

Miscarriage

DNA Health Report

REPORT CATEGORY —



REPRODUCTIVE
HEALTH

Sample Client

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omicsedge

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DISCLAIMER

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

Personal information

NAME

Sample Client

SEX AT BIRTH

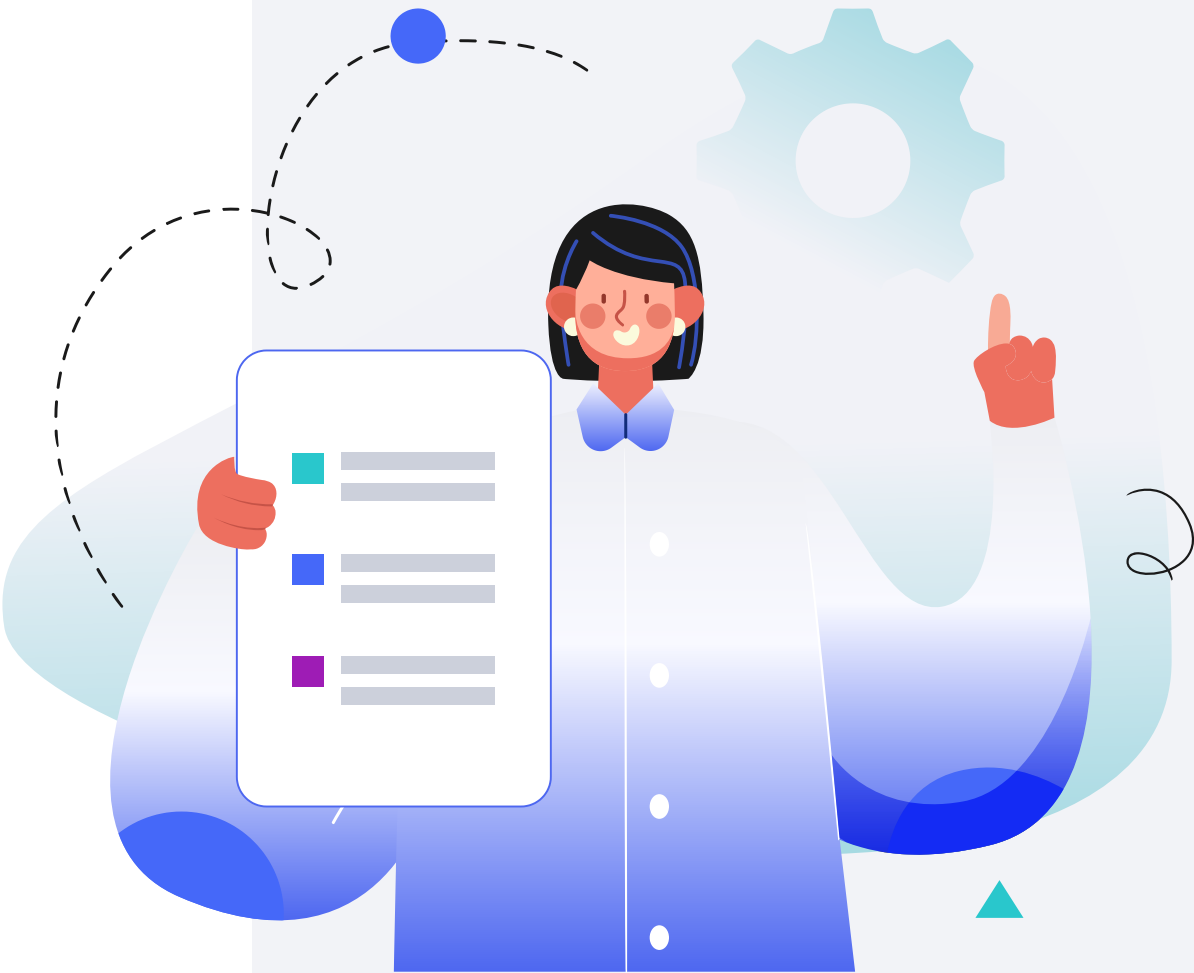
Male

HEIGHT

5ft 5" 165cm

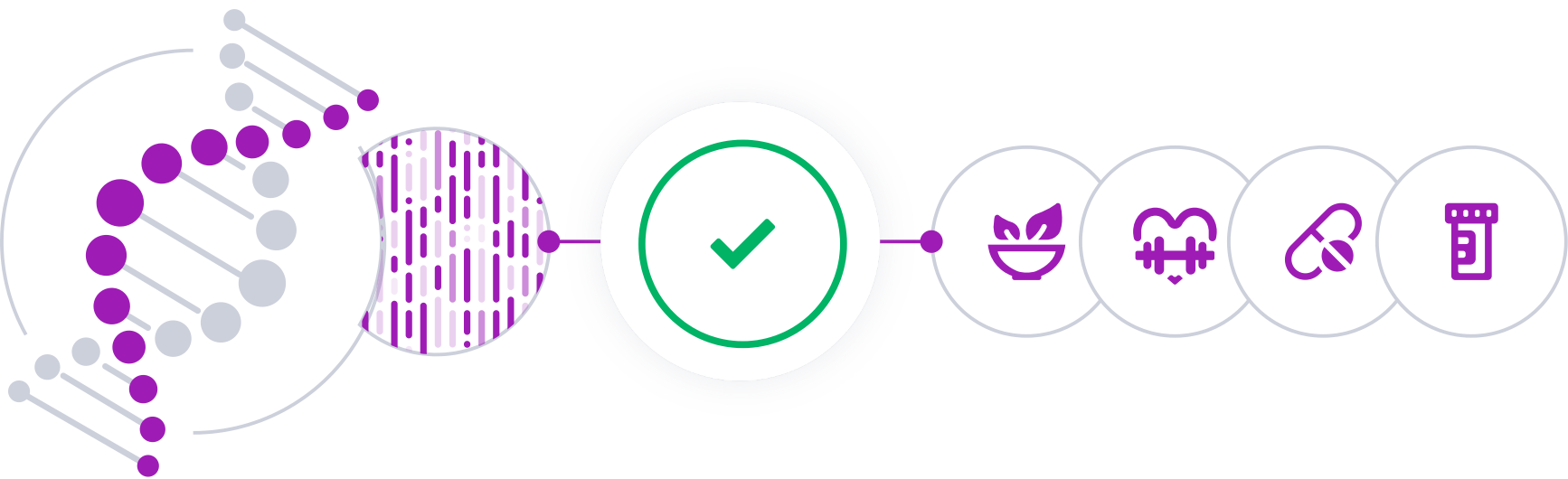
WEIGHT

137lb 62kg



How this works

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

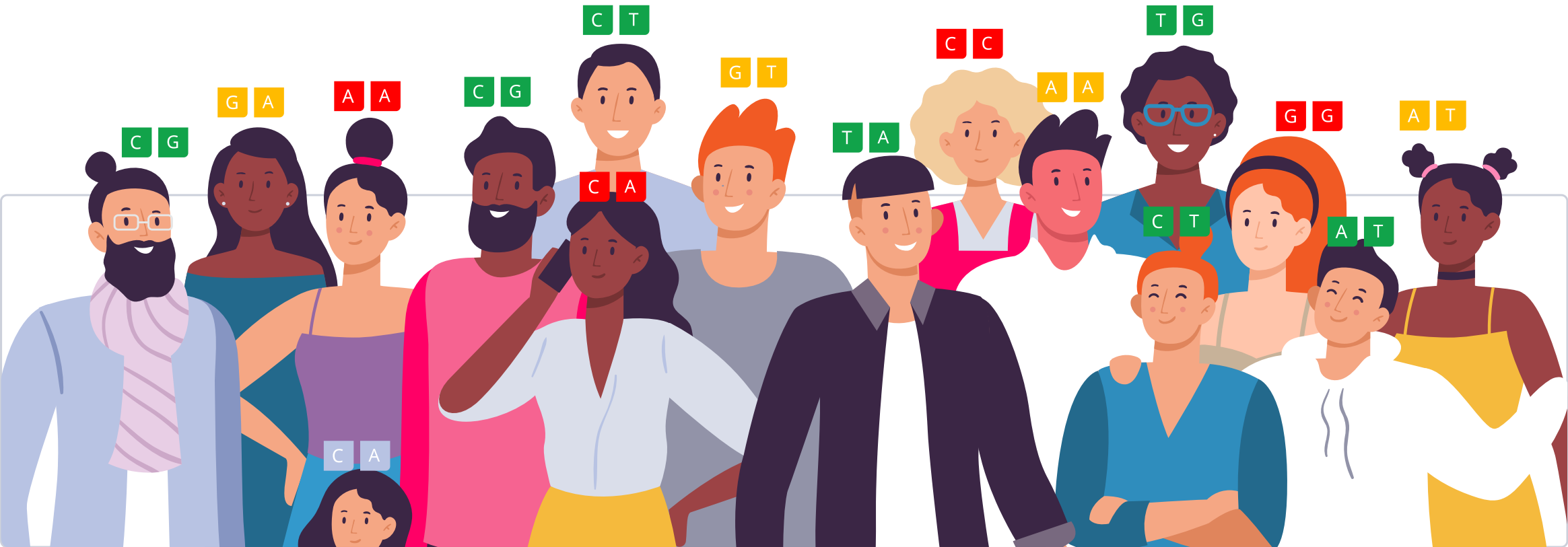


Similarly, our Trait Reports look at how your DNA influences your traits.



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

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



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

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

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



Genotype color info:

AA

You don't have any risk alleles

AA

You have 1 risk allele

AA

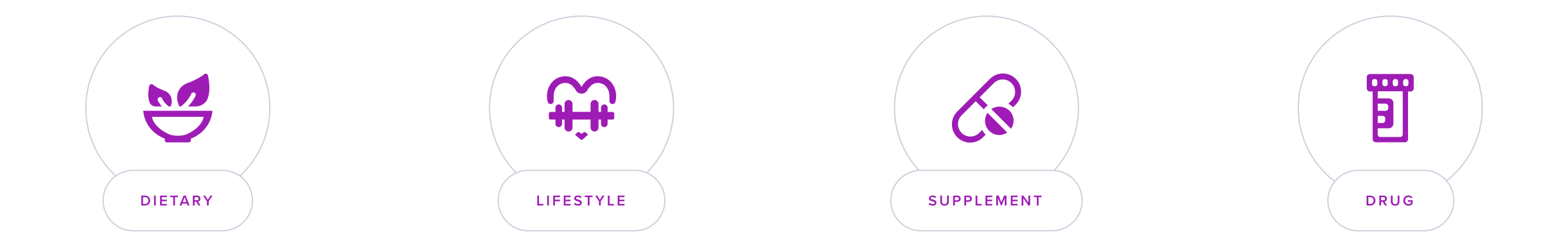
You have 2 risk alleles

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

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

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

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



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

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



Impact

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

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

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

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

Recommendation Evidence

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

Genotype-specific Evidence

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

Some things to keep in mind:

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

Introduction

Miscarriage is the loss of a pregnancy before 20 weeks of gestation. It is a relatively common event, affecting about 10-20% of confirmed pregnancies.

Signs and symptoms of a miscarriage include:

- Vaginal bleeding: This is the most common sign, though not all bleeding leads to miscarriage.
- Cramping and pain in the abdomen or lower back
- Fluid, blood clots, or tissue passing from the vagina.
- Loss of pregnancy symptoms, such as nausea and breast tenderness.

Causes and Management

The causes of miscarriage can vary, but the most common one is chromosomal abnormalities in the fetus that make the pregnancy nonviable. Other potential causes include:

- Hormonal problems: Insufficiencies in hormones necessary to sustain the pregnancy.
- Immune system responses: Some miscarriages occur because the body mistakenly treats the pregnancy as an unwanted foreign presence.
- Uterine abnormalities and incompetent cervix: Physical problems with the uterus or cervix can prevent a pregnancy from developing normally.
- Infections: Certain infections can increase the risk of miscarriage.
- Lifestyle factors: Smoking, excessive alcohol use, drug use, and extreme levels of caffeine consumption can contribute to the risk.
- Age: Women over the age of 35 have a higher risk of miscarriage.
- Underlying health conditions: Conditions like uncontrolled diabetes, thyroid disease, and high blood pressure can increase the risk.

Diagnosing a miscarriage usually involves a physical exam, an ultrasound, and sometimes blood tests to measure hormone levels. Treatment depends on the stage of the pregnancy and the severity of the symptoms. Options may include:

- Expectant management: Waiting for the body to expel pregnancy tissue naturally.
- Medical management: Using medication to trigger the expulsion of pregnancy tissue.
- Surgical management: Procedures like dilation and curettage (D&C) to remove the pregnancy tissue from the uterus.

The emotional impact of a miscarriage can be profound and can include feelings of loss, grief, guilt, and depression. It's important for those affected to seek support from friends, family, or professional counselors. Physically recovery from a miscarriage can vary, but most women feel better within a few weeks. However, hormonal adjustments and bleeding may last several weeks.



MORE LIKELY

More likely to have a miscarriage based on 109,574 genetic variants we looked at



For couples looking to conceive again, doctors generally recommend waiting until it's emotionally and physically safe. It's often advised to have at least one normal menstrual cycle before trying to become pregnant again, but guidance can vary based on individual circumstances.

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	Avoid Illicit Drugs	2	Limit Caffeine Intake
3	Avoid Formaldehyde Exposure	4	Methylfolate400 mcg
5	Maintain Optimal Vitamin D Levels1000 iu	6	Relaxation Techniques30 minutes
7	Magnesium Sulfate200 mg	8	Avoid Phthalate Exposure
9	Avoid Secondhand Smoke	10	N-acetylcysteine (NAC)1200 mg
11	Avoid Mycotoxin	12	Dietary Folate
13	Avoid Lead Exposure	14	Avoid Cadmium Exposure
15	Mindfulness Meditation30 minutes	16	Avoid Pesticide Exposure
17	Avoid PFAS Exposure	18	Vitamin B12100 mcg
19	Omega-3 (Fish Oil)2000 mg	20	Avoid Arsenic Exposure
21	Avoid Exposure To Organic Solvents	22	Vitamin B12 And Folate
23	Stress Management Therapy1 hour	24	Dietary Omega-3 Fatty Acids
25	Avoid Lifting Heavy Objects	26	Support Groups
27	Avoid Substance Abuse		

1



Avoid Illicit Drugs

IMPACT

4 / 5

EVIDENCE

3 / 5

How to implement

Refrain from using any illegal substances, including but not limited to, narcotics, stimulants, hallucinogens, and cannabis where it's not legalized. This means not purchasing, possessing, or consuming these substances in any form or amount. Commit to this practice indefinitely for long-term health benefits.

Description

Avoiding the use of illicit drugs is essential for preserving physical and mental health, as these substances can lead to addiction, mental health disorders, and other physical health issues. Abstaining from their use supports a safer and healthier lifestyle.

Illicit drugs are highly addictive, illegal drugs. Examples include **marijuana, cocaine, meth, and MDMA (ecstasy)**. The term can also refer to a non-medical use of drugs that are legally available (e.g., medical marijuana in some countries and states) [\[R\]](#).

Illicit drug use can have a **devastating impact on all aspects of your health and wellbeing**. It can lead to [\[R\]](#):

- Dependence and addiction
- Injury and accidents
- Health and sleep problems
- Problems in family and social life

How it helps

Experts recommend against consuming illicit drugs during pregnancy. Substances such as cocaine, MDMA, and heroin can interfere with the placenta's ability to deliver necessary nutrients and oxygen to the developing fetus, leading to complications that can result in miscarriage [\[R, R, R\]](#).

Moreover, women who consume these drugs during pregnancy are more likely to also consume alcohol. Alcohol increases the risk of miscarriage and other complications such as fetal alcoholic syndrome [\[R\]](#).

2



Limit Caffeine Intake

IMPACT

3 / 5

EVIDENCE

4 / 5

How to implement

Limit your caffeine consumption to less than 200 milligrams per day, equivalent to about two 6-ounce cups of coffee. Aim to avoid caffeine-containing foods and beverages such as tea, chocolate, and some soft drinks, especially in the late afternoon and evening to minimize sleep disturbances.

Description

Although caffeine is the world's most popular stimulant, some people choose to limit or avoid it due to potential adverse effects on their sleep, mood, or blood pressure.

How it helps

Heavy (above 300 mg/day) preconception caffeine intake may increase the risk of miscarriage [\[R\]](#).

In line with this, moderate to high caffeine intake during pregnancy increases the risk of miscarriage. The risk may increase with the dose [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Experts recommend not exceeding two caffeinated beverages per day during pregnancy to reduce the risk of miscarriage [\[R\]](#), [\[R\]](#).

3



Avoid Formaldehyde Exposure

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

To minimize formaldehyde exposure, choose household products and building materials labeled low-VOC (Volatile Organic Compounds) or formaldehyde-free. Ensure proper ventilation in your living and working spaces, especially when using products known to contain formaldehyde like certain adhesives, cleaning agents, and cosmetics. Aim to reduce use of pressed wood products and seek out alternatives when possible.

Description

Avoiding exposure to formaldehyde, a chemical commonly found in building materials and certain products, is crucial to prevent respiratory problems and potential carcinogenic effects.

How it helps

Epidemiology studies initially suggested a potential increased risk of spontaneous abortion due to formaldehyde exposure (meta-relative risk=1.4). However, after accounting for biases, no increased risk was found (meta-relative risk=0.7). Limited data on other reproductive outcomes make conclusions uncertain. Experimental and metabolic studies suggest low exposure levels in epidemiology studies are unlikely to impact reproduction [\[R\]](#).

In a meta-analysis of 6 studies (666 subjects, 3087 controls), maternal formaldehyde exposure during pregnancy was linked to a higher risk of spontaneous abortion (OR = 1.64, 95% CI 1.20-2.24, P = 0.002) [\[R\]](#).

A meta-analysis found an increased risk of spontaneous abortion (1.76x) and adverse pregnancy outcomes (1.54x) in formaldehyde-exposed women, with potential mechanisms suggesting reproductive toxicity [\[R\]](#).

4



Methylfolate

IMPACT

3 / 5

EVIDENCE

2 / 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

Women with recurrent miscarriages may have lower serum folate concentrations compared to healthy controls. However, a study found no evidence that daily consumption of 400 micrograms of folic acid before and during early pregnancy influenced the risk for miscarriage [\[R\]](#), [\[R\]](#).

Further research showed that folic acid supplementation could substantially reduce total plasma homocysteine concentrations, which might be beneficial for women with a history of unexplained recurrent miscarriages. Additionally, pregnant women with low plasma folate concentrations were found to have an increased risk of miscarriage, particularly when carrying a fetus with a chromosomal abnormality [\[R\]](#), [\[R\]](#), [\[R\]](#).

A study conducted in Brazil reported that high-dose folic acid supplementation did not increase miscarriage risk, suggesting the safety of high folic acid supplementation. Moreover, folate is essential for cell division and growth, and its deficiency during pregnancy has been linked to poor outcomes such as preterm delivery, low birth weight, and fetal growth retardation [\[R\]](#), [\[R\]](#).

5



Maintain Optimal Vitamin D Levels

IMPACT2 / 5

EVIDENCE3 / 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

Vitamin D deficiency, but not insufficiency, may increase the risk of miscarriage. However, vitamin D levels don't seem to affect miscarriage rates in women undergoing assisted reproduction. Nevertheless, supplementation may increase pregnancy rates in women undergoing this procedure [\[R, R, R, R, R\]](#).

6



Relaxation Techniques

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Incorporate relaxation techniques such as deep breathing exercises, meditation, or yoga into your daily routine. Spend at least 15-30 minutes each day practicing one of these techniques, preferably in a quiet, comfortable space without interruptions.

TYPICAL STARTING DOSE

30 minutes

Description

Relaxation techniques encompass various methods like deep breathing, yoga, meditation, and progressive muscle relaxation, aimed at reducing stress and promoting mental and physical relaxation. Practicing these techniques regularly can help manage stress, improve mental clarity, and enhance overall emotional well-being.

We all get stressed from time to time.

[Stress](#) can help you deal with a challenge or avoid danger. However, **it’s not healthy to be stressed for a long time** [\[R\]](#), [\[R\]](#).

Relaxation techniques such as [yoga](#) and [meditation](#) can relieve stress in different ways. Most of them focus on breathing and help you get rid of negative thoughts and emotions [\[R\]](#).

People use relaxation techniques to improve conditions like [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Anxiety
- Depression
- Chronic pain

Progressive muscle relaxation is another relaxation technique. In this technique, you focus on tensing and relaxing different parts of your body. It is common to start with the toes and slowly work your way up to the neck and head [\[R\]](#), [\[R\]](#).

Autogenic training is a relaxation technique that a person may carry out on their own. It uses exercises that take the mind’s attention to bodily sensations such as warmth and heaviness [\[R\]](#), [\[R\]](#).

How it helps

Women exposed to stress during pregnancy may have a 42% higher risk of miscarriage [\[R\]](#).

In a non-placebo-controlled trial of 76 women with recurrent pregnancy loss, a 7-week meditation and mindfulness program reduced perceived stress significantly more than a standard supportive care program [\[R\]](#).

7



Magnesium Sulfate

IMPACT

2 / 5

EVIDENCE

3 / 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

Intravenous magnesium sulfate may control the symptoms of threatened abortion and help prevent miscarriage. However, phloroglucinol may be more effective [\[R\]](#).

8



Avoid Phthalate Exposure

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

To avoid phthalate exposure, check product labels and choose phthalate-free options for personal care items, plastics (look for recycling codes 3 and 7 or the letters 'V' or 'PVC'), and household products. Additionally, reduce the use of plastic containers for food storage, especially those not marked as 'phthalate-free', and avoid microwaving food in plastic containers. Aim to make these changes consistently in your daily life for long-term health benefits.

Description

Avoiding phthalate exposure involves choosing phthalate-free products, such as personal care items and plastics, to minimize potential endocrine-disrupting effects and protect reproductive and hormonal health.

How it helps

A systematic review and meta-analysis involving 4,713 participants found that increased urinary levels of specific phthalates, such as monobutyl phthalate, mono(2-ethylhexyl) phthalate, mono(2-ethyl-5-hydroxyhexyl) phthalate, and mono(2-ethyl-5-oxohexyl) phthalate, were associated with a higher risk of spontaneous pregnancy loss. The study, however, did not find a significant association with other phthalates like monomethyl phthalate or monoethyl phthalate [\[R\]](#).

9



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

Secondhand exposure to cigarette smoke has been associated with an 11% increased risk of miscarriage. However, the evidence is mixed [\[R, R\]](#).

10



N-acetylcysteine (NAC)

IMPACT

2 / 5

EVIDENCE

2 / 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

Supplementation with NAC during pregnancy may improve several fertility outcomes, including a reduction of miscarriages [\[R\]](#).

NAC may further increase the beneficial effects of folate [\[R\]](#).

11



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 [\[R\]](#).

12



Dietary Folate

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Increase your intake of folate-rich foods such as leafy green vegetables, fruits, nuts, and legumes. Aim to consume these foods daily, incorporating them into various meals throughout the day to meet the recommended dietary allowance of 400 micrograms for adults.

Description

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

- Making DNA
- Metabolism
- Energy production

Rich sources of folate include [\[R\]](#), [\[R\]](#):

- Beef liver
- Spinach
- Black-eyed peas
- Asparagus
- Citrus fruits

While folate deficiency is rare, it can happen in people who don’t eat enough fruits and vegetables. Alcoholics and lactating women may also be at increased risk [\[R\]](#).

Adults should get **400 micrograms (mcg)** of folate per day. Pregnant or breastfeeding women should get **500-600 mcg per day**. Supplements are usually in the form of *folic acid* or [L-methylfolate](#) (5-MTHF) [\[R\]](#), [\[R\]](#).

How it helps

Women with recurrent miscarriages may have lower serum folate concentrations compared to healthy controls. However, a study found no evidence that daily consumption of 400 micrograms of folic acid before and during early pregnancy influenced the risk for miscarriage [\[R\]](#), [\[R\]](#).

Additionally, pregnant women with low plasma folate concentrations were found to have an increased risk of miscarriage, particularly when carrying a fetus with a chromosomal abnormality [\[R\]](#).

Moreover, folate is essential for cell division and growth, and its deficiency during pregnancy has been linked to poor outcomes such as preterm delivery, low birth weight, and fetal growth retardation [\[R\]](#).

How to implement

Description

How it helps

However, a study of 380 pregnant women found no link between lead exposure and adverse birth outcomes [R].

14



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 found higher cadmium and lead concentrations in women with spontaneous abortions compared to controls [\[R\]](#).

Women with spontaneous abortions had lower zinc and copper levels and higher lead and cadmium levels compared to normal pregnant women in another study [\[R\]](#).

Chronic exposure to cadmium and lead may impact menarche, menopause, and pregnancy. A study of 5317 post-menopausal US women found that higher blood levels of cadmium and lead were associated with extended reproductive lifespan and increased pregnancy loss, especially in smokers [\[R\]](#).

15



Mindfulness Meditation

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice mindfulness meditation for 10-20 minutes daily. Find a quiet, comfortable place to sit or lie down, then focus on your breath, observing thoughts and sensations without judgment. Consistency is key, so try to incorporate it into your daily routine, perhaps in the morning or before bed.

TYPICAL STARTING DOSE

30 minutes

Description

Mindfulness meditation involves focused attention on the breath or a specific point of focus to cultivate mindfulness and reduce stress. Regular meditation practice is associated with improved mental clarity, emotional regulation, and overall well-being.

How it helps

In a non-placebo-controlled trial of 76 women with recurrent pregnancy loss, a 7-week mindfulness meditation program reduced perceived stress significantly more than a standard supportive care program [\[R\]](#).

16



Avoid Pesticide Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Purchase organic produce when possible, wash fruits and vegetables thoroughly under running water, and peel them if not organic. Use natural pest control methods instead of chemical pesticides at home and garden. Limit the use of non-organic lawn and garden chemicals.

Description

Pesticides include all chemicals used to kill weeds, insects, fungi, and microbes. Reducing pesticide exposure involves choosing organic or pesticide-free foods and using natural pest control methods to limit contact with potentially harmful chemical residues. It supports overall health by reducing the risk of pesticide-related health issues.

Pesticides include all chemicals used to kill weeds, insects, fungi, and microbes. They are widely used in agriculture to improve crop yields. Common groups of pesticides include:

- Organophosphates (glyphosate, parathion, malathion, chlorpyrifos, diazinon, phosmet)
- Neonicotinoids (imidacloprid, acetamiprid, thiacloprid, clothianidin)
- Pyrethroids (permethrin, alpha-cypermethrin)

Chronic exposure to pesticides has been linked to:

- Fertility problems [\[R\]](#)
- Cognitive problems [\[R\]](#)
- Alzheimer’s and Parkinson’s disease [\[R\]](#), [\[R\]](#)
- Thyroid problems [\[R\]](#)
- Obesity [\[R\]](#)
- DNA damage and cancer [\[R\]](#), [\[R\]](#), [\[R\]](#)

How it helps

Analysis of twelve studies shows that pesticide exposure in farmers significantly increases the risk of spontaneous abortion, premature birth, and fetal death, though associations with stillbirth, birth defects, low birth weight, neonatal death, and delayed conception were not statistically significant [\[R\]](#).

17



Avoid PFAS Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

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

A meta-analysis of 21 studies associated prenatal exposure to PFNA with a 48% higher risk of miscarriage [\[R\]](#).

18



Vitamin B12

IMPACT1 / 5

EVIDENCE1 / 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

In a study of 83 females with early pregnancy loss (EPL) and 70 healthy pregnant females, folic acid deficiency wasn't linked to EPL risk. However, low vitamin B12 and elevated homocysteine were significant individual risk factors and confirmed by meta-analysis ($P < .001$ and $P < .05$, respectively). The combination of vitamin B12 deficiency and high homocysteine posed an even greater risk for EPL. Thus, vitamin B12 deficiency and elevated homocysteine levels independently contribute to EPL risk, with higher risk when both factors are present [\[R\]](#).

19



Omega-3 (Fish Oil)

IMPACT

1 / 5

EVIDENCE

1 / 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

In an old, uncontrolled trial of 22 women with recurrent miscarriage, supplementation with fish oil (5.1 g/day) helped prevent miscarriages. There were 23 pregnancies over 3 years, 19 of which were successful [\[R\]](#).

Both aspirin and omega-3 fatty acids (4 g/day) were equally effective at improving uterine blood flow and preventing miscarriages in 2 non-placebo-controlled trials of 90 women with recurrent miscarriage [\[R\]](#), [\[R\]](#).

20



Avoid Arsenic Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Use a water filter certified to remove arsenic if you rely on well water, opt for arsenic-tested rice or rice products, and avoid using contaminated pesticides or herbicides in gardening or farming. Test your home for arsenic if you live in an area known for high levels of arsenic in soil or water. Limit consumption of foods known to accumulate arsenic such as rice and rice-based products, especially if you are pregnant, nursing, or preparing meals for young children.

Description

Avoiding arsenic exposure is essential for preventing potential health risks associated with arsenic contamination in drinking water and foods. Chronic exposure to arsenic has been linked to various health issues, including cancer and cardiovascular problems.

Arsenic is a [heavy metal](#) naturally found in the environment. It is used for mining, fracking, and industrial applications, such as the production of pesticides and wood preservatives, and the use of fossil fuels [\[R\]](#).

The main sources of exposure to arsenic are contaminated [\[R\]](#), [\[R\]](#), [\[R\]](#):

- **Drinking water**
- **Rice** and fish
- Air

Long-term exposure to high amounts of arsenic may be linked to health problems, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Skin disorders
- Heart disease
- High blood pressure
- Stroke
- Diabetes
- Cancer

Please note: *Soaking, washing until clear, and cooking rice with a high (1:6) water-to-rice ratio may help reduce rice’s arsenic content* [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

An ecological study in India linked higher groundwater arsenic levels with increased rates of stillbirth, recurrent pregnancy loss, and infertility, suggesting the need for targeted arsenic mitigation efforts [\[R\]](#).

A study in Bangladesh found that drinking water arsenic levels above 2.5 µg/L increase the risk of miscarriage, suggesting that current water safety standards may need re-evaluation [\[R\]](#).

21

Avoid Exposure To Organic Solvents

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Ensure to work in well-ventilated areas and wear protective gear when handling products like paints, varnishes, and adhesives. When possible, choose solvent-free or water-based products to minimize exposure. Regularly check labels for any solvents listed and strive to limit their use in both personal and professional settings.

Description

Avoiding exposure to organic solvents, commonly found in paints, adhesives, and cleaning products, can protect against the potential health risks associated with inhalation or skin contact, such as respiratory issues and skin irritation.

Organic solvents are used in various industries and workplaces for tasks like cleaning, painting, and manufacturing.

However, their use can be hazardous to workers' health. Exposure to these solvents can lead to problems such as breathing difficulties, skin irritation, and reduced fertility [R].

How it helps

Exposure to organic solvents has been associated with increased miscarriage risk. Avoiding these chemicals minimizes the risk by reducing harmful toxin exposure.

22

Vitamin B12 And Folate

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Take a combined supplement of vitamin B12 and folate daily. For adults, the typical dose is 2.4 mcg of B12 and 400 mcg of folate. This supplement should be taken with water and a meal to enhance absorption.

Description

Vitamin B12 and folate (vitamin B9) work together to support DNA synthesis and red blood cell formation. Both are essential for preventing megaloblastic anemia and are commonly found in a variety of foods, including leafy greens, legumes, and fortified cereals.

How it helps

Vitamin B12 and folate are essential for DNA synthesis and cell division, helping to reduce the risk of chromosomal abnormalities which are a common cause of miscarriage.

23



Stress Management Therapy

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Engage in stress management therapy sessions, such as cognitive-behavioral therapy (CBT), for at least 1 hour per week over a course of 8 to 12 weeks. Techniques can include mindfulness, deep breathing exercises, and identifying stressors to develop coping strategies.

TYPICAL STARTING DOSE

1 hour

Description

Stress management therapy refers to various techniques and approaches aimed at reducing and coping with stress. It can improve mental and physical well-being by helping individuals better manage the effects of stress on their health.

How it helps

Managing stress can help balance hormones and improve overall mental and physical health, which may reduce the risk of miscarriage.

24



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 been found to support pregnancy by reducing inflammation and improving placental function, which can reduce the risk of miscarriage.

25



Avoid Lifting Heavy Objects

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Refrain from picking up items that require significant strain or exertion, typically defined as those weighing more than 25 pounds (11 kilograms), to avoid unnecessary pressure on your body. This restriction should be adhered to as long as your healthcare provider advises, which may be indefinitely for chronic conditions or for a specific recovery period following surgery or injury.

Description

Avoiding improper lifting techniques when handling heavy objects can help prevent back injuries and musculoskeletal strain. Practicing safe lifting methods and using proper equipment promotes spine and musculoskeletal health.

How it helps

Avoiding heavy lifting can reduce physical strain and the risk of injury, which may help maintain a healthy pregnancy by lowering the risk of miscarriage.

26



Support Groups

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Attend a support group meeting related to your condition at least once a week. These meetings can be found through local hospitals, online platforms, or health organizations specific to your condition. Participation can be in-person or virtual, depending on what is offered and your preference.

Description

Support groups are gatherings of individuals facing similar challenges, where they can share experiences, emotions, and coping strategies. They offer emotional support, camaraderie, and valuable insights for those dealing with various health conditions or life circumstances.

Support groups involve people with similar struggles helping each other. Support groups usually take place in a casual setting. During sessions, people share their [\[R\]](#):

- Knowledge
- Experiences
- Coping strategies
- Understanding of the recovery process

Support groups may help support recovery from addictions [\[R\]](#).

How it helps

Support groups provide emotional support and reduce stress, which can positively affect pregnancy outcomes by improving mental well-being.

27



Avoid Substance Abuse

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Eliminate the use of illegal drugs, excessive alcohol, and tobacco from your daily routine. Seek professional help if needed to stop substance use and engage in support groups or counseling for sustained recovery. Implement this change permanently for long-term health benefits.

Description

Substance abuse is the excessive use of alcohol or drugs. It can lead to dependence on the substance. Abusing drugs or alcohol can have long-term health and social consequences.

Substance abuse is the excessive use of alcohol or drugs. It can lead to dependence on the substance [\[R\]](#).

Abusing drugs or alcohol can have long-term health and social consequences [\[R\]](#).

How it helps

Substance abuse, including alcohol, drugs, and smoking, is linked to higher miscarriage risk. Avoiding these substances helps create a safer environment for pregnancy.

Next Steps

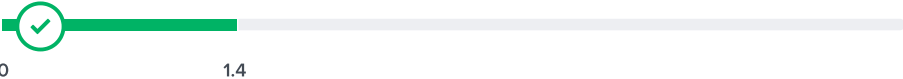
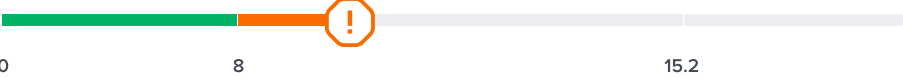
Remember, your genes only tell one important part of your health story!

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.

	Platelet Count	215 x10 ³ /mm ³		9 Nov 2025
	Progesterone	0.22 ng/mL		9 Nov 2025
	Prolactin	9.83 ng/mL		9 Nov 2025
	Vitamin D, 25-Hydroxy, Total	58.59 ng/mL		9 Nov 2025
	Homocysteine	12.84 umol/L		9 Nov 2025