cholesterol in those with moderately high levels, LDL cholesterol in those with high values, and lipoprotein A levels in all participants regardless of baseline levels [\[R, R\]](#).

Please note: Seawater contains much more salt than the human body can handle. Hence, the human body can safely ingest only small amounts of seawater. Drinking seawater may increase the risk of gastrointestinal infections [\[R, R\]](#).

12  **Red Clover**

IMPACT  **EVIDENCE** 

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

Red clover contains isoflavones that may help balance cholesterol levels, potentially reducing Lipoprotein(a). However, scientific consensus on this is still uncertain.

13  **Tea**

IMPACT  1 / 5

EVIDENCE  1 / 5

How to implement

Drink 1-3 cups of tea daily, choosing from green, black, or herbal varieties according to preference. It's beneficial to consume tea throughout the day, either hot or cold, for ongoing hydration and health benefits.

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 polyphenols 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 many active compounds. These include antioxidants like EGCG and amino acids like [L-theanine](#). Active components of tea help support [[R](#), [R](#), [R](#), [R](#), [R](#)]:

- Heart health
- Cognition
- Immunity
- Relaxation

How it helps

A systematic review of 152 studies identified tea intake among the dietary interventions lowering lipoprotein(a) levels [[R](#)].

14  **Inulin**

IMPACT  **EVIDENCE** 

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, a type of dietary fiber, might not directly affect Lipoprotein(a) levels, it can promote heart health by improving digestive health and enhancing calcium absorption. But keep in mind, it's important to treat high Lipoprotein(a) under a doctor's supervision.

15  **Curcumin**

IMPACT
● ○ ○ ○ ○ 1 / 5

EVIDENCE
● ○ ○ ○ ○ 1 / 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, an ingredient found in turmeric, may help reduce Lipoprotein(a) levels by decreasing inflammation and oxidative stress in the body. However, more research is needed to definitively establish its effectiveness in treating this condition.

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