SelfDecode™

Contrast-Induced Nephropathy

Disease Report

REPORT CATEGORY —

KIDNEY HEALTH

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

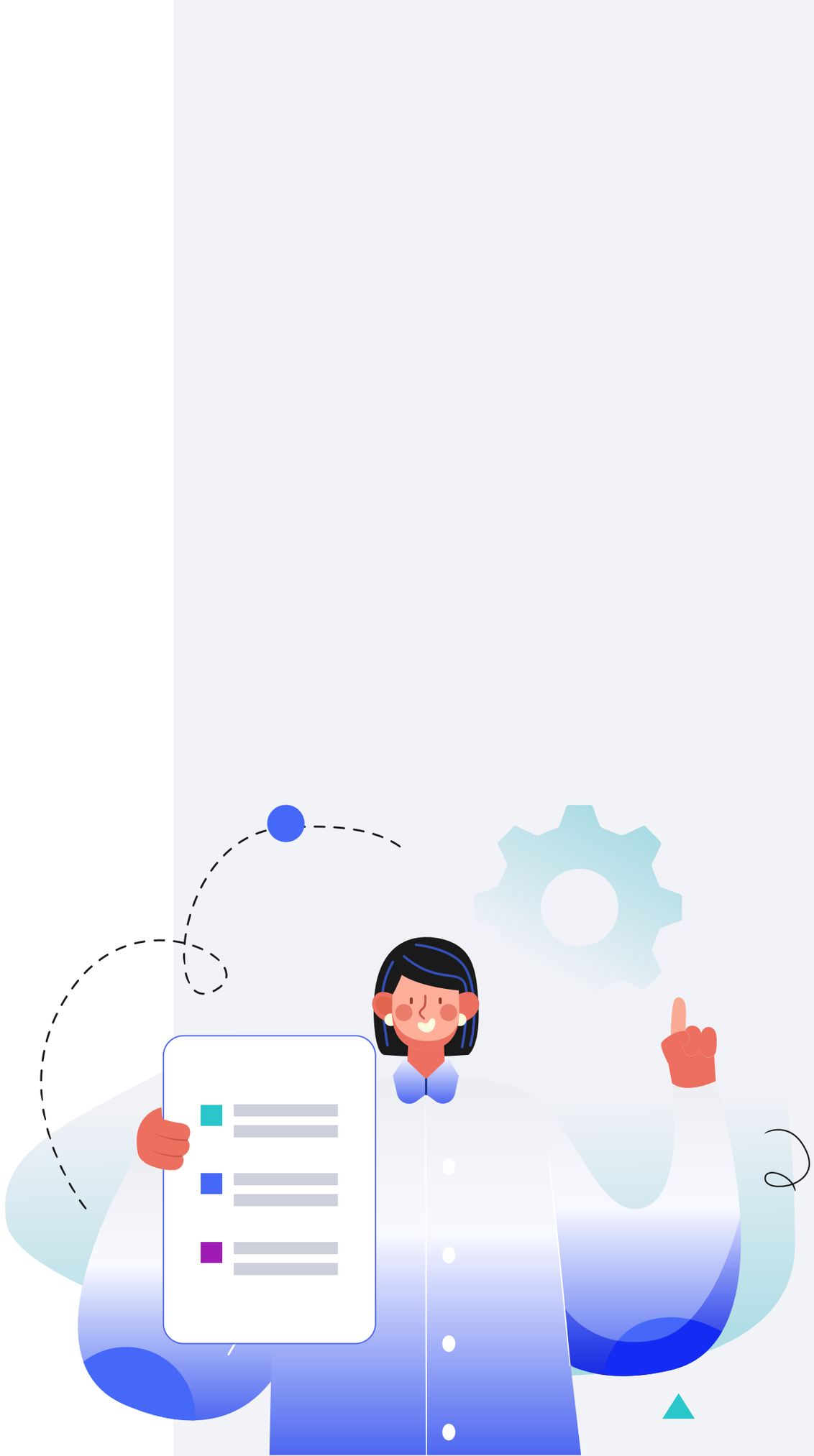
Male

HEIGHT

5ft 5" 165cm

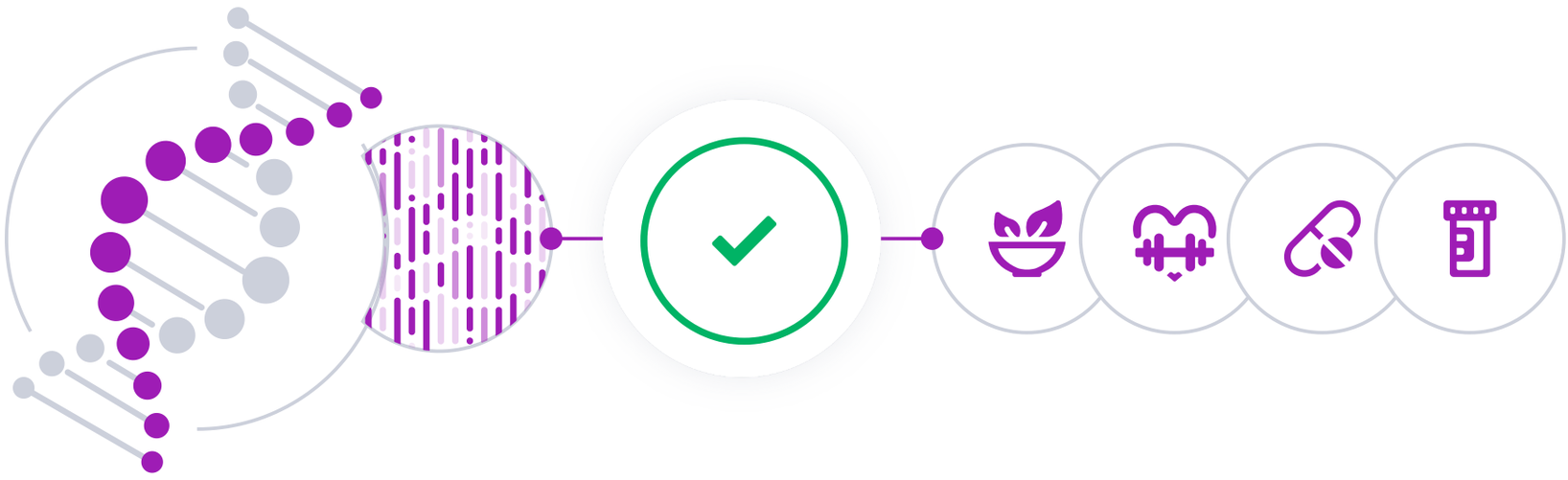
WEIGHT

137lb 62kg



How this works

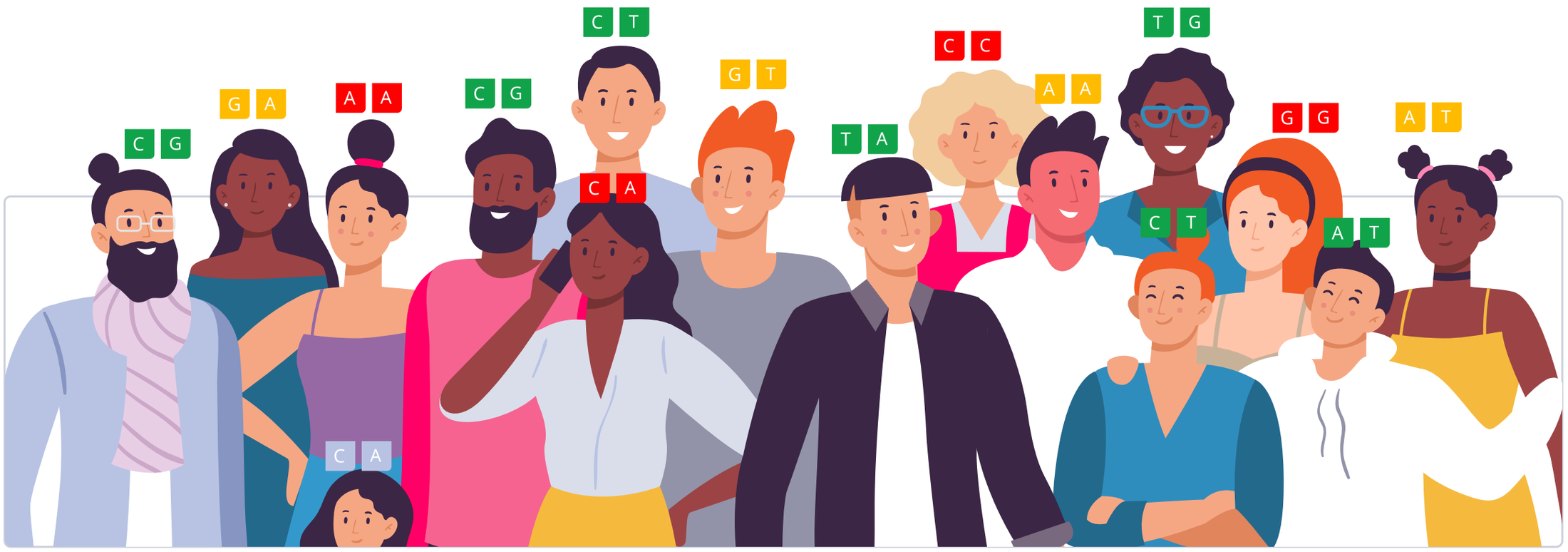
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

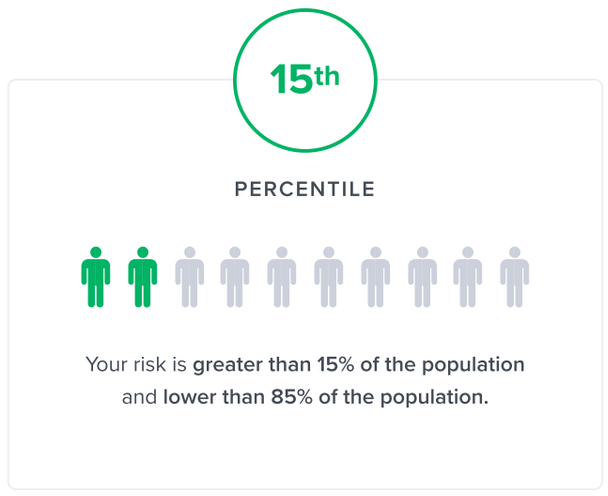
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

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

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



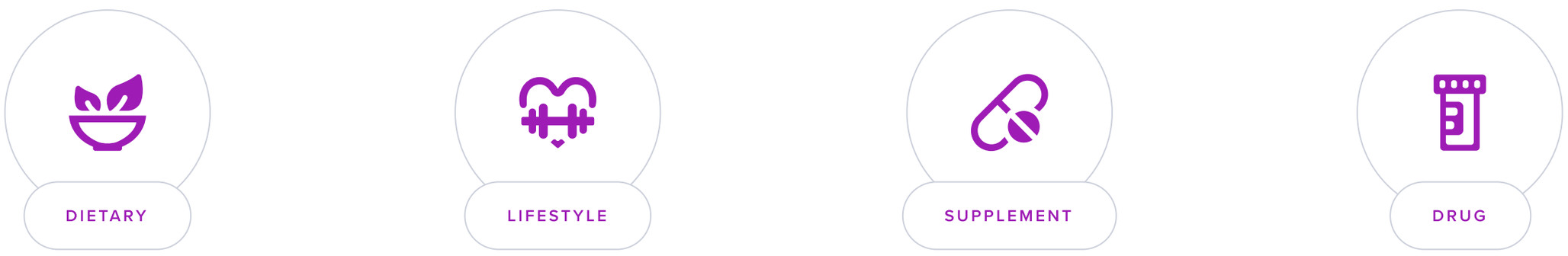
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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, afew 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

Contrast-induced nephropathy (CIN), also known as contrast-induced acute kidney injury, is a form of kidney damage that can occur after the administration of contrast material during diagnostic imaging procedures, such as angiograms, computed tomography (CT) scans, and other radiographic procedures.

This condition arises because the contrast dye used in these procedures can be toxic to the kidneys, particularly in individuals who already have existing kidney impairment or other risk factors.

Risk Factors and Treatment

Risk factors for contrast-induced nephropathy include:

- Pre-existing kidney disease: Individuals with reduced kidney function are at higher risk.
- Diabetes: Diabetics, especially those with existing kidney issues, are more susceptible.
- Dehydration: Inadequate hydration can increase the risk, as it reduces the ability to dilute and excrete the contrast agent.
- Heart disease: Patients with cardiovascular diseases often have compromised kidney function.
- Repeated exposure: Frequent administration of contrast media within a short period can greatly increase the risk.
- Age: Older adults are generally at higher risk due to a natural decline in kidney function with age.

Symptoms of contrast-induced nephropathy typically include a decrease in urine output and an increase in serum creatinine levels 24-48 hours after the administration of contrast dye.

There is no specific treatment for contrast-induced nephropathy once it occurs, other than supportive care. This care primarily involves managing symptoms and supporting kidney function until recovery. In severe cases, dialysis might be necessary. The severity of contrast-induced nephropathy can vary. While many patients recover normal kidney function within a few days, in some cases, particularly among those with pre-existing kidney issues, the damage may lead to long-term kidney problems.

TYPICAL LIKELIHOOD

Typical likelihood of contrast-induced nephropathy based on 6 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IL19	rs1554286	GG
IL19	rs1800896	CT
NOS3	rs2070744	TC
KIF6	rs20455	GA
TNF	rs1800629	GG
NOS3	rs1799983	TT

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
1	Drink at Least 8 Glasses of Water a Day	
2	N-acetylcysteine (NAC)	1200 mg
3	Vitamin C	2000 mg
4	Cordyceps	500 mg
5	Magnesium Sulfate	200 mg
6	Magnesium	350 mg
7	Coenzyme Q10 (CoQ10)	100 mg
8	Alpha-Lipoic Acid	600 mg
9	Dietary Antioxidants	
10	Dietary Omega-3 Fatty Acids	
11	Avoid Processed High Phosphate Foods	
12	Acetyl-L-Carnitine	500 mg
13	Taurine	500 mg

1

Drink at Least 8 Glasses of Water a Day

IMPACT 3 / 5

EVIDENCE 4 / 5

How to implement

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.

Description

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

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

Water helps maintain [R]:

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

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].

How it helps

Prophylactic hydration may reduce the risk of contrast-induced kidney injury and death after percutaneous coronary intervention or transcatheter aortic valve replacement. Oral hydration may be as effective as intravenous hydration [R, R, R, R, R, R, R, R, R, R].

2

N-acetylcysteine (NAC)

IMPACT 2 / 5

EVIDENCE 3 / 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

CIN is a type of kidney damage that can occur after the use of certain contrast dyes during imaging procedures. NAC has been investigated for its antioxidant properties, which may protect the kidneys from the harmful effects of these dyes.

Studies have shown mixed results, with some indicating a beneficial effect of NAC in preventing CIN, especially in patients with pre-existing kidney impairment, while others have found no significant benefit.

The typical dosage of NAC varies based on the clinical scenario. For preventing CIN, oral NAC is often used, with common regimens including 600 mg to 1200 mg twice daily, starting a day before and continuing for a day or two after the contrast exposure.

While NAC is generally well-tolerated, it's important to consider potential side effects like nausea, vomiting, and rare allergic reactions. Additionally, its effectiveness in kidney protection is not definitively established, and it should not replace other preventive measures like adequate hydration and the use of safer contrast agents.

References: R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R, R.

3

Vitamin C

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

2000 mg

Description

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

Foods rich in Vitamin C include: [R]

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

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

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

How it helps

A literature search retrieved 2350 studies, with 49 trials reporting outcomes. Antioxidants like NAC, vitamin C, and vitamin E reduced CIN incidence. Only NAC significantly lowered serum creatinine levels. AO did not reduce mortality [R].

A network of 150 trials found that high-dose statin plus NAC and high-dose statin alone were effective in preventing contrast-induced AKI compared to hydration [R].

In 19 studies, vitamin C plus saline and vitamin E plus saline significantly reduced CI-AKI incidence compared to saline alone. Vitamin C plus saline was confirmed effective. No significant difference was found between vitamin C, NAC, or their combinations [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].

4

Cordyceps

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 500-1000 mg of Cordyceps extract in supplement form once daily, preferably with a meal to enhance absorption. This dosage is commonly recommended for general wellness and should be continued on a long-term basis, as effects accumulate over time.

TYPICAL STARTING DOSE

500 mg

Description

Cordyceps is a type of medicinal mushroom known for its potential to boost endurance and enhance respiratory function. It's used in traditional medicine and dietary supplements to support physical performance and overall vitality.

Cordyceps are a group of fungi (mushrooms) that grow on insects. Some species, like *O. sinensis* and *C. militaris*, are used in supplements [R].

O. sinensis grows on a moth caterpillar. Extracts and teas made from the fungus-caterpillar combination are often used in traditional Chinese medicine. They are thought to boost sex drive, reduce fatigue, and support kidney health [R, R, R].

How it helps

In a non-placebo-controlled trial of 103 patients with stable angina pectoris, supplementation with cordyceps (3 g, 3x/day) 3 days before angioplasty and 3 days after angioplasty **non-significantly reduced the prevalence of contrast-induced nephropathy (5.77% vs 11.76%)** and **significantly reduced baseline SCr, and urine levels of KIM-1, NGAL and IL18 after the procedure** [R].

In a non-placebo-controlled trial of 120 patients with type 2 diabetes and renal insufficiency, supplementation with cordyceps (6-9 g/day 3 times/d, 3 days before and after angiography) **lowered the prevalence of contrast-induced nephropathy, the prevalence of eGFR decrease below 25%, and the levels of KIM-1, NGAL, and IL-18** [R].

5

Magnesium Sulfate

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 200-400 mg of magnesium sulfate orally with water once daily, ideally in the evening or as directed by your healthcare provider. Continue this supplementation as recommended by your healthcare provider, often for several weeks to months for optimal benefits.

TYPICAL STARTING DOSE

200 mg

Description

Magnesium sulfate, also known as Epsom salt, is used in baths and topical applications to soothe sore muscles, alleviate stress, and promote relaxation. It is believed to be absorbed through the skin, providing a calming effect on muscles and the nervous system.

How it helps

In a prospective, randomized clinical trial, 122 patients were divided into two groups: a control group receiving routine treatment (n = 64) and a study group receiving routine treatment plus IV magnesium sulfate 1g before the procedure (n = 62). The primary outcome was the occurrence of contrast-induced acute kidney injury (CI-AKI) within 48 hours, defined as a 0.5 mg/dl or 25% increase in serum creatinine. CI-AKI was significantly reduced in the study group (14.5%) compared to the control group (26.6%) after angioplasty [R].

6

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

In a prospective, randomized clinical trial, 122 patients were divided into two groups: a control group receiving routine treatment (n = 64) and a study group receiving routine treatment plus IV magnesium sulfate 1g before the procedure (n = 62). The primary outcome was the occurrence of contrast-induced acute kidney injury (CI-AKI) within 48 hours, defined as a 0.5 mg/dl or 25% increase in serum creatinine. CI-AKI was significantly reduced in the study group (14.5%) compared to the control group (26.6%) after angioplasty [R].

7

Coenzyme Q10 (CoQ10)

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

100 mg

Description

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

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

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

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

- Organ meats
- Fatty fish
- Whole grains

How it helps

Coenzyme Q10 (CoQ10) is known for its antioxidant capabilities, which help protect kidney cells from oxidative stress and inflammation caused by contrast agents.

8

Alpha-Lipoic Acid

IMPACT 0 / 5

EVIDENCE 0 / 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

Alpha-Lipoic Acid is an antioxidant that can help protect kidney cells from damage caused by contrast agents, potentially reducing the risk of nephropathy.

9

Dietary Antioxidants

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

Description

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

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

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

- High blood sugar
- Type 2 diabetes
- Heart disease

Antioxidants are substances that help combat ROS [R].

Antioxidants are found in many plants. Good sources include [R, R, R]:

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

How it helps

Antioxidants can help neutralize free radicals and reduce oxidative stress, which is beneficial for protecting the kidneys from contrast media-related damage.

10

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 have anti-inflammatory properties that can protect the kidneys from damage associated with contrast agents.

11

Avoid Processed High Phosphate Foods

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

To follow this recommendation, remove or significantly reduce processed foods such as sodas, packaged snacks, processed meats, and canned foods from your daily diet. Instead, opt for fresh fruits, vegetables, whole grains, and lean proteins. It's helpful to read nutrition labels, aiming to keep your daily phosphate intake below 700 mg if possible.

Description

Processed foods often have high levels of phosphate. These include fast foods and soda. Extra phosphate can make bones brittle and damage your blood vessels over time. So, it's healthier to choose fresh foods over processed ones.

How it helps

Processed foods high in phosphate can worsen kidney function, making it harder for kidneys already at risk of contrast-induced nephropathy to work efficiently. Reducing phosphate intake can help protect kidney function.

12

Acetyl-L-Carnitine

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Take 500-1,000 mg of Acetyl-L-Carnitine per day, split into 2 or 3 doses, with or without food. Joe prefers taking 500 mg in the morning. It can be taken indefinitely for chronic conditions or for a period of several months for acute concerns.

TYPICAL STARTING DOSE

500 mg

Description

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine. Acetyl-L-carnitine may help with nerve damage and mood problems.

Carnitine is a protein building block (amino acid). It comes in many forms, such as acetyl-L-carnitine [R, R, R].

Acetyl-L-carnitine may help with [R, R, R]:

- Nerve damage
- Mood problems
- Cognitive decline

Doctors are also studying its potential effect on drug addiction [R].

How it helps

Acetyl-L-Carnitine may help reduce the risk of contrast-induced nephropathy by improving kidney function. It supports energy production in kidney cells, possibly protecting them from damage caused by contrast agents.

13

Taurine

IMPACT 0 / 5

EVIDENCE 0 / 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

Taurine is an amino acid that has antioxidant properties and can help protect the kidneys from the oxidative stress caused by contrast agents. This can help reduce the risk of nephropathy.

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.

Protein, Urine		Negative — Positive	9 Nov 2025
eGFR	71 mL/min/1.73 m2	30 · 60 · 90 · 120	29 Aug 2025
Uric Acid	4.4 mg/dL	2 · 3.7 · 4 · 6 · 9	9 Nov 2025
BUN/Creatinine Ratio	13 x100%	10 · 15 · 20	9 Nov 2025
Creatinine	1.08 mg/dL	0.6 · 0.7 · 1.1 · 1.2	9 Nov 2025
BUN	14 mg/dL	7 · 13 · 22 · 25	9 Nov 2025