

Preeclampsia

Disease Report

REPORT CATEGORIES —



HEART & BLOOD
VESSELS



REPRODUCTIVE
HEALTH

Sample Client

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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

30 Next Steps

- 30 Your Lab Results

Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

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.



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.



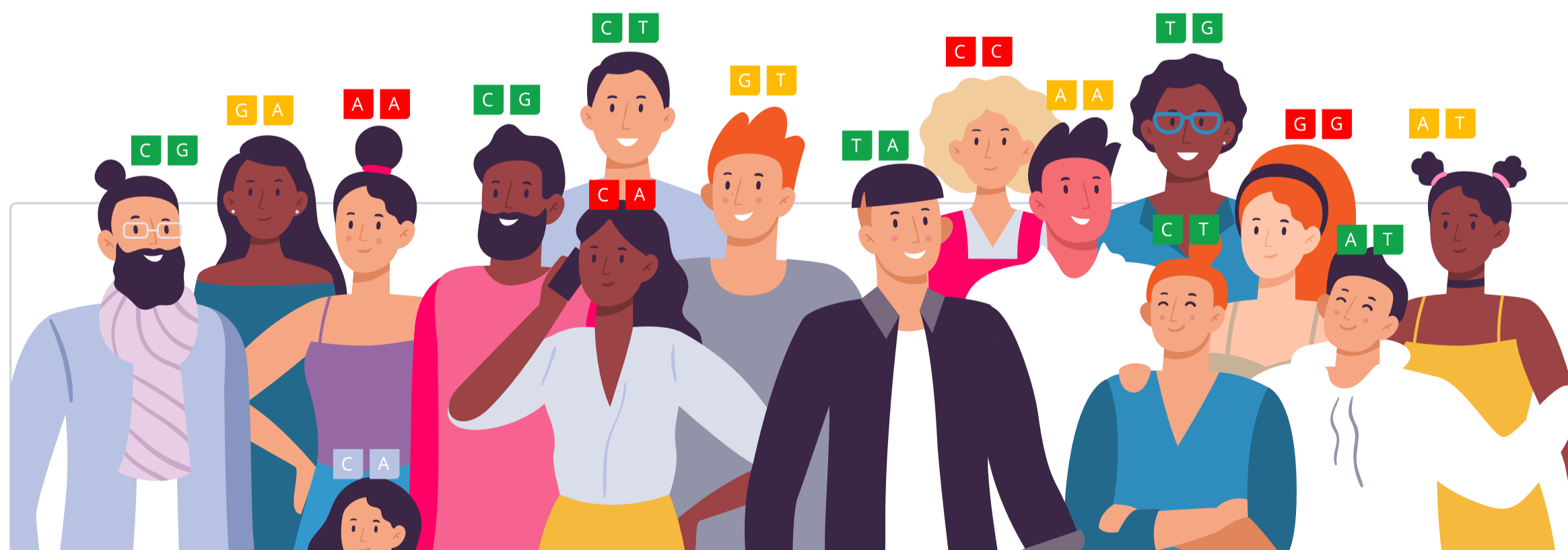
Similarly, our Trait Reports look at how your DNA influences your traits.



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

Preeclampsia is a pregnancy complication characterized by high blood pressure and signs of organ damage, often involving the liver or kidneys. It usually occurs after 20 weeks of pregnancy but can develop earlier or postpartum in rare cases [\[R, R\]](#).

Symptoms of preeclampsia include [\[R, R\]](#):

- Elevated blood pressure (140/90 mm Hg or higher).
- Severe headaches that do not go away with medication.
- Swelling in the face, hands, or feet (edema).
- Sudden weight gain unrelated to diet.
- Blurred vision or light sensitivity.
- Upper abdominal pain, particularly under the ribs on the right side.
- Shortness of breath or difficulty breathing.
- Decreased urine output.

Early recognition of these symptoms is crucial to managing the condition and preventing complications for both the mother and baby.

Complications and Treatment

Preeclampsia can affect any pregnant woman, but certain factors may increase the risk [\[R\]](#), [\[R\]](#), [\[R\]](#):

- First pregnancy.
- A history of preeclampsia in previous pregnancies.
- Chronic hypertension, kidney disease, or diabetes.
- Obesity or being overweight.
- Maternal age over 35 or under 20.
- Carrying twins or multiples.
- Family history of preeclampsia (e.g., mother or sister).
- Autoimmune disorders, such as lupus.
- Genetic predisposition.

Genetics accounts for about **50%** of the differences in blood pressure and preeclampsia rates [\[R\]](#), [\[R\]](#).

Management of preeclampsia depends on the severity and stage of pregnancy [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Mild cases may require blood pressure monitoring, medication, and bed rest.
- Severe cases may necessitate hospitalization, early delivery, or emergency cesarean section.

Early diagnosis and intervention are critical to improving outcomes for both mother and baby.

Consumer Summary

- Preeclampsia is a pregnancy complication marked by high blood pressure and organ problems, often involving the liver or kidneys. It typically happens after 20 weeks of pregnancy but can occur earlier or even after delivery.
- Symptoms include very high blood pressure, severe headaches, swelling in the face or hands, sudden weight gain, blurry vision, pain under the ribs, shortness of breath, and low urine output. Recognizing these signs early can prevent serious complications.
- Risk factors include being pregnant for the first time, having a history of preeclampsia or other chronic conditions, being over 35 or under 20, being overweight, carrying twins, and genetics.
- Mild cases may need close monitoring, medications, and rest, while severe cases might require



TYPICAL LIKELIHOOD

Typical likelihood of preeclampsia based on 7,287,096 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ANKRD13C	rs482843	GG
AUH	rs5899121	INS(G)INS(G)
FLT1	rs7318880	TT
FGF5	rs16998073	TA
SH2B3	rs10774624	GA
WNT3A	rs708119	GC
MECOM	rs9855086	AT
MICB	rs2442752	CT
UPB1	rs17572606	CC
FGL1	rs2653414	CC
NELFCD	rs259983	AA
PGR	rs2508372	GG
RGL3	rs167479	TT
FTO	rs1421085	TT

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

hospitalization or early delivery to ensure the safety of both the mother and baby. Early diagnosis and treatment are essential for better outcomes.

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	Aerobic Exercise (Cardio)	1 hour	2	Methylfolate	400 mcg
3	Magnesium Sulfate	200 mg	4	Avoid PFAS Exposure	
5	Selenium Supplements	50 mcg	6	Avoid Lead Exposure	
7	Avoid Air Pollution		8	Avoid Mycotoxin	
9	Avoid Noise Pollution		10	Yoga	30 minutes
11	Coenzyme Q10 (CoQ10)	100 mg	12	Vitamin B12	100 mcg
13	Maintain Optimal Vitamin D Levels	1000 iu	14	Melatonin	500 mcg
15	Omega-3 (Fish Oil)	2000 mg	16	Calcium Supplements	1000 mg
17	Vitamin D and Calcium		18	Topical L-Arginine	
19	Dietary Calcium		20	Vitamin C	2000 mg
21	Exercise At Least One Hour a Day	1 hour			

1



Aerobic Exercise (Cardio)

IMPACT

 4 / 5

EVIDENCE

 3 / 5

How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.


Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.


Interval training is a type of cardio that combines periods of high-intensity training with brief rest periods.

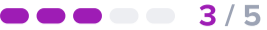
How it helps

Physical activity before or during pregnancy may reduce the risk of preeclampsia. In the case of aerobic exercise, sessions of 30-60 minutes practiced at least twice a week may help. Potentially useful exercise types include [\[R, R, R, R, R, R\]](#):

- Brisk walking
- Water aerobics
- Stationary cycling
- Mind-body exercises

2  **Methylfolate**

IMPACT  4 / 5

EVIDENCE  3 / 5

How to implement

Take an L-methyl folate supplement (400-800 micrograms daily), ideally with a meal, to improve absorption. This dosage is recommended for adults, including pregnant women, to support overall health, especially to reduce the risk of neural tube defects in developing fetuses. Continue daily use as part of your regular supplement routine.

TYPICAL STARTING DOSE**400 mcg**

Description

Folate, a B-vitamin, is crucial for DNA synthesis, cell growth, and the formation of red blood cells. Adequate folate intake supports overall health and reduces the risk of neural tube defects during pregnancy.

Vitamin B9 (*folate*) plays an essential role in [\[R, R, R\]](#):


- Making DNA
- Metabolism
- Energy production

SelfDecode recommends L-methylfolate as the preferred folate supplement for those who need one. It is superior to folic acid because it doesn't require activation, but the research is still ongoing [\[R, R\]](#).

How it helps


Several studies indicate that supplementation containing folic acid may lower preeclampsia risk. MTHFR C677T genotype increases risk, notably in Asians and Caucasians. Periconceptual multivitamin supplementation is recommended. The reduction in preeclampsia risk may be more beneficial with pre-conception BMI < 25 kg/m². However, one study's results were uncertain [\[R, R, R, R, R, R\]](#).


3



Magnesium Sulfate

IMPACT
EVIDENCE





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

Magnesium sulfate may reduce the odds of preeclampsia and eclampsia, but not blood loss, in pregnant women. Shortened treatment may be as effective as traditional 24-hour treatment in preventing seizures and complications but less at reducing flushing [\[R, R, R, R\]](#).

4



Avoid PFAS Exposure

IMPACT
EVIDENCE





How to implement

To avoid PFAS exposure, choose products that are labeled PFAS-free, especially when selecting cookware, cosmetics, and clothing. Reduce the consumption of packaged and fast foods since the packaging often contains PFAS. Use a water filter that is certified to remove PFAS compounds for your drinking and cooking water.

Description

Avoiding per- and polyfluoroalkyl substances (PFAS) exposure means avoiding products and environments contaminated with these chemicals, which can help prevent potential health issues like hormonal disruption and adverse effects on liver and immune function.

How it helps

Two meta-analyses (the largest one with 14 studies) associated high exposure to PFAS with an increased risk of preeclampsia. PFOA, PFOS, PFHx, and PFNA increased the risk by 20-39%, 23-51%, 39%, and 20%, respectively [\[R, R\]](#).

5



Selenium Supplements

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

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

TYPICAL STARTING DOSE

50 mcg

Description

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

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

- Reproduction
- Thyroid function
- DNA production
- Immune response

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

How it helps


A meta-analysis involving 13 observational studies with 1,515 participants showed lower blood selenium levels in preeclampsia (-6.47 µg/L). In line with this, three randomized trials with 439 participants found that selenium supplementation reduced preeclampsia risk about 3 times [\[R\]](#).

6




Avoid Lead Exposure

IMPACT

 2 / 5

EVIDENCE

 2 / 5

How to implement

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

Description

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

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

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

How it helps

A systematic review and meta-analysis found a significant link between blood lead concentrations in pregnant women and preeclampsia, with a 1µg/dL increase associated with a 1.6% higher risk [\[R\]](#).

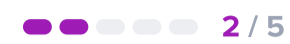
A meta-analysis of 25 studies found a significant association between maternal lead exposure and preeclampsia in pregnancy, even at low blood lead levels [\[R\]](#).

7

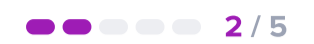


Avoid Air Pollution

IMPACT

 2 / 5

EVIDENCE

 2 / 5

How to implement

Stay indoors on days when air quality indexes (AQI) indicate high pollution levels, which are often reported by weather services or government environmental agencies. **Install air purifiers** in your home, especially in bedrooms, to reduce indoor pollutants. Limit outdoor exercise when air pollution warnings are issued, opting for indoor activities instead.

Description

Avoiding air pollution by reducing exposure to pollutants in the environment is essential for respiratory and overall health. It can help lower the risk of respiratory diseases, cardiovascular conditions, and other health issues associated with poor air quality.

While city life is convenient in a lot of ways, it comes with some health hazards. Cars, factories, and other sources increase air [pollution](#) [R].

Air pollution plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lung disease
- Heart disease
- Diabetes
- Asthma
- Skin conditions

How it helps

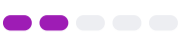
A 2013 study analyzed 17 articles on air pollution's impact on pregnancy-induced hypertensive disorders and found increased risk, particularly for preeclampsia. PM2.5 had a notable effect [\[R\]](#).

8

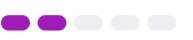


Avoid Mycotoxin

IMPACT

 2 / 5

EVIDENCE

 2 / 5

How to implement

To avoid mycotoxins, store grains and nuts in a dry, cool place, check for mold on foods before eating, and avoid consuming products with visible mold. Prefer buying whole foods over processed ones, and if possible, opt for foods tested for mycotoxin contamination. Discard any food that smells musty or shows signs of spoilage.

Description

Avoiding mycotoxin exposure, which can occur in contaminated foods, is crucial to prevent potential health risks such as liver damage and cancer. Being cautious about food quality and storage conditions can help minimize the risk of mycotoxin ingestion.

How it helps

Exposure to mycotoxins during pregnancy may increase the risk of preterm birth and late-term miscarriage. When analyzed by toxin type, *Aspergillus* mycotoxins (e.g., aflatoxins) may reduce fetal growth while *Fusarium* mycotoxins (e.g., fumonisin) may increase the risk of preeclampsia and neural tube defects [\[R\]](#).

9



Avoid Noise Pollution

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Minimize exposure to loud environments by using noise-cancelling headphones or earplugs, especially in areas known for high noise levels such as construction sites, concerts, and busy urban streets. Aim to keep the volume of personal audio devices below 60% of their maximum. At home, use carpets, curtains, and wall fabrics to reduce indoor noise, and prefer quieter appliances. Try to dedicate at least one hour of quiet time before bed to aid in relaxation and improve sleep quality.

Description

Noise pollution refers to the presence of excessive, disruptive, or unwanted sound in the environment. It often includes sounds from traffic, industrial machinery, construction, loud music, and other sources that exceed acceptable or comfortable noise levels. Noise pollution disrupts normal activities and can have detrimental effects on human health, well-being, and the natural world.

Prolonged exposure to high noise levels can lead to a range of health issues, including:

- Stress
- Anxiety,
- Sleep disturbances
- High blood pressure
- Heart disease
- Impaired cognitive function

How it helps

Women exposed to elevated environmental noise may have a a higher risk of preeclampsia, as well as a 29% higher risk of severe preeclampsia and 71% higher risk of early-onset preeclampsia [\[R\]](#).

10  **Yoga**

IMPACT
● ● ● ● ● 2 / 5

EVIDENCE
● ● ● ● ● 1 / 5

How to implement

Practice yoga for at least 20 to 30 minutes a day, most days of the week. Choose a style that matches your fitness level and goals, and consider attending a class or using online resources to guide your practice.

TYPICAL STARTING DOSE

30 minutes

Description

Yoga is a mind-body practice that combines physical postures, breathing exercises, and meditation. It enhances flexibility, strength, and mental well-being and is used for stress reduction, relaxation, and overall health improvement.

[Yoga](#) combines breathing, stretching, and relaxation techniques. Practicing yoga may help [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Reduce [stress](#)
- Improve fitness
- Lower blood pressure and heart rate
- Manage pain

How it helps

Yoga may lower blood pressure and reduce stress in pregnant women, potentially reducing the risk of preeclampsia [\[R\]](#).

11



Coenzyme Q10 (CoQ10)

IMPACT

1 / 5

EVIDENCE

1 / 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

In a randomized trial, pregnant women at increased risk of pre-eclampsia received either 200mg CoQ10 or placebo daily from 20 weeks gestation. The pre-eclampsia rate was significantly lower in the CoQ10 group (14.4%) compared to the placebo (25.6%), indicating that CoQ10 reduces preeclampsia risk [\[R\]](#).

12  **Vitamin B12**

IMPACT 1 / 5 **EVIDENCE** 1 / 5

How to implement

Take a 50 mcg vitamin B12 supplement daily, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

100 mcg

Description

Vitamin B12 is a water-soluble vitamin primarily found in animal-based foods like meat, fish, and dairy products. It plays a crucial role in maintaining healthy nerve cells, DNA synthesis, and red blood cell formation. Vitamin B12 deficiency can lead to anemia, neurological issues, and fatigue.

[Vitamin B12](#) is important for [\[R\]](#), [\[R\]](#):

- Building DNA
- Nervous system function
- Energy production

You can get vitamin B12 from [\[R\]](#):

- Animal products (meat, fish, eggs, and dairy)
- Fortified foods
- Supplements

Adults should be getting **2.4 micrograms** of vitamin B12 every day [\[R\]](#).

How it helps

Women with preeclampsia had significantly lower vitamin B12 levels compared to healthy women (mean difference: -15.24 pg/mL, 95% CI: -27.52 to -2.954, $p < 0.015$). High heterogeneity was observed among studies ($I^2 = 97.8\%$, $p = 0.0103$), and subgroup analyses did not explain the source of heterogeneity.

Preeclampsia was consistently associated with lower vitamin B12 concentrations in pregnant women [\[R\]](#).

13



Maintain Optimal Vitamin D Levels

IMPACT

1 / 5

EVIDENCE

1 / 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** [\[R\]](#).

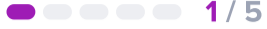
How it helps

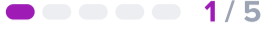
A meta-analysis of 27 randomized clinical trials indicated that vitamin D supplementation in pregnancy is associated with a reduced risk of preeclampsia. The benefits are more pronounced when supplementation begins before 20 weeks of gestation [\[R\]](#).

Vitamin D has shown effectiveness as an adjunct treatment with nifedipine in managing preeclampsia. It helped shorten the time needed to control blood pressure in pregnant women with severe preeclampsia features [\[R\]](#).

A randomized controlled trial found that vitamin D supplementation significantly reduced the recurrence of preeclampsia in women with a history of the condition [\[R\]](#).

14  **Melatonin**

IMPACT  1 / 5

EVIDENCE  1 / 5

How to implement

Take 500 mcg of melatonin orally, about 30 minutes before bedtime, to help with sleep. It can be taken daily as needed.

TYPICAL STARTING DOSE

500 mcg

Description


Melatonin is a natural hormone produced by the pineal gland in the brain that helps regulate the sleep-wake cycle. It plays a crucial role in promoting sleep onset and maintaining a consistent sleep pattern, making it a commonly used supplement for managing sleep disorders and jet lag.

[Melatonin](#) is an important sleep hormone. Bright light at night may prevent your body from making enough melatonin [\[R, R, R\]](#).

Your body makes melatonin on its own. However, some people take melatonin supplements to help them sleep. It may help with jet lag in particular [\[R, R, R\]](#).

How it helps

Meta-analysis findings suggest significantly lower melatonin levels in women with preeclampsia compared to controls, with severity correlating with lower levels [\[R\]](#).

15  **Omega-3 (Fish Oil)**

IMPACT 0 / 5

EVIDENCE 0 / 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

2000 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

Omega-3 fatty acids from fish oil have anti-inflammatory properties and can improve endothelial function, potentially reducing the risk of preeclampsia.

16



Calcium Supplements

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take 500-600 mg of calcium supplement twice daily with food. For best absorption, do not exceed 600 mg at one time and ensure a total daily intake of 1000-1200 mg from all sources, including diet. Continue indefinitely for ongoing support of bone health.

TYPICAL STARTING DOSE

1000 mg

Description

Calcium supplements are commonly used to support bone health and prevent conditions like osteoporosis. Adequate calcium intake is essential for maintaining strong bones and teeth.

[Calcium](#) is the most abundant mineral in the human body. It is vital for the bones, heart, muscles, and nervous system [\[R\]](#).

Your body gets calcium from food and needs vitamin D to help absorb it. Calcium can be found in a variety of foods, including [\[R\]](#):

- Dairy products
- Green, leafy vegetables
- Fish with edible soft bones (e.g., sardines)
- Calcium-fortified foods and beverages

How it helps

Calcium supplementation in women with low calcium intake has been shown to reduce the risk of preeclampsia. This is because adequate calcium intake is important for preventing blood pressure from becoming too high.

17



Vitamin D and Calcium

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

Description

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

How it helps

Studies have shown that supplementation with Vitamin D and calcium can reduce the risk of developing preeclampsia by regulating blood pressure and promoting proper placental function.

18



Topical L-Arginine

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Apply a pea-sized amount of L-arginine cream or gel to the affected area of the skin. Gently massage it in until fully absorbed, twice daily, in the morning and evening. Continue this routine for at least 4 weeks to observe potential benefits.

Description

L-arginine is an amino acid that can be found in topical formulations designed to promote wound healing and improve circulation. It may be used to support skin repair and reduce the appearance of scars.

[L-arginine](#) is a building block for the proteins in our bodies. This amino acid supports **healthy blood vessels** [\[R\]](#).

All major protein sources, including meat, fish, dairy, and beans, have L-arginine. People also take it as a supplement to [\[R, R, R, R, R, R, R\]](#):

- Improve heart health
- Reduce blood sugar
- Support immunity
- Support sexual function

How it helps

Topical L-Arginine is beneficial for preeclampsia because it serves as a precursor for nitric oxide synthesis, which helps to improve blood flow and reduce blood pressure. Improved endothelial function and blood flow can potentially alleviate some symptoms of preeclampsia.

19



Dietary Calcium

IMPACT

0 / 5

EVIDENCE

0 / 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

Calcium supplementation has been shown to reduce the risk of preeclampsia, especially in women who have low dietary calcium intake. Adequate calcium reduces the constriction of blood vessels, potentially lowering blood pressure and preventing the development of preeclampsia.

20  **Vitamin C**

IMPACT 0 / 5

EVIDENCE 0 / 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

Vitamin C has antioxidant properties that can help reduce oxidative stress in the body, which is a factor in the development of preeclampsia.

21



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 moderate exercise can help manage blood pressure levels, which is crucial in preventing and managing preeclampsia. It also improves circulation and reduces stress, contributing to overall cardiovascular health.

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.

