

Kidney Stones

DNA Health Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

10 Your recommendations

42 Next Steps

- 42 Your Lab Results

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

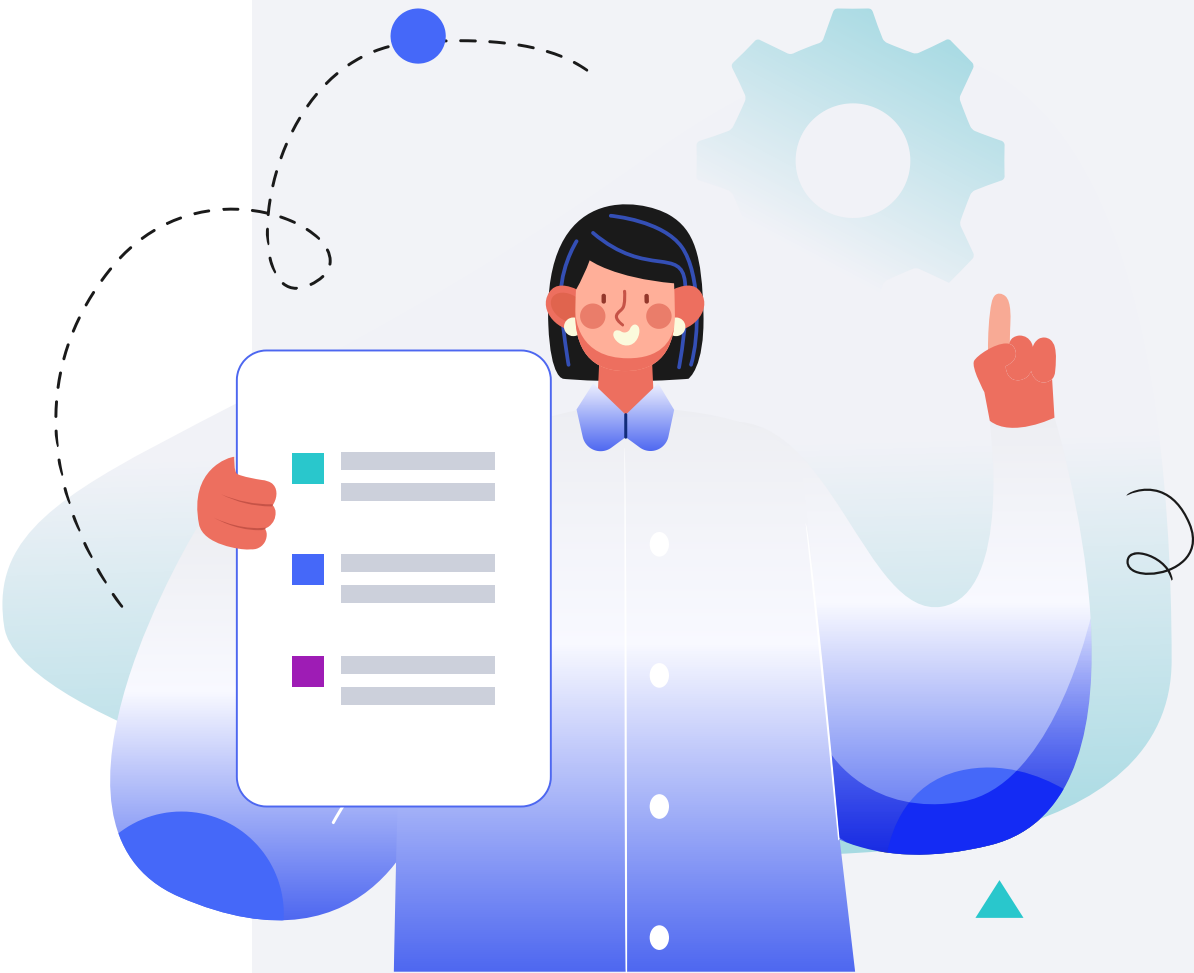
Male

HEIGHT

5ft 5" 165cm

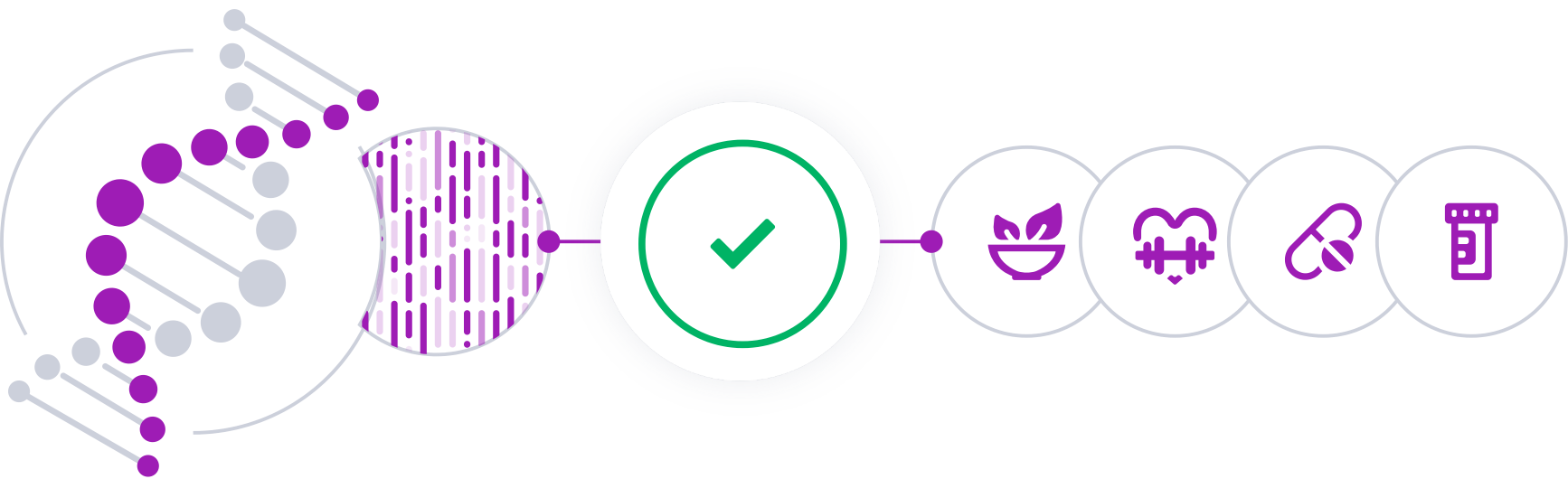
WEIGHT

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.

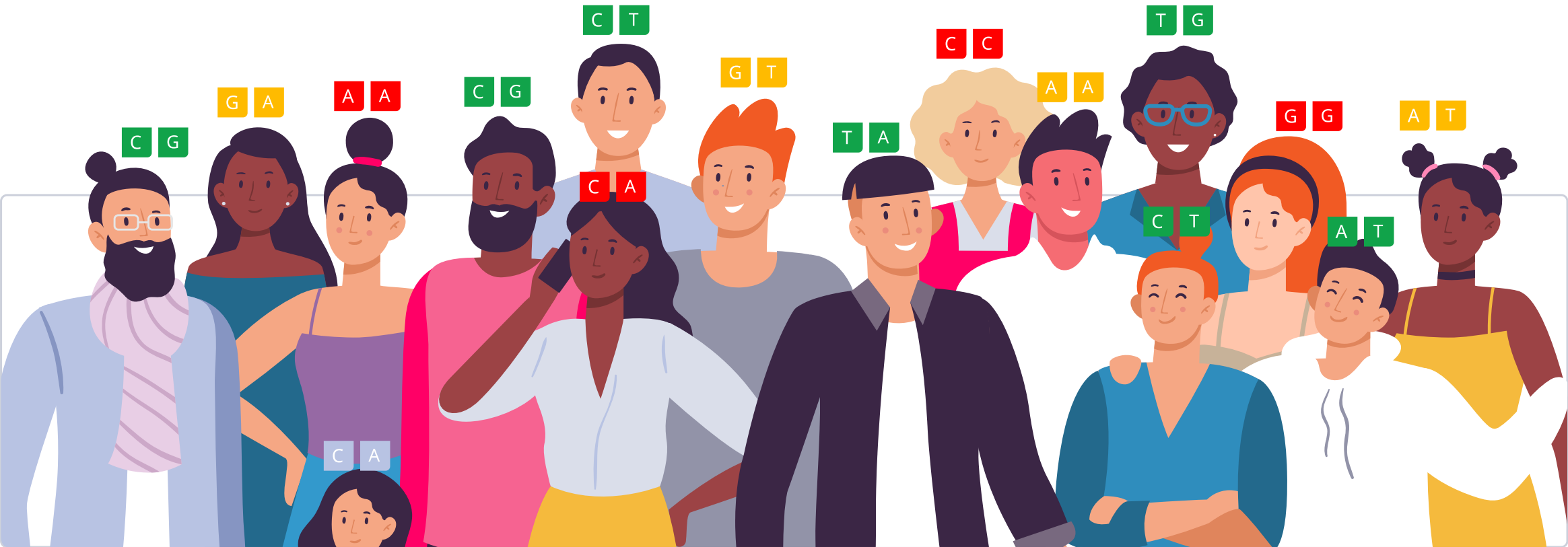


Similarly, our Trait Reports look at how your DNA influences your traits.



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

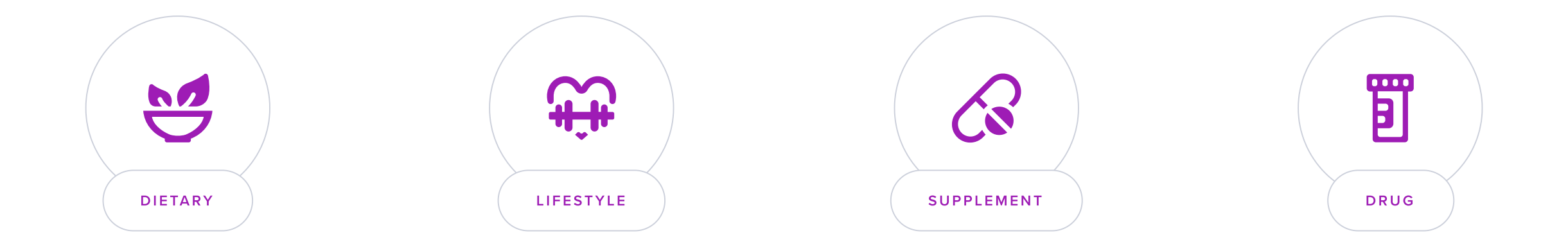
You have 2 risk alleles

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

What is the worst pain a human can experience?

The answer to this question is subjective.

For example, if you break a bone, you not only have to deal with the initial trauma, but you may also have pain years beyond the injury. On the other hand, those who have experienced severe cluster headaches have described the pain as giving birth through your eye socket [\[R\]](#), [\[R\]](#).

Then there is the pain of childbirth... but where do kidney stones rank?

Scientists asked a small group of men and women suffering from a blocked urinary tract whether this was the worst pain they had ever experienced, and the majority answered yes.

Some of the women in this study had also previously given birth, and even the majority of those women still answered yes [\[R\]](#)!

So, the pain from kidney stones just might be the worst imaginable, and nobody wants to suffer that!

While nobody wants to experience kidney stones, they’re actually relatively common. An estimated 1 in 10 people will have a kidney stone at some point in their lives [\[R\]](#).

Scary stuff.

But don’t worry, there are some things you can do to lower your risk of developing kidney stones. We’ve got you covered with our Kidney Stone Report, starting with some genetic steps to lower your risk.

One thing that may help you lower your risk is targeting your [DGKH](#) gene and reducing your oxalate intake. If you happen to have a certain variant of this gene, you may be more prone to calcium oxalate kidney stones [\[R\]](#).

Alternatively, you may benefit from reducing your salt and sugar intake if you have a particular variant of the [BCAS1](#) gene. Those who carry this variant may be more prone to kidney stones due to higher levels of calcium in their urine [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are many more gene-based tips that may reduce your risk of kidney stones.

Read on to find out more about:

- **How your genetics play a role in kidney stones**
- **Your genetic risk score based on over 850,000 genetic variants**
- **Personalized recommendations based on your genetics**

About Kidney Stones

Key Takeaways:

- About **50%** of differences in people's chances of developing kidney stones may be due to genetics.
- Risk factors include dehydration, excess animal protein, salt, or sugar, obesity, IBD, UTIs, medications, excess vitamin C.
- If you are at high genetic risk, you may want to address modifiable risk factors like hydration, diet, and weight to help you lower overall risk.
- About **11%** of American men and 7% of women have kidney stones.
- Click the **next steps** tab for relevant labs and lifestyle factors.

The kidneys are a natural filtration system for water, minerals, salts, and waste in the blood. They balance mineral levels in the body. They also help regulate [\[R\]](#):

- Blood pressure
- Red blood cell formation
- Bone health

Minerals can build up in the kidney and form deposits called stones. Kidney stones are made primarily of calcium [\[R\]](#), [\[R\]](#), [\[R\]](#).

Small kidney stones may go completely unnoticed until they pass. But when bigger stones move through the kidney and out of the body, they may cause **pain** [\[R\]](#), [\[R\]](#).

Other signs and symptoms include [\[R\]](#):

- Nausea
- Discolored or bad-smelling urine
- Urinating more often or in small amounts

Kidney stones are fairly common. About 11% of American men and 7% of women have kidney stones [\[R\]](#).

A major cause of kidney stones is dehydration. Fluid helps dilute the salts, minerals and waste in your urine.



MORE LIKELY

More likely to have kidney stones based on 816,639 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SCNN1B	rs889299	GG
CYP24A1	rs17216707	TC
GNAZ	rs13054904	TA
SOX9	rs4793434	GC
SPP1	rs2853744	GG
AGXT	rs34116584	CT
CLDN14	rs219780	CC
RGS14	rs12654812	AA
RGS14	rs56235845	GG
RGS14	rs10051765	CC
TBX2	rs1010269	GG
ALPL	rs6703976	CT
CHAF1B	rs2776288	GA
DGKH	rs1037271	TC
ALPL	rs10917002	CT
POU2AF1	rs4529910	TG
PTGER1	rs3760702	GA
PKD2	rs9138	AA
DGKH	rs4142110	TT
SPP1	rs1126616	CC
KCNK5	rs1155347	TT
SLC22A2	rs28495851	AA
SLC22A2	rs77648599	TT
PDILT	rs77924615	GG

This prevents them from building up and forming stones [R, R, R].

Other risk factors for kidney stones include [R]:

- Diets high in animal protein, salt, or sugar
- Obesity
- Gut diseases like IBD
- Weight reduction surgery
- UTIs
- Certain medications
- Excess vitamin C supplementation
- **Genetics**

Small kidney stones usually pass on their own. Most doctors recommend painkillers to manage the discomfort of passing a stone. They may also prescribe medication to relax the muscles in part of the urinary tract. This can help the stone pass more easily [R].

For larger stones, a doctor may recommend a procedure that uses sound waves to break them apart. Sometimes, a large kidney stone may need to be removed through surgery [R].

About 50% of differences in people's chances of developing kidney stones may be attributed to genetics. Most genes involved in kidney stones influence the levels of calcium and other minerals in the kidneys. These include [R, R, R]:

- CASR
- SLC34A1
- SLC2A9
- TRPV5

Genetically higher fasting insulin may be causally associated with a higher risk of kidney stones [R, R].

GENE	SNP	GENOTYPE
RAP1GAP	rs1256328	CC
AQP1	rs12666466	CC
RAP1GAP	rs1256332	CC
CSTA	rs7627468	GG
DGKH	rs1170174	GG
MORC3	rs12626330	CC
HIBADH	rs7790498	GG
HIBADH	rs12539707	CC
DGKD	rs838717	AA
PKD2	rs1481012	AA
DGKD	rs13003198	CC
GCKR	rs780093	CC
WDR72	rs578595	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	Drink at Least 8 Glasses of Water a Day	2	Limit Salt Intake
3	Reduce Oxalate Intake	4	Limit Protein Intake
5	Shock Wave Therapy	6	Citrate Salts200 mg
7	Eat Fiber-Rich Foods	8	Avoid Sugary Foods & Drinks
9	Chanca Piedra500 mg	10	Dietary Pyridoxine (Vitamin B6)
11	Exercise At Least One Hour a Day1 hour	12	Omega-3 (Fish Oil)500 mg
13	Tea	14	Avoid Vitamin C Supplements
15	Avoid Secondhand Smoke	16	Hibiscus250 mg
17	Avoid Phthalate Exposure	18	Avoid Cadmium Exposure
19	Orange Juice	20	Potassium Magnesium Citrate100 mg
21	Green Tea400 mg	22	Clary Sage Aromatherapy3 drops
23	Avoid Exposure to Heavy Metals	24	Green Bean Extract800 mg
25	Black Seed (Black Cumin)1000 mg	26	Boron3 mg
27	Avoid PAHs Exposure	28	Aromatherapy30 minutes
29	Lemon Juice	30	Magnesium350 mg
31	Radishes		

EVIDENCE

5 / 5

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

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

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

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

According to experts, people who get kidney stones should drink more water. Drinking at least 85 oz. (2.5 L) of water per day may lower the risk of kidney stones [R, R, R, R, R, R, R].

People who live in hot climates or tend to sweat a lot should take special care to drink more water [\[R\]](#).

Staying hydrated may help dilute the urine and flush stone-forming compounds from the kidneys [R, R, R].

2



Limit Salt Intake

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

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

Description

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

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

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

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

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

How it helps

Eating a lot of salt may increase the risk of kidney stones by [\[R\]](#) [\[R\]](#) [\[R\]](#):

- Raising the amount of calcium in the urine
- Making the urine more acidic
- Promoting the buildup of calcium-forming stones

Experts agree that limiting sodium intake may help with kidney stones [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#).

Reducing the intake of both animal protein and salt may also help [\[R\]](#) [\[R\]](#).

3



Reduce Oxalate Intake

IMPACT

4 / 5

EVIDENCE

4 / 5

How to implement

Avoid high-oxalate foods such as spinach, beets, potatoes, and nuts. Instead, choose low-oxalate options like bananas, cabbage, and cucumbers. Aim to keep your daily oxalate intake under 100mg.

Description

Reducing oxalate intake means consuming foods and beverages with lower oxalate content, which can help prevent kidney stone formation and support kidney health. Oxalates are naturally occurring compounds found in various foods like spinach, chocolate, and nuts, and managing their intake is important for those prone to kidney stone formation.

Oxalate (*oxalic acid*) is a natural substance found in many foods, such as [R](#), [R](#), [R](#):

- **Spinach**
- Tea
- Rhubarb
- Chocolate
- Beets
- Nuts

Adults typically get 150-250 mg of oxalate every day. A high intake of oxalate may reduce calcium absorption and increase the risk of kidney stones [R](#), [R](#), [R](#).

How it helps

According to experts, people who get kidney stones should limit their intake of foods rich in oxalate. This is because high dietary oxalate may be linked to kidney stones [R](#), [R](#), [R](#), [R](#), [R](#).

People who get kidney stones tend to absorb more oxalate from food. This may lead to higher oxalate in the urine [R](#).

Adopting a diet low in oxalate may help by reducing the amount of oxalate in the urine [R](#), [R](#).

Note that people who limit oxalate should also aim to get enough calcium. Increased calcium intake may decrease oxalate absorption. It may also help prevent the buildup of oxalate in the urine [R](#), [R](#).

4



Limit Protein Intake

IMPACT4 / 5

EVIDENCE4 / 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

Eating a lot of meat is linked to a greater risk of kidney stones. The association may be stronger for men [\[R, R, R, R, R, R, R, R\]](#).

Experts agree that people who get kidney stones should limit their intake of animal proteins [\[R, R, R\]](#).

A high-protein diet may contribute to kidney stones by [\[R, R, R\]](#):

- Increasing the amount of oxalate and uric acid in the urine
- Making the urine more acidic and prone to forming stones

Reducing the intake of animal protein may help when combined with other preventive strategies such as [\[R, R, R, R, R\]](#):

- Drinking more water
- Lowering salt intake
- Eating more fruits and vegetables



PERSONALIZED TO YOUR GENES

People with your [MMP9](#) gene variant may be more prone to kidney stones. They may also have higher levels of uric acid in the urine. Reduced intake of animal protein may help by lowering uric acid [\[R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SLC12A5	rs3918242	TT	

5



Shock Wave Therapy

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

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

Description

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

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

How it helps

A [meta-analysis of 13 studies](#) found that **intermediate- and low-intensity shock wave lithotripsy are more effective than high-intensity therapy in terms of efficacy and complications**. A rate of **60 shocks/min is more effective than 120 shocks/min** according to a [meta-analysis of 4 trials and 589 patients](#) [\[R\]](#), [\[R\]](#).

[Four meta-analyses \(the largest one with 35 studies\)](#) found that percutaneous nephrolithotomy is the **most effective treatment and shock wave lithotripsy is the least effective one in terms of stone-free rates**. Similarly, a [meta-analysis of 7 studies and 936 patients](#) found **mini-percutaneous nephrolithotomy more effective than shock wave lithotripsy in terms of stone-free rates, lower auxiliary procedure, and re-treatment rate**. However, shock wave lithotripsy caused **fewer complications** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Extracorporeal shock wave lithotripsy is also **less effective than retrograde intrarenal surgery in pepole with stones of 1-2 cm** according to a [meta-analysis of 7 trials and 938 patients](#) [\[R\]](#).

A [meta-analysis of 6 studies and 669 patients](#) found that **flexible ureteroscopy as a significantly higher stone-free rate than shock wave lithotripsy** [\[R\]](#).

6



Citrate Salts

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Take citrate salts in supplement form, usually available as potassium citrate or magnesium citrate. Follow the dosage instructions on the product label, typically ranging from 200 mg to 400 mg daily, divided into two or three doses to be taken with meals or a full glass of water to aid in absorption and minimize stomach upset. Continue as per the duration suggested on the product or by a healthcare provider.

TYPICAL STARTING DOSE

200 mg

Description

Citrate salts, such as potassium citrate, are used as supplements to promote kidney stone prevention by increasing urinary citrate levels, which inhibit stone formation. They are also used as alkalizing agents to help manage certain urinary tract conditions.

Citrate salts are salts of citric acid. Citric acid is found in many citrus fruits, like lime and lemons [\[R\]](#), [\[R\]](#).

Citrate salts are often prescribed as medication to help with kidney stones [\[R\]](#).

How it helps

Citrate salts may reduce the formation of kidney stones [\[R\]](#).

Types of citrate salts that may help include:

- Potassium citrate [\[R\]](#)
- Potassium-magnesium citrate [\[R\]](#), [\[R\]](#)
- Potassium-sodium citrate [\[R\]](#)

Citrate salts may help with kidney stones by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Increasing urinary citrate, which prevents the buildup of calcium salts
- Reducing uric acid levels
- Making the urine less acidic
- Reducing oxidative stress

Please note: *High potassium intake from supplements may be harmful. Avoid taking citrate salts unless prescribed by a doctor* [\[R\]](#).

7



Eat Fiber-Rich Foods

IMPACT3 / 5

EVIDENCE3 / 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

Getting more fiber, especially from fruits and vegetables, may reduce the risk of kidney stones [\[R, R, R\]](#).

Diets high in fiber and low in protein may create less strain on the kidneys. They may help prevent kidney stones by [\[R, R, R\]](#):

- Decreasing the amount of calcium in the urine
- Increasing urinary citrate, which prevents the buildup of calcium oxalate crystals

8



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

A diet high in sugary foods and beverages may increase the odds of kidney stones [R](#), [R](#), [R](#), [R](#), [R](#), [R](#).

Sugary foods and drinks may lead to kidney stones by increasing calcium, oxalate, and uric acid in the urine [R](#), [R](#).

9



Chanca Piedra

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Take 500 mg of Chanca Piedra supplement orally with water, once daily for a period of 1-3 months. Always check the product label for specific instructions regarding dosage and duration, as formulations may vary.

TYPICAL STARTING DOSE
500 mg

Description

Chanca piedra is a plant used in traditional herbal medicine and dietary supplements for its potential to support kidney and liver health. Some studies suggest it may have properties that can promote urinary tract health and help prevent kidney stones.

[Chanca piedra](#) (*Phyllanthus niruri*) is an herb that grows in tropical areas. The plant is used to make teas, liquid extracts, capsules, or tablets. It has a history of traditional use in China and Malaysia [\[R\]](#).

Some people take chanca piedra to help support the digestive system, liver, and kidneys [\[R\]](#).

How it helps

Chanca piedra supplements (2-9 g for 12 weeks) may help reduce the number and size of kidney stones. They may also help when combined with medical treatment for kidney stones [\[R, R, R, R\]](#).

Chanca piedra may help make stones less likely to form by [\[R, R, R, R, R\]](#):

- Maintaining healthy mineral levels in the urine
- Decreasing oxalate and uric acid, potentially through more frequent urination

 PERSONALIZED TO YOUR GENES

People with your [MMP9](#) gene variant may be more prone to kidney stones. They may also have higher levels of uric acid in the urine. Chanca piedra may help by lowering uric acid [\[R, R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
SLC12A5	rs3918242	TT	

10



Dietary Pyridoxine (Vitamin B6)

IMPACT

3 / 5

EVIDENCE

2 / 5

How to implement

Increase your intake of vitamin B6 by eating more foods rich in this nutrient, such as bananas, chickpeas, tuna, salmon, chicken breast, and spinach. Aim for a balanced diet that includes these foods regularly, about 2-3 servings of B6-rich foods per day, to help meet the general daily requirement of 1.3mg for adults.

Description

Vitamin B6 is involved in over 100 enzyme reactions in the body and plays a role in brain development, immune function, and hormone regulation. It is found in foods like poultry, fish, potatoes, and bananas.

[Vitamin B6](#) (*pyridoxine*) is important for nervous and immune system health [\[R\]](#).

Good sources of vitamin B6 include [\[R\]](#):

- Poultry
- Fish
- Potatoes
- Chickpeas
- Bananas
- Fortified cereals

How it helps

A high intake of **vitamin B6 (at least 40 mg/day)** is linked to a lower risk of kidney stones in women. However, it may not help reduce the risk in men [\[R\]](#), [\[R\]](#).

Vitamin B6 may help by reducing oxalate in the urine [\[R\]](#), [\[R\]](#).

Please note: *High doses of vitamin B6 may cause nerve damage in the long term. Be sure not to get more than 100 mg of vitamin B6 per day. Vitamin B6 may also interact with some medications* [\[R\]](#).

11



Exercise At Least One Hour a Day

IMPACT

2 / 5

EVIDENCE

3 / 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 may be linked to a lower risk of kidney stones. However, the evidence is mixed [\[R, R, R, R\]](#).

Note that it's important to drink water when you exercise. Doing so helps make up for the water lost through sweat. Exercising without drinking enough water may lead to a buildup of calcium oxalate. This may increase the risk of kidney stones [\[R, R\]](#).

12



Omega-3 (Fish Oil)

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

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

- Salmon
- Tuna
- Herring
- Sardines

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

How it helps

Fish oil (omega-3s) may help with kidney stones by reducing [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Oxidative stress
- Calcium oxalate buildup

However, some studies didn't find a benefit [\[R\]](#), [\[R\]](#).

Please note: *One serving of salmon can contain high levels of phosphorus. If you have kidney problems, check the phosphorus content of salmon before eating it. Fish oil can interact with blood thinners (like aspirin, Plavix, and Coumadin). Consult your doctor before taking fish oil* [\[R\]](#), [\[R\]](#).

13



Tea

IMPACT

2 / 5

EVIDENCE

3 / 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 [\[R, R, R, R, R, R\]](#):

- Heart health
- Cognition
- Immunity
- Relaxation

How it helps

Green and black tea are high in oxalate. Despite this, drinking tea is linked to lower odds of kidney stones [\[R, R, R, R, R\]](#).

Scientists think that other compounds found in tea may counteract the effect of oxalates. This may prevent calcium oxalate from building up [\[R, R, R, R\]](#).

14



Avoid Vitamin C Supplements

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Stop taking all forms of vitamin C supplements, including pills, chewables, powders, and liquids. If vitamin C is part of a multivitamin or other combined supplement you are taking, look for alternatives that do not contain vitamin C. This exclusion should be maintained permanently or until your healthcare provider advises otherwise.

Description

Limiting excessive vitamin C supplementation is advisable, as high doses may lead to potential side effects such as kidney stones and interactions with medications.

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

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

However, **excessive supplementation with vitamin C may have adverse effects** [\[R, R\]](#).

How it helps

Experts advise people who form stones to avoid excessive vitamin C intake. This advice may be particularly applicable to men [\[R, R, R\]](#).

Vitamin C can form oxalate during digestion. This may increase the amount of oxalate in the urine [\[R, R\]](#).

The effect of different doses of vitamin C on kidney health isn’t completely clear. However, **it may be best to get 1,000 mg/day at most** [\[R, R, R, R\]](#).

15



Avoid Secondhand Smoke

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

How it helps

Both smoking and exposure to secondhand smoke may increase the risk of kidney stones [\[R, R\]](#).

Smoking increases oxidative damage, making kidney stones more likely to form [\[R, R\]](#).

16



Hibiscus

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Take 250 mg of hibiscus supplement daily, either in the form of a capsule or powder. It can be taken at any time of day, with or without food.

TYPICAL STARTING DOSE
250 mg

Description

Hibiscus is a flower known for its potential to lower blood pressure, boost antioxidant levels, and support heart health. Consuming hibiscus tea or incorporating hibiscus into your diet may provide these health benefits.

[Hibiscus](#) (*Hibiscus sabdariffa*), also known as roselle or sorrel, is a flowering plant. It is traditionally brewed as a tea of a distinctive, bright pink color [\[R\]](#), [\[R\]](#).

For hundreds of years, people from all over the world have taken hibiscus for its potential health benefits [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Hibiscus can interact with "water pills" (diuretics) like hydrochlorothiazide. If you are using "water pills", consult your doctor before taking hibiscus.*

How it helps

Drinking **hibiscus juice (16 g/day)** or **tea (3 g dried flowers/day)** may help balance minerals, salts, and uric acid in the urine. This may prevent the buildup of crystals in the kidneys [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Please note: *Hibiscus can interact with "water pills" (diuretics). If you are using "water pills," consult your doctor before taking hibiscus.*

How to implement

Description

How it helps

TABLE OF CONTENTS

18



Avoid Cadmium Exposure

IMPACT1 / 5

EVIDENCE2 / 5

How to implement

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

Description

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

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

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

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

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A meta-analysis of 6 studies and 88,045 participants found that higher cadmium exposure significantly increased the risk of urolithiasis, especially in occupational settings [\[R\]](#).

A study of 7809 adults found a positive link between urinary cadmium and cobalt levels and kidney stone risk. Mixed heavy metal exposure, primarily cadmium, cobalt, and barium, was associated with higher kidney stone risk, particularly among the elderly. The study also revealed a significant synergistic effect between urinary cobalt and urinary uranium in increasing kidney stone risk [\[R\]](#).

Another study found that kidney stone risk increased with higher blood and urinary cadmium levels, particularly among women and non-Hispanic white individuals [\[R\]](#).

Cadmium can damage kidneys and increase urinary calcium levels, which contribute to stone formation.

How to implement

Description

How it helps

In a study involving 11 men, orange juice and potassium citrate both increased urinary pH and citrate similarly. However, orange juice raised urinary oxalate levels, while potassium citrate reduced urinary calcium levels [R].

20



Potassium Magnesium Citrate

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a potassium magnesium citrate supplement daily with a full glass of water, preferably with a meal to minimize stomach upset. The typical dose is between 100-400 mg for magnesium, and 99-100 mg for potassium, but follow the specific dosage recommended on the product label or by a healthcare provider. Continue as long as recommended by your healthcare provider, usually for several months to support electrolyte balance.

TYPICAL STARTING DOSE

100 mg

Description

Potassium magnesium citrate is a dietary supplement that combines potassium and magnesium in citrate form. It is often used to support cardiovascular health, muscle function, and overall electrolyte balance in the body.

How it helps

- In a placebo-controlled trial of 64 patients with recurrent calcium oxalate kidney calculi, taking potassium-magnesium citrate (42 mEq. potassium, 21 mEq. magnesium, and 63 mEq. citrate) daily for up to 3 years reduced calculi formation (present in 63.6% of subjects receiving placebo vs 12.9% of those receiving potassium-magnesium citrate) and the risk of recurrence by 85% [\[R\]](#).
- In a trial with 20 subjects on bed rest, potassium-magnesium citrate reduced the risk of renal stone disease. It decreased calcium oxalate saturation and uric acid concentration, despite increased urine calcium and higher pH due to citrate chelation [\[R\]](#).
- Potassium magnesium citrate increases urinary citrate levels. Citrate binds to calcium and inhibits the growth of stone-causing calcium crystals.

21



Green Tea

IMPACT

1 / 5

EVIDENCE

1 / 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 and black tea are high in oxalate. Despite this, drinking tea is linked to lower odds of kidney stones [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#).

A study of over 120,000 people associated green tea consumption with a 28% lower risk of kidney stones [\[R\]](#).

Active substances in green tea may prevent calcium oxalate from building up [\[R\]](#) [\[R\]](#) [\[R\]](#) [\[R\]](#).

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

22



Clary Sage Aromatherapy

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Add 3-5 drops of clary sage essential oil to a diffuser filled with water. Use the aromatherapy diffuser in your room for 30-60 minutes. This can be done daily for stress reduction and mood enhancement.

TYPICAL STARTING DOSE

3 drops

Description

Clary sage essential oil is used in aromatherapy for its potential to promote relaxation and relieve stress. Inhaling its soothing aroma may help reduce anxiety and improve mood.

How it helps

In a non-placebo-controlled trial of 79 patients undergoing percutaneous nephrolithotomy, inhaling clary sage oil immediately and 3 and 6 hours after the operation reduced pain and nausea [R].

23



Avoid Exposure to Heavy Metals

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To avoid exposure to heavy metals, ensure you're not using cosmetic products with heavy metals, opt for organic foods to minimize pesticide exposure, and use filters for drinking water to remove possible contaminants. Check for lead-based paints in older homes and avoid cooking or storing food in uncoated metal containers. When possible, choose glass or BPA-free plastics instead.

Description

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

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

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

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A study of 7,809 participants associated urinary cadmium and cobalt with an increased risk of kidney stones. Mixed exposure to heavy metals also increased the risk, especially to cadmium, cobalt, and barium. Moreover, urinary cobalt and uranium showed a synergistic effect [\[R\]](#).

24



Green Bean Extract

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a green bean extract supplement, usually available in capsule form, with a full glass of water. Dosage typically ranges from 400 to 800 mg, taken twice daily, 30 minutes before meals. Continue this regimen daily for at least 12 weeks to potentially see benefits.

TYPICAL STARTING DOSE

800 mg

Description

Green bean extract contains chlorogenic acids, which are believed to have antioxidant properties that can support weight management and metabolic health. Some studies suggest that it may help regulate blood sugar levels and promote fat loss.

How it helps

In a study of 60 people with kidney stones, supplementation with green bean extract (250 g, 3x/week for 6 weeks) increased urine amount and urine potassium. It also lowered urine oxalate, calcium, and uric acid levels, which may indicate the elimination of small kidney stones [\[R\]](#).

Green bean extract may help increase urine production in the kidneys [\[R\]](#).

25



Black Seed (Black Cumin)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

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

TYPICAL STARTING DOSE

1000 mg

Description

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

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

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

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

How it helps

In a placebo-controlled trial of 60 people with kidney stones, supplementation with black seed capsules (500 mg, 2x/day) for 10 weeks caused stone excretion in 44.4% of patients, while the size of the stones decreased in 51.8% [\[R\]](#).

Black seed’s active component thymoquinone may help with kidney stones by preventing the buildup of calcium oxalate, reducing oxidative damage to the kidneys, and promoting urination [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

26



Boron

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a boron supplement of 3 to 6 mg daily, with food to enhance absorption. This dosage range is commonly recommended for general health benefits, based on nutritional studies. It's advisable to continue this regimen daily for an extended period, as long-term benefits depend on consistent supplementation.

TYPICAL STARTING DOSE

3 mg

Description

Boron is a trace mineral that plays a role in bone health, cognitive function, and hormone regulation.

Boron is a mineral in many foods, including:

- Fruits and fruit juices
- Avocados
- Potatoes
- Legumes
- Drinks (coffee, milk, cider, wine, and beer)

Scientists aren’t sure if boron has any roles in the body, so they don’t consider it an essential nutrient.

Some people take boron supplements to balance hormone levels, increase athletic performance, and more. However, the evidence to support these uses is weak.

How it helps

In a [placebo-controlled trial of 11 postmenopausal women](#), supplementing the diet with boron (3 mg/day) **decreased the percentage of dietary calcium lost in the urine**. Because it also decreased **urinary oxalate**, it was suggested to **prevent kidney stones** [\[R\]](#).

27



Avoid PAHs Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

How it helps

A study of 4385 participants associated high exposure to total PAHs, 2-hydroxynaphthalene, 1-hydroxyphenanthrene, 2-hydroxyphenanthrene, 9-hydroxyfluorene with respectively 32%, 37%, 24%, and 36% higher risk of kidney **stones** [\[R\]](#).

Another study (8975 participants) associated high levels of 2-hydroxynaphthalene and 9-hydroxyfluorene with respectively 38% and 39% higher risk of kidney stones. In women, 2-hydroxynaphthalene, 1-hydroxyphenanthrene, and 2-hydroxyphenanthrene were respectively associated with 94%, 57%, and 85% higher risk [\[R\]](#).

28



Aromatherapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

30 minutes

Description

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

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

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

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

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

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

How it helps

In a placebo-controlled trial of 80 patients with renal colics, receiving aromatherapy with rose essential oil as an add-on to conventional therapy reduced pain [\[R\]](#).

29



Lemon Juice

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Incorporate freshly squeezed lemon juice into your daily diet by adding about two tablespoons to a glass of water. Drink this once or twice a day, preferably in the morning on an empty stomach, and again in the afternoon before meals.

Description

Lemon juice is rich in vitamin C and antioxidants, which can boost the immune system, aid digestion, and contribute to skin health.

How it helps

Lemon juice increases the amount of citrate in the urine which helps in the prevention of kidney stones by reducing the ability of kidney stones to form. Its acidic property also helps dissolve the stones.

In a study, patients were divided into three groups. The first group received 60 mEq/day of fresh lemon juice, the second group got potassium citrate, and the third group received dietary recommendations. Lemon juice may be an alternative treatment for urinary calcium stones, especially in those with hypocitraturia, while dietary changes can enhance the treatment's effectiveness. Urinary calcium and uric acid was reduced, while urinary citrate increased [\[R\]](#).

30



Magnesium

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

TYPICAL STARTING DOSE

350 mg

Description

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

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

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

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

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

How it helps

People with low levels of blood magnesium, even within the normal range, may have a higher risk of kidney stones [\[R\]](#).

In line with this, a small study found that drinking mineral water, containing calcium (202 ppm) and magnesium (36 ppm) reduced the risk of kidney stones in 20 kidney stone formers [\[R\]](#).

31



Radishes

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate 1-2 servings of radishes into your diet each day. This can be done by adding sliced radishes to salads, eating them as a crunchy snack, or including them in cooked dishes like stir-fries. Each serving should consist of about a half-cup of sliced radishes.

Description

Radishes are crisp, peppery root vegetables known for their low-calorie content and rich vitamin C and fiber content. They support digestive health, and provide immune-boosting antioxidants.

How it helps

A study with 21 renal stone cases and 15 normal subjects found that consuming a radish-containing diet for a week increased calcium oxalate excretion compared to a self-selected diet, resulting in higher urine crystal counts in both genders [\[R\]](#).

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.

	Occult Blood, Urine		Optimal High	9 Nov 2025
	Specific Gravity, Urine	1.015 x100%	1 1.04	9 Nov 2025
	Zinc	17.12 umol/L	7.65 9.18 12.24 19.89	9 Nov 2025
	Uric Acid	4.4 mg/dL	2 3.7 4 6 9	9 Nov 2025
	Magnesium	2.17 mg/dL	1.2 1.5 2 2.6 4.9	9 Nov 2025
	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL	10 20 30 75 150	9 Nov 2025
	Insulin, Fasting	9.08 uU/mL	1 6 19.6 25	9 Nov 2025
	Potassium, Serum	5.2 mmol/L	2.5 3.5 4 4.75 5.3 5.5	9 Nov 2025
	Calcium	9.2 mg/dL	6.5 8.5 8.8 9.8 10.5 13	9 Nov 2025

 pH, Urine

6.5 :1



9 Nov 2025