

Uric Acid

Biohacker Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026

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DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

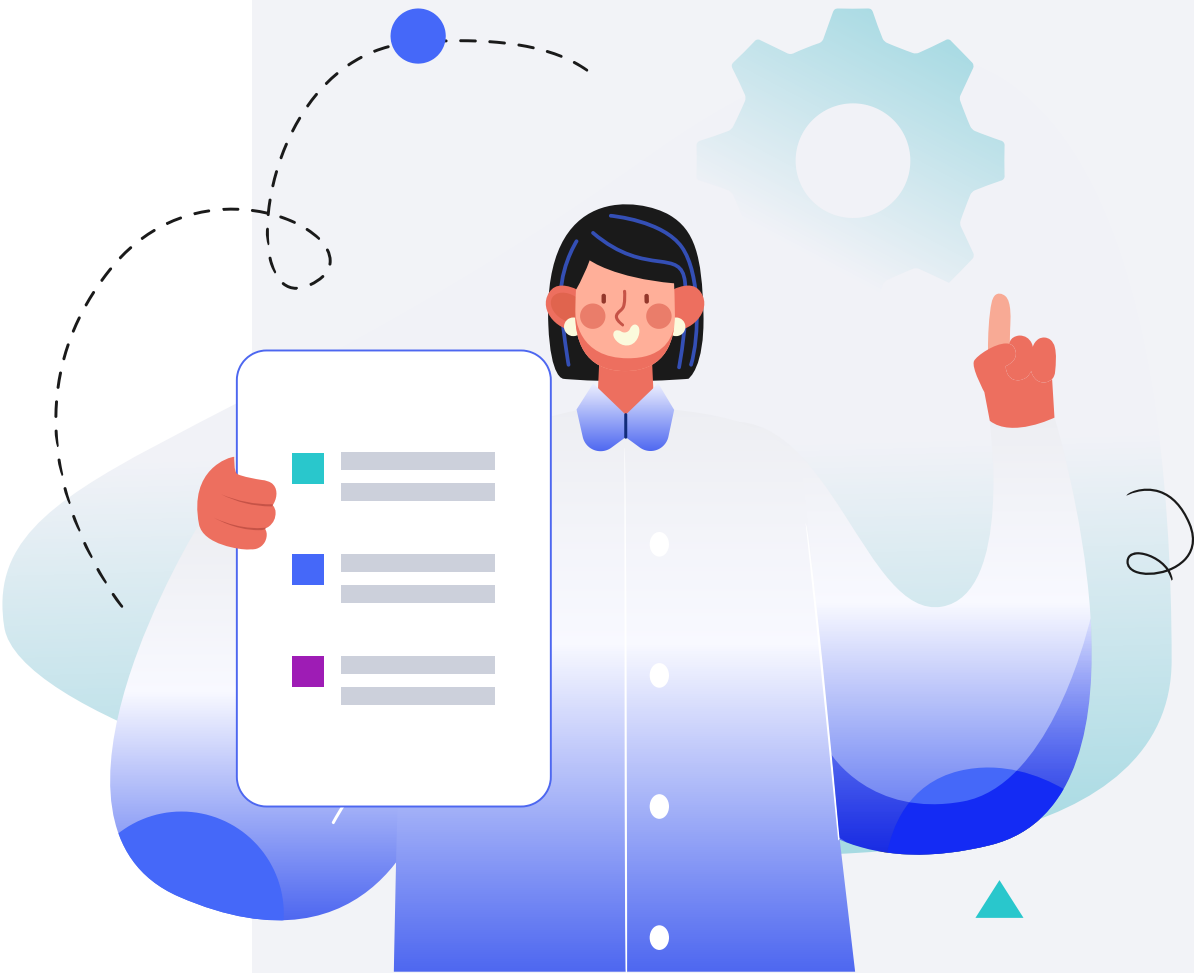
Male

HEIGHT

5ft 5" 165cm

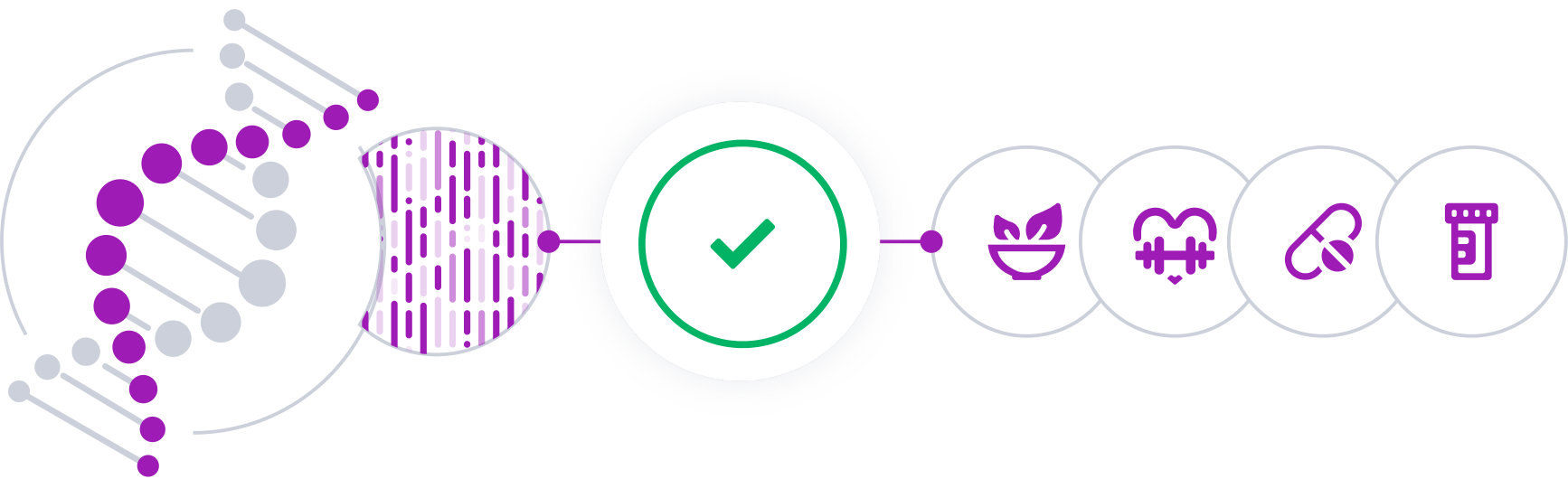
WEIGHT

137lb 62kg



How this works

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

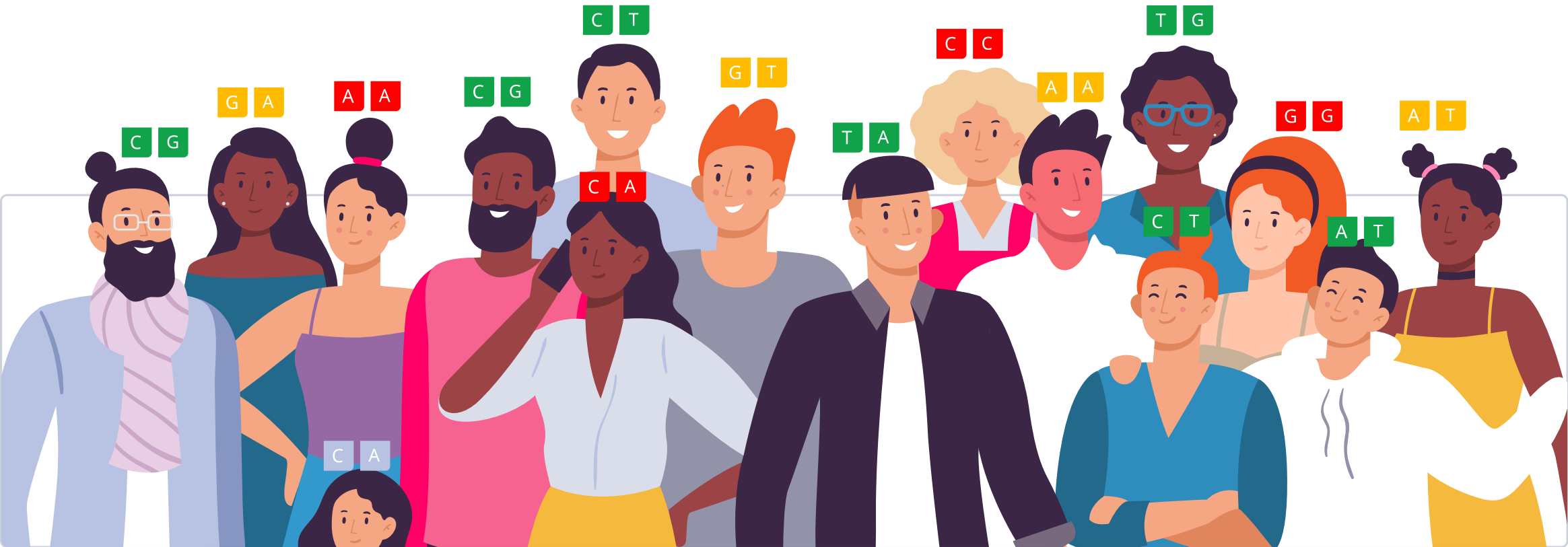


Similarly, our Trait Reports look at how your DNA influences your traits.



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

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



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

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

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



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

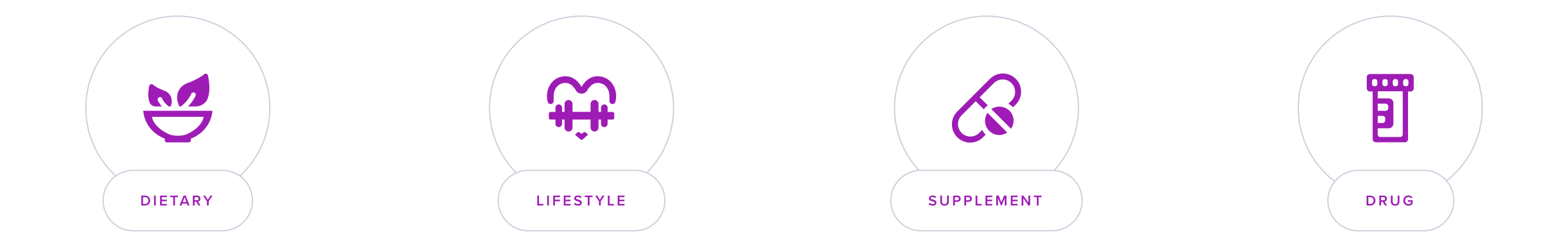
You have 2 risk alleles

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

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

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

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



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

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



Impact

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

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

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

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

Recommendation Evidence

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

Genotype-specific Evidence

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

Some things to keep in mind:

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

Introduction

Some people believe certain crystals can help you heal, bring wealth, or find love. Uric acid crystals don't do any of that.

Uric acid is made in the liver. It is the end product of the breakdown of purines. **Purines** are chemicals found in our cells and in certain foods, such as meat and seafood. Most of the uric acid we produce is normally removed by the kidneys through urine [\[R, R, R, R\]](#).

If too much uric acid is produced or not enough is removed, it can build up in the blood and urine. Uric acid crystals can deposit in the body, causing kidney stones or gout [\[R, R\]](#).

On the other hand, scientists have discovered that uric acid is not solely a waste product. In fact, studies suggest that uric acid acts as a natural antioxidant. Below-normal uric acid levels have been linked to neurological conditions [\[R, R, R, R\]](#).

That is why balanced uric acid levels are important for overall health.

High Uric Acid

Uric acid is made in the liver as an end product of the breakdown of **purines** (chemicals found in our cells and in foods such as meat and seafood). If too much uric acid is produced or not enough is removed by the kidneys, it can build up in the blood and urine. Uric acid crystals can deposit in the body, causing kidney stones or gout [\[R, R, R, R\]](#).

Blood uric acid increases with age. Men tend to have higher levels than women, and are therefore at greater risk of developing gout. This may be because estrogen helps eliminate uric acid [\[R, R\]](#).

Causes of elevated uric acid levels include:

- A diet high in purines (e.g., from meat and seafood) [\[R, R\]](#)
- A diet high in sugar [\[R, R, R\]](#)
- Obesity [\[R\]](#)
- Heavy drinking [\[R\]](#)

Genetically higher uric acid levels may be causally associated with:

- Gout [\[R, R\]](#)
- High Blood Pressure [\[R, R, R, R\]](#)
- Stroke [\[R\]](#)
- Deep vein thrombosis [\[R\]](#)

Up to 70% of differences in people’s uric acid levels may be attributed to genetics. Genes involved may influence [\[R\]](#):

- How kidneys clear uric acid
- How much uric acid is created in the liver



Predisposed to typical uric acid levels based on 11,718 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HMGCS2	rs150147865	AA
SOS2	rs72681869	GG
ACVR1	rs186905001	AA
HPRT1	rs73560966	C
SLC17A1	rs2762353	GG
CCND2	rs76895963	TT
ABCA6	rs77542162	AA
PIP5KL1	rs56379622	GG
ZKSCAN5	rs34670419	GG
UNCX	rs13230509	CC
SLC39A8	rs13107325	CC
AAK1	rs12987661	TT
NRG4	rs4886755	GG
SLC16A9	rs1171614	CT
TBX2	rs9895661	TT
INHBC	rs2229357	AG
ADAM15	rs11264341	TC
SH3YL1	rs62106258	CT
VEGFA	rs1317983	CT
PRKAG2	rs6464165	TC
PKD2	rs45499402	GG
ZDHHC18	rs114165349	GG
HCRT2	rs4715517	CC
CUBN	rs45551835	GG

GENE	SNP	GENOTYPE
HOXD10	rs187355703	CC
ASAH2B	rs10994860	CC
PPP2R5A	rs2788144	AA
DNAJC13	rs113177823	GG
EZH2	rs148190310	GG
GSTM3	rs17024258	CC
MLXIPL	rs13247874	TT
HNF4G	rs2941484	CC
SFMBT1	rs2581824	CC
CYB5D1	rs78671965	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	Dairy Products	2	Methylsulfonylmethane (MSM) 1 g
3	Avoid PCBs	4	Avoid Sugary Foods & Drinks
5	Vitamin C 500 mg	6	Avoid Cadmium Exposure
7	Avoid Organochlorine Pesticide Exposure	8	Molybdenum
9	Calcium Supplements 1000 mg	10	Dietary Calcium
11	Maintain Optimal Vitamin D Levels 1000 iu	12	Avoid Phthalate Exposure
13	Cherries	14	L-Citrulline 3 g
15	Intermittent Fasting	16	Chlorella 3 g
17	Glycine 3 g	18	Decaffeinated Coffee
19	Alpha-Lipoic Acid 600 mg	20	Lactobacillus Gasseri 10 billion CFU
21	Avoid Lead Exposure	22	Taurine 500 mg
23	Almonds	24	N-acetylcysteine (NAC) 1200 mg
25	Saccharomyces Boulardii 10 billion CFU	26	Anserine 500 mg
27	Tomato	28	Tart Cherries
29	Tyrosol 10 mg	30	Dietary Omega-3 Fatty Acids
31	Magnesium 250 mg	32	Exercise At Least One Hour a Day 1 hour

33	Low-Purine Diet		34	Drink at Least 8 Glasses of Water a Day	
35	Glycine And Tryptophan	3 g	36	Whole Grains	
37	Phytic Acid		38	Limit Protein Intake	
39	Avoid Iron Supplements (Unless Deficient)		40	Avoid L-Carnitine Supplements	500 mg
41	Psyllium	5 g	42	Limit Fructose	25 g

1



Dairy Products

IMPACT4 / 5

EVIDENCE3 / 5

How to implement

Incorporate 2-3 servings of low-fat or fat-free dairy products into your daily diet. One serving could be 8 ounces of milk, 1 cup of yogurt, or 1.5 ounces of cheese. Choose options that are low in added sugars and consume as part of balanced meals or snacks throughout the day.

Description

Dairy products, such as milk, yogurt, and cheese, are rich sources of calcium and protein. They are essential for bone health, providing nutrients that support strong bones and teeth, as well as overall nutritional well-being.

Dairy products are made from milk. They include [\[R\]](#):

- Cheese
- Yogurt
- [Kefir](#)
- Butter
- Cream

Dairy products contain high levels of [calcium](#). Calcium helps build strong bones [\[R\]](#).

How it helps

Some experts say that eating more low-fat dairy products may help with high uric acid [\[R\]](#) [\[R\]](#).

Dairy may help lower uric acid levels. It may also reduce the risk of gout attacks in people with gout [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#).

Milk proteins found in dairy products may help clear uric acid with the urine [\[R\]](#) [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your [SLC2A9](#) gene variant is linked to higher levels of uric acid. It likely reduces uric acid elimination through the urine. Dairy may help by increasing uric acid elimination [\[R\]](#) [\[R\]](#) [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SLC2A9	rs11942223	TT	

2



Methylsulfonylmethane (MSM)

IMPACT

4 / 5

EVIDENCE

1 / 5

How to implement

Take 1 to 3 grams of Methylsulfonylmethane (MSM) per day, divided into three doses. This can be in the form of capsules or powder that is mixed with water. It is recommended to start with a lower dose to assess tolerance, then gradually increase to the desired dose over a period of 1 to 2 weeks.

TYPICAL STARTING DOSE

1 g

Description

MSM is a naturally occurring sulfur compound found in foods and used in dietary supplements. It has anti-inflammatory properties and may be used to support joint health and reduce exercise-related muscle soreness.

A molecule of MSM is broken down in the body into a sulfate (sulfur) group and two methyl groups.

The following may increase people’s needs for sulfur and methyl groups: physical activity, recovery from injuries, inflammation, infections/sickness, toxins, etc.

People also need more sulfur when taking hormones (DHEA, pregnenolone, etc.), drugs (Aspirin, Tylenol, NSAIDs, birth control, etc.) or supplements (flavonoids & polyphenols - resveratrol, quercetin, curcumin, etc.) that undergo sulfation.

How it helps

In one small study, MSM supplementation significantly lowered serum uric acid levels immediately after exercise in healthy untrained men [\[R\]](#).

3



Avoid PCBs

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

To avoid PCBs (Polychlorinated Biphenyls), do not use old electrical equipment manufactured before 1977, avoid consuming fish from contaminated waters, especially larger species such as shark and swordfish which are higher in the food chain, and check for and properly dispose of any old fluorescent lighting fixtures that may contain PCBs. Pay attention to local advisories regarding the safety of locally caught fish and wildlife.

Description

PCBs are toxic chemicals that can cause cancer, reproductive problems, and developmental problems. Avoiding exposure to PCBs is important for protecting your health.

Polychlorinated biphenyls (PCBs) are man-made chemicals. They were used in the industry until their **ban in 1979**. PCBs are considered **persistent organic pollutants** (POPS) due to their slow degradation in the environment. They may also **accumulate** in the food chain and the human body [\[R\]](#), [\[R\]](#).

We may be exposed to PCBs through contaminated [\[R\]](#), [\[R\]](#):

- **Food** (e.g., fish, meat, rice)
- Soil
- Air

PCBs may have toxic effects on [\[R\]](#), [\[R\]](#):

- Immunity
- Nervous system
- Reproductive system
- Hormone levels

They may also increase the risk of cancer and reduce lifespan [\[R\]](#), [\[R\]](#).

How it helps

Avoiding PCBs (polychlorinated biphenyls), which are harmful industrial chemicals, helps decrease the risk of gout, a painful condition linked to high uric acid levels. PCB exposure can disrupt your metabolic processes, potentially leading to increased uric acid production in your body.

A [meta-analysis of 9 studies](#) associated exposure to PCBs with a **2.57-fold higher risk of hyperuricemia** [\[R\]](#).

4



Avoid Sugary Foods & Drinks

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

To avoid sugary foods, eliminate or significantly reduce consumption of foods and beverages high in added sugars such as sodas, candies, baked goods, and sugary cereals from your diet. Instead, opt for natural sugar sources like fruits. Aim to do this daily for ongoing health benefits.

Description

High-sugar foods like baked goods, sweets, and sugary drinks, can spike your blood sugar levels. Consuming a lot of these types of foods can contribute to health issues like diabetes, obesity, insomnia, and heart disease.

High-sugar foods and refined carbs have a high glycemic index (GI). This means they tend to spike your blood sugar levels. They include [R](#), [R](#), [R](#):

- Sugary drinks
- Baked goods
- Sweets
- White bread
- White rice
- Pasta

Eating a lot of sugary foods can contribute to:

- Diabetes [R](#), [R](#), [R](#)
- Weight gain and obesity [R](#), [R](#)
- Insomnia [R](#)
- Heart disease [R](#)

You may also want to avoid processed sugars and sugary drinks. They may have a role in increasing IL-1B [R](#), [R](#).

How it helps

Foods high in sugar, especially fructose, are linked to high uric acid levels [R](#), [R](#), [R](#), [R](#).

Sugars such as fructose increase the production of uric acid [R](#), [R](#).

Experts say that avoiding sugary foods and drinks may help lower uric acid. It may also decrease the risk of gout attacks in people with gout. This also includes artificially flavored soft drinks and fresh fruit juice such as orange juice. [R](#), [R](#), [R](#).

5



Vitamin C

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

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

TYPICAL STARTING DOSE
500 mg

Description

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

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

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

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

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

How it helps

Vitamin C may help clear uric acid with the urine [\[R\]](#), [\[R\]](#).

A diet rich in vitamin C is linked to lower uric acid levels and risk of gout [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Taking vitamin C (200-2,000 mg/day for 4 weeks) may also support healthy uric acid levels. However, it may not help people with gout as much [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

In line with this, experts state more research is needed and some even recommend against using vitamin C supplements to help with gout [\[R\]](#), [\[R\]](#).

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

6



Avoid Cadmium Exposure

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

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

Description

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

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

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

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

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

Multiple studies have associated high exposure to cadmium with increased uric acid levels. Combinations of cadmium with other heavy metals may further increase uric acid. Women may be more sensitive to the effects of cadmium, with exposure to low concentrations increasing uric acid levels only in this gender [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Cadmium can impair kidney function. Poor kidney function could lead to higher uric acid levels.

7



Avoid Organochlorine Pesticide Exposure

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

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

Description

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

How it helps

Reducing exposure to organochlorine pesticides aids in controlling Uric Acid levels as these pesticides can disrupt your body's ability to properly metabolize and excrete uric acid. Avoiding these chemicals could lead to decreased uric acid levels, potentially reducing the risk of related conditions like gout and kidney stones.

A [meta-analysis of 9 studies](#) associated exposure to **DDT with a 2.34-fold higher risk of hyperuricemia, DDE with a 3.25-fold higher risk, and trans-nonanchlor with a 2.57-fold higher risk** [\[R\]](#).

8



Molybdenum

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Adults should get about **45 micrograms** of molybdenum each day [R].

Foods rich in molybdenum include [R]:

- Black-eyed peas (288 mcg per serving)
- Beef liver (104 mcg per serving)
- Lima beans (104 mcg per serving)
- Yogurt (26 mcg per serving)
- Baked potato (16 mcg per serving)
- Wheat cereals (15 mcg per serving)

Description

[Molybdenum](#) (Mo) is a mineral that we need in very small amounts (trace mineral) [R].

Molybdenum helps process sulfur-containing amino acids such as [methionine](#) and [cysteine](#). It also helps make [uric acid](#) and is part of the tooth enamel [R, R].

Adults should get about **45 micrograms** of molybdenum each day [R].

Foods rich in molybdenum include [R]:

- Black-eyed peas (288 mcg per serving)
- Beef liver (104 mcg per serving)
- Lima beans (104 mcg per serving)
- Yogurt (26 mcg per serving)
- Baked potato (16 mcg per serving)
- Wheat cereals (15 mcg per serving)

Water also contains some molybdenum, although the exact amount can vary greatly depending on the region [R].

People easily get all the molybdenum they need through food and water, so [molybdenum deficiency is extremely rare](#) [R].

How it helps

A meta-analysis of 20 studies and 63,283 participants associated exposure to molybdenum with a decreased risk of elevated uric acid [R].

9



Calcium Supplements

IMPACT2 / 5

EVIDENCE1 / 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 placebo-controlled trial, 35 adult women (18-42 years old) with low calcium intake (<800 mg/day) were divided into three groups: low calcium breakfast (control, ~70 mg/day), high calcium from calcium citrate (~770 mg/day), or high calcium from skim milk (~770 mg/day) for 45 days. Calcium supplementation (dairy or calcium citrate) lowered serum urate levels [\[R\]](#).

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.

10



Dietary Calcium

IMPACT2 / 5

EVIDENCE1 / 5

How to implement

Consume 1,000-1,200 mg of calcium daily through dietary sources such as dairy products (milk, yogurt, cheese), green leafy vegetables (kale, broccoli), and fortified foods (orange juice, plant-based milks). Adults under 50 need 1,000 mg per day, while those over 50 should aim for 1,200 mg per day.

Description

Dietary calcium is a mineral found in dairy products, leafy greens, and fortified foods. It is essential for bone health, muscle function, and nerve transmission.

[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 placebo-controlled trial, 35 adult women (18-42 years old) with low calcium intake (<800 mg/day) were divided into three groups: low calcium breakfast (control, ~70 mg/day), high calcium from calcium citrate (~770 mg/day), or high calcium from skim milk (~770 mg/day) for 45 days. Calcium supplementation (dairy or calcium citrate) lowered serum urate levels [\[R\]](#).

11



Maintain Optimal Vitamin D Levels

IMPACT

1 / 5

EVIDENCE

2 / 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

Low vitamin D has been linked to high uric acid. However, not all studies found this link [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Taking vitamin D (1,000-2,800 IU/day for 3-12 months) may support healthy uric acid levels [\[R\]](#), [\[R\]](#).

It's not yet clear how exactly vitamin D decreases uric acid. Scientists think it may help clear uric acid from the body [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Experts recommend getting 600-800 IU of vitamin D per day. Medical bodies recommend against taking more than 4,000 IU per day* [\[R\]](#).

How to implement

Description

How it helps

6865 participants, NHANES: The multivariable logistics regression showed that MECP, MEOHP, MEHHP, MBzP, and MiBP were generally positively associated with hyperuricemia, especially in MiBP (Q3 OR : 1.31 and Q4 OR: 1.68, compared to Q1) [R].

13



Cherries

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

Incorporate a serving of cherries, which is about 1 cup or 21 cherries, into your daily diet. You can eat them fresh, frozen, dried, or in juice form. If opting for juice, ensure it's 100% cherry juice without added sugars.

Description

Cherries are a stone fruit that comes in numerous varieties. They are a natural source of antioxidants and anti-inflammatory compounds. They may help reduce inflammation, promote better sleep, and support overall health.

A cherry is a stone fruit with numerous varieties. Cherries are native to parts of Europe and Asia [\[R\]](#), [\[R\]](#).

People consume sweet cherries (*Prunus avium*) and tart cherries (*Prunus cerasus*) to help with [\[R\]](#):

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

How it helps

Cherries may help lower uric acid levels and reduce gout symptoms. Helpful forms include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Tart cherry juice (60-240 mL/day for 1-4 weeks)
- Fresh tart cherries (10-36 cherries/day for at least 2 days)
- Fresh Bing cherries (280 g/day)

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

In line with this, **some experts recommend eating more cherries to people with gout.**

Cherries may help by reducing how much uric acid is made by the liver [\[R\]](#).

14



L-Citrulline

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

3 g

Description

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

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

- Watermelon
- Pumpkins
- Cucumber
- Bitter melon

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

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

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

How it helps

Although citrulline supplementation is not directly associated with lowering uric acid levels, it may indirectly help by supporting kidney function. On the one hand, it promotes blood flow by aiding in the production of nitric oxide [\[R\]](#).

Moreover, citrulline is involved in the urea cycle, a process that helps remove ammonia from the body. This aids in detoxification and maintains nitrogen balance [\[R\]](#).

15



Intermittent Fasting

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

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

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

How it helps

In a randomized trial on participants with metabolic syndrome, a low-carbohydrate diet, 8-hour time-restricted eating, and their combination significantly reduced body weight and subcutaneous fat area after 3 months. However, only time-restricted eating and the combination treatment led to reductions in visceral fat, fasting blood glucose, uric acid, and dyslipidemia [\[R\]](#).

Intermittent fasting may help due to the combustion of fat, as it switches the body's energy source from carbohydrates to fats. Fasting also promotes autophagy, a cellular cleanup process that may help reduce uric acid crystal formation.

16



Chlorella

IMPACT

1 / 5

EVIDENCE

1 / 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

In 2 placebo-controlled trials of 146 patients with NAFLD, supplementation with chlorella (1200 mg/day), both alone and as an add-on to metformin and vitamin E, for 8 weeks lowered uric acid levels [\[R\]](#), [\[R\]](#).

17



Glycine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 3 to 5 grams of glycine supplement per day with water, preferably before bedtime for sleep improvement or spread throughout the day for general health benefits. Continue indefinitely as needed, but consult a healthcare provider for long-term use beyond three months.

TYPICAL STARTING DOSE

3 g

Description

Glycine is an amino acid that may have calming and anti-inflammatory effects, potentially benefiting sleep quality and joint health.

If you can't get enough glycine from food sources, glycine supplements are available. Daily doses of up to **6 g** have been safely used for up to **4 weeks**. Consult your doctor before supplementing.

How it helps

Glycine aids in the removal of extra uric acid from your body by enhancing liver function and increasing your urine output. As a result, it could help reduce the risk of gout, a condition caused by high levels of uric acid.

In 2 placebo-controlled trials of 95 adults with mild hyperuricemia, supplementation with glycine (3 g/day), both alone and combined with tryptophan (0.2 g/day), for 6 weeks decreased serum uric acid (by 0.4 mg/dL) an triglycerides (by 33 mg/dL) [[R](#), [R](#)].

18



Decaffeinated Coffee

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Replace your regular coffee intake with decaffeinated coffee. Aim to consume it in the same quantities and at the same times you would normally drink caffeinated coffee. This adjustment can be made indefinitely to reduce caffeine intake without altering your routine significantly.

Description

Decaffeinated coffee allows individuals to enjoy the flavor and aroma of coffee without the stimulating effects of caffeine, making it a suitable choice for those who are sensitive to caffeine or want to reduce their intake. It can still provide antioxidants and potential benefits like improved alertness.

How it helps

Decaffeinated coffee is beneficial for high uric acid levels as it contains ingredients that help lower this acid, reducing the risk of gout. Additionally, it promotes healthy kidney function, which is responsible for excreting uric acid from the body.

In a study of 51 healthy men, a randomized experiment with coffee (CC or DC) showed that DC reduced serum uric acid (SUA), especially in hyperuricemic participants. Non-hyperuricemic individuals who consumed CC experienced SUA increases during intervention but decreases during withdrawal. Additionally, CC increased sXanthine oxidase activity (sXOA) with SUA in non-hyperuricemic participants. In summary, DC decreased SUA, while CC raised SUA in non-hyperuricemic individuals [\[R\]](#).

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.

19



Alpha-Lipoic Acid

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

600 mg

Description

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

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

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

How it helps

In a study of 55 healthy trained men, ALA (1.2 g/day for 3 days) decreased uric acid concentration and enhanced plasma antioxidant status, reducing oxidative damage post-exercise [\[R\]](#).

20



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 25 patients with elevated uric acid levels, consuming yogurt with *L. gasseri* PA-3 for 8 weeks improved serum uric acid [\[R\]](#).

21



Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

How it helps

A NHANES study of 4,794 linked high blood lead to a higher uric acid/SCr ratio, while urinary lead lowered it. Mixtures of lead, cadmium, and arsenic raised uric acid in men, while lead and cadmium raised it in women [\[R\]](#).

A study of 111 healthy subjects suggested that chronic low-level environmental lead exposure may inhibit urate excretion and lead chelation therapy reduces this inhibition [\[R\]](#).

22



Taurine

IMPACT1 / 5

EVIDENCE1 / 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

In a study of 55 healthy trained men, taurine (3 g/day for 3 days) decreased uric acid concentration and enhanced plasma antioxidant status, reducing oxidative damage post-exercise [\[R\]](#).

Taurine also showed a potential to reduce uric acid in two animal studies [\[R\]](#), [\[R\]](#).

23



Almonds

IMPACT1 / 5

EVIDENCE1 / 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 contain a significant amount of monounsaturated fats and fiber which can lower the levels of uric acid in the body by improving kidney function and reducing inflammation. They also have a low purine content which is beneficial as high purine foods can increase uric acid levels.

Dietary almonds (10g/day) in Pakistani and American varieties reduced liver enzyme levels (AST, ALT, GGT) significantly compared to the control group after 12 weeks [\[R\]](#).

24



N-acetylcysteine (NAC)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take 600 mg of N-Acetylcysteine (NAC) supplement daily with water. It can be taken at any time of the day, but try to take it at the same time each day for best results.

TYPICAL STARTING DOSE

1200 mg

Description

NAC is a supplement that contains a form of the amino acid cysteine, a protein building block that your body uses to make the antioxidant glutathione. It is used for its potential antioxidant properties and its ability to support lung, gut, and mental health.

[N-acetylcysteine](#) (NAC) is converted to cysteine in the body. Cysteine is a protein building block (amino acid) that helps make the antioxidant glutathione [\[R\]](#).

People take NAC to potentially support [\[R\]](#), [\[R\]](#):

- Mental health
- Ovarian health and pregnancy outcomes
- Lung health
- Gut health

How it helps

In a study of 55 healthy trained men, NAC (1.8 g/day for 3 days) decreased uric acid concentration and enhanced plasma antioxidant status, reducing oxidative damage post-exercise [\[R\]](#).

NAC showed a potential to reduce uric acid in two animal studies as well [\[R\]](#), [\[R\]](#).

25



Saccharomyces Boulardii

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take Saccharomyces boulardii as an oral supplement, typically available in capsule or powder form, twice daily with a glass of water. Continue this regimen for 4-8 weeks, or as directed by a healthcare provider.

TYPICAL STARTING DOSE
10 billion CFU

Description

Saccharomyces boulardii is a beneficial yeast often used as a probiotic supplement to support digestive health and prevent or alleviate symptoms of diarrhea, including those caused by antibiotics or infections.

How it helps

Saccharomyces boulardii, a probiotic yeast, may help lower uric acid levels by promoting gut health and influencing gut microbiota composition. This can be beneficial for individuals suffering from gout or at risk of developing it, as high uric acid levels are a primary contributor to gout attacks.

26



Anserine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take anserine as a dietary supplement in doses of 500-1000 mg daily, ideally with a meal to enhance absorption. Follow this regimen for a period of at least 12 weeks to evaluate its benefits, as most studies assessing its effects on cognitive function and physical performance use this duration.

TYPICAL STARTING DOSE
500 mg

Description

Anserine is a naturally occurring amino acid compound found in certain meats, particularly poultry. It is often considered a dietary source of beta-alanine, which may support muscle function and endurance.

How it helps

Anserine has been reported to lower uric acid levels in healthy individuals [\[R\]](#).

27



Tomato

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

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

- High cholesterol
- High blood pressure

How it helps

In an [uncontrolled trial of 35 women](#), consuming a ripe tomato (90 g) before lunch for 4 weeks **reduced uric acid (by 0.16 mg/dL)** [\[R\]](#).

28



Tart Cherries

IMPACT

0 / 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 rich in anthocyanins, a type of antioxidant that helps lower the levels of uric acid in your body, potentially reducing the occurrence of gout attacks. They can also decrease inflammation and pain related to this condition.

In a placebo-controlled trial of 48 participants, ingesting tart cherry juice (240 mL) or concentrate (480 mg) once or twice for 48 hours **decreased uric acid levels by 8% on average** [R].

However, cherry concentrate (7.5-30 mL, 2x/day for 28 days) had **no effect on serum uric acid levels or uric acid excretion** in a placebo-controlled trial of 50 patients with gout [R].

29



Tyrosol

IMPACT

0 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

10 mg

Description

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

How it helps

A nutraceutical with red yeast rice (10 mg), phytosterols (800 mg), and L-tyrosol (5 mg) taken for 8 weeks improved uric acid in a placebo-controlled trial of 60 patients with hypercholesterolemia [\[R\]](#).

Tyrosol can promote healthier kidney function and help the body more effectively remove excess uric acid.

30



Dietary Omega-3 Fatty Acids

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

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

- Salmon
- Tuna
- Herring
- Sardines

For optimal health, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

How it helps

Omega-3 fatty acids can help in the condition of high uric acid by reducing inflammation and swelling that often occurs in gout, a disease caused by too much uric acid. Moreover, they may improve kidney function and assist in flushing out uric acid from the body.

Genetically higher levels of DHA may be linked to a reduced risk of:

- Gout [\[R\]](#)
- High uric acid levels [\[R\]](#)

31



Magnesium

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

TYPICAL STARTING DOSE

250 mg

Description

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

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

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

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

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

How it helps

Genetically higher levels of magnesium may be associated with lower:

- Risk of gout [\[R\]](#), [\[R\]](#)
- Uric acid levels [\[R\]](#)

Magnesium aids in the dissolution of uric acid crystals. It also exhibits anti-inflammatory properties that can help alleviate gout symptoms.

Please note: *There is no evidence from controlled clinical trials to support this recommendation. It is included based on uncontrolled clinical trials, animal or cell studies, or non-scientific criteria. Please take this recommendation with a grain of salt until more research is available.*

32



Exercise At Least One Hour a Day

IMPACT

0 / 5

EVIDENCE

0 / 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

Regular exercise helps to regulate uric acid levels by promoting weight control and healthy kidney function, which assists in flushing uric acid out of the body. Reducing body fat also decreases uric acid production, hence lowering the risk of developing related conditions like gout.

33



Low-Purine Diet

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Consume foods low in purines such as fruits, vegetables (excluding high-purine vegetables like spinach, asparagus, and cauliflower), dairy products with low fat content, and whole grains. Limit intake of red meats, organ meats, and seafood as these are high in purines. Aim to maintain this dietary pattern consistently to manage conditions such as gout.

Description

A low-purine diet can help individuals with gout manage their condition by limiting foods high in purines, which can reduce the risk of painful gout attacks and joint inflammation.

Purines are compounds found in cells of the body and in many foods. They are broken down by your kidneys into *uric acid*. Although uric acid can act as an antioxidant, too much of it can lead to gout [\[R\]](#), [\[R\]](#).

Foods and drinks high in purines include [\[R\]](#), [\[R\]](#):

- Red meat
- Organ meats
- Seafood (such as anchovies, shellfish, and sardines)
- Alcohol

How it helps

A low-purine diet helps by reducing the amount of uric acid the body produces. Purines contribute to uric acid formation, so eating fewer foods high in purines can reduce the risk of uric acid related issues.

How to implement

Description

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

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

How it helps

Adequate water intake can help the kidneys flush excess uric acid from the body, potentially lowering levels.

35



Glycine And Tryptophan

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 3 grams of glycine and 500 mg of tryptophan daily, preferably on an empty stomach, before bedtime for better absorption and effect on sleep and mood. Continue this regimen for at least 4 weeks to evaluate its benefits.

TYPICAL STARTING DOSE

3 g

Description

Glycine is an amino acid that may have calming and anti-inflammatory effects, potentially benefiting sleep quality and joint health. [Tryptophan](#) is an amino acid, or a protein building block. Humans can’t make tryptophan, so we need to get it from protein-rich foods. Your body uses tryptophan to make [serotonin](#) and [melatonin](#). These brain chemicals are important for mood and sleep.

How it helps

Glycine and tryptophan can help your body to more effectively process and eliminate uric acid, potentially reducing the symptoms of conditions like gout. However, they should be used as part of a balanced diet and are not a standalone treatment for high uric acid levels.

36



Whole Grains

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate at least three servings of whole grains into your daily diet. This can include consuming foods such as whole grain bread, brown rice, whole grain pasta, and oats. Aim to replace refined grains with whole grains at each meal for optimal benefits.

Description

Whole grains encompass a variety of grains like wheat, oats, and quinoa, where the entire grain kernel is intact. They are rich in fiber, vitamins, minerals, and antioxidants, supporting heart health and reducing the risk of chronic diseases.

Unlike refined grains, whole grains contain nutritious parts of the grain like bran and germ.

Whole grains provide many crucial nutrients, including:

- Fiber
- B-vitamins
- Iron
- Magnesium
- Phosphorus

Due to their high fiber content, whole grains don’t tend to spike blood sugar like refined grains do.

How it helps

Whole grains can contribute to a balanced diet and may help lower uric acid levels indirectly through improved insulin sensitivity and healthier body weight.

37



Phytic Acid

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 50-800mg of phytic acid as a supplement daily with a glass of water, preferably with meals to enhance absorption. This dosage is typically spread out over the course of the day in 2-3 divided doses. Continue this regimen daily for at least several weeks to assess its effects.

Description

Phytic acid, also known as inositol hexaphosphate (IP6), is found in various plant seeds, grains, and nuts. It is known for its role as an antinutrient because it can bind to minerals like iron, calcium, and zinc, reducing their absorption in the human digestive tract. it also has potential health benefits, including antioxidant properties and potential anti-cancer effects.

How it helps

Phytic acid acts as an antioxidant and can bind with excess uric acid in the body, potentially helping to remove it and thereby reducing symptoms of uric acid buildup, such as gout.

38



Limit Protein Intake

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Limit your daily protein intake to 0.8 grams per kilogram of your body weight. For example, if you weigh 70 kilograms (about 154 pounds), aim to consume no more than 56 grams of protein per day. Adjust this goal based on your activity level and health status, reducing intake further if advised by a healthcare professional.

Description

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

You should choose high-quality foods that give you the “best” version of each macronutrient. For example, too much protein from certain animal sources may increase the risk of bone, kidney, and metabolic issues in some people [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

Balancing protein intake, specifically cutting down on high-purine proteins found in meat and fish, can help uric acid levels as your body produces uric acid when it breaks down purines. So, less intake of high-purine foods can mean less production of uric acid, reducing the chance of a gout attack, a painful condition that can happen with high uric acid levels.

39



Avoid Iron Supplements (Unless Deficient)

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Only take iron supplements if a blood test shows you are iron deficient. If not deficient, do not use iron supplements. For those diagnosed with iron deficiency, follow your healthcare provider's instructions on the type and dosage of iron supplement to take.

Description

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

Avoiding unnecessary iron supplements, particularly without a confirmed deficiency, can prevent the risk of iron overload, which can lead to health issues like hemochromatosis and oxidative stress.

However, too much iron can be bad for the body. It can deposit into organs, such as the liver, heart and the pancreas. This can cause issues such as liver disease, heart problems and diabetes [\[R\]](#), [\[R\]](#).

How it helps

Genetically higher iron levels may be associated with a 35% increased risk of gout [\[R\]](#).

Please note: *Some people deficient in iron may need to take iron supplements. Your doctor should help you make that decision based on your actual iron levels.*

40



Avoid L-Carnitine Supplements

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Do not purchase or consume supplements that list L-carnitine as an ingredient. This includes checking the labels on all vitamin and supplement products you currently use or consider buying in the future.

TYPICAL STARTING DOSE

500 mg

Description

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

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

Excessive supplementation with L-carnitine may cause health issues, such as nausea, diarrhea, and a “fishy” body odor [\[R\]](#).

L-carnitine may also reduce T4 levels. [\[R\]](#)

How it helps

In one study, genetically higher carnitine was directly and causally associated with systolic BP but not diastolic BP. The findings additionally support direct and indirect relationships of carnitine on TG and uric acid. No causal associations of carnitine were found with glycemic traits [\[R\]](#).

In another similar study, a 1 unit increase in genetically predicted carnitine was associated with a 1 SD increase in systolic BP [\[R\]](#).

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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 that aids digestion and helps maintain a healthy heart and gut. While there's no direct evidence it reduces uric acid, it may contribute to overall health by improving digestion and supporting weight control.

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Limit Fructose

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Limit your daily intake of fructose, particularly from added sugars and sweetened beverages, to less than 25 grams per day. Check nutrition labels for fructose content in foods and beverages and make adjustments to stay within this limit.

TYPICAL STARTING DOSE

25 g

Description

Limiting excessive fructose intake, especially from added sugars, can help prevent potential health issues like insulin resistance and obesity. Reducing fructose consumption supports better metabolic health and overall well-being.

How it helps

Limiting fructose in your diet can help manage uric acid levels because fructose metabolizes into purines, which are then turned into uric acid in the body. So by consuming less fructose, you can reduce the production of uric acid and thus reduce symptoms associated with high uric acid levels, such as gout.

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.

