

Female Infertility

DNA Health Report

REPORT CATEGORY —



REPRODUCTIVE
HEALTH

Sample Client

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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

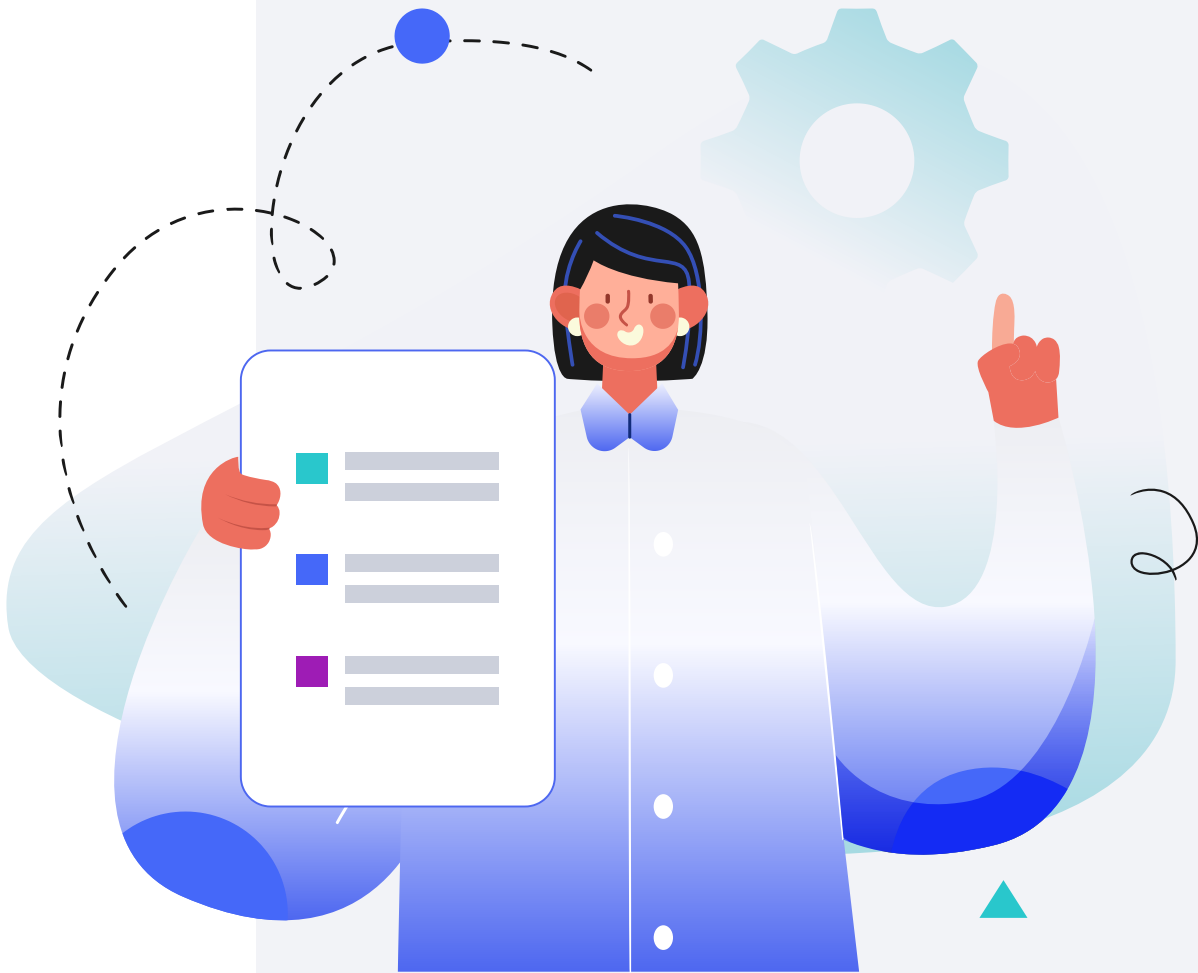
Male

HEIGHT

5ft 5" 165cm

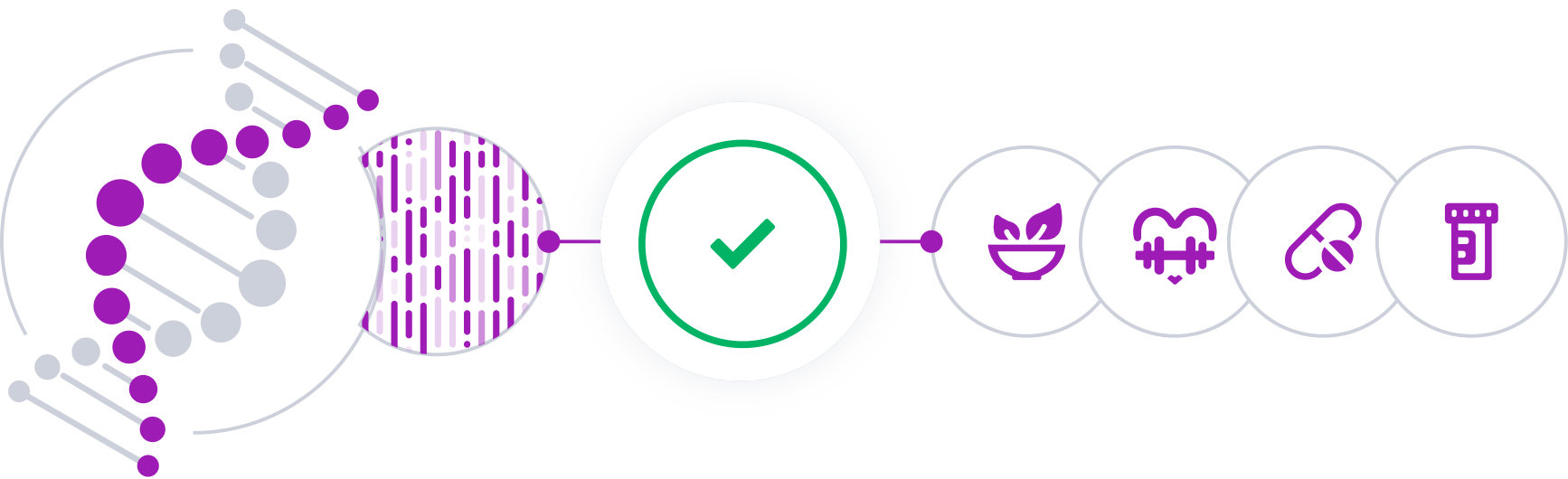
WEIGHT

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.

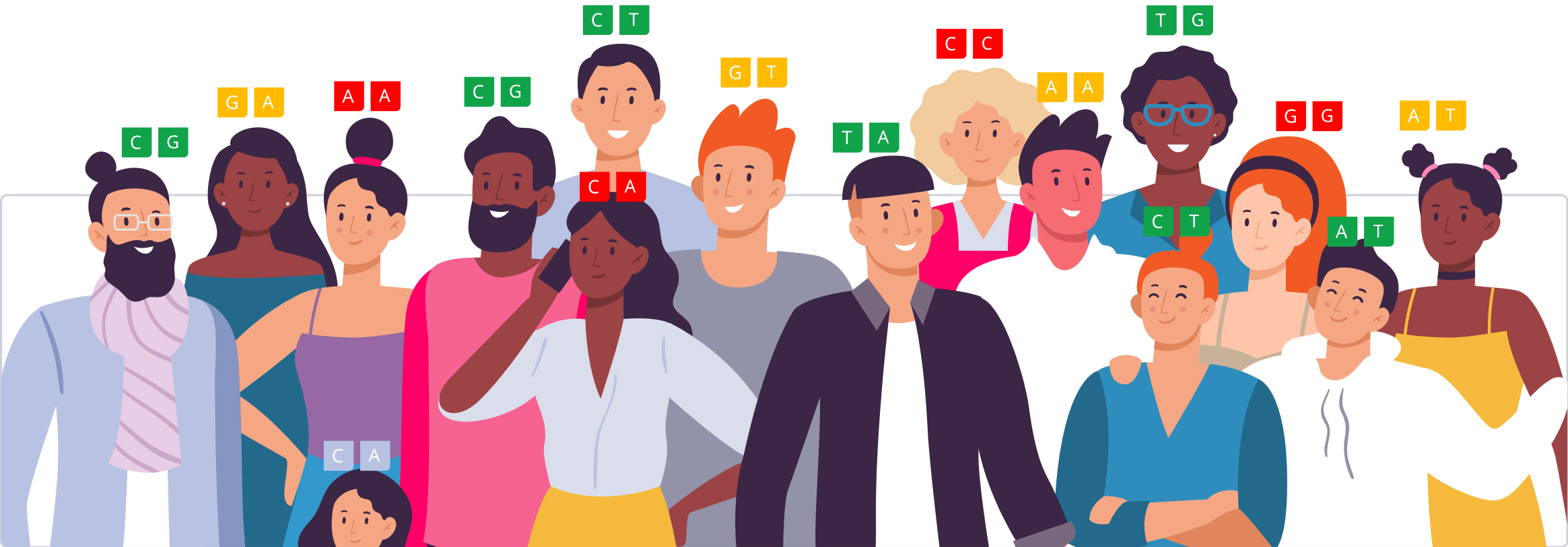


Similarly, our Trait Reports look at how your DNA influences your traits.



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

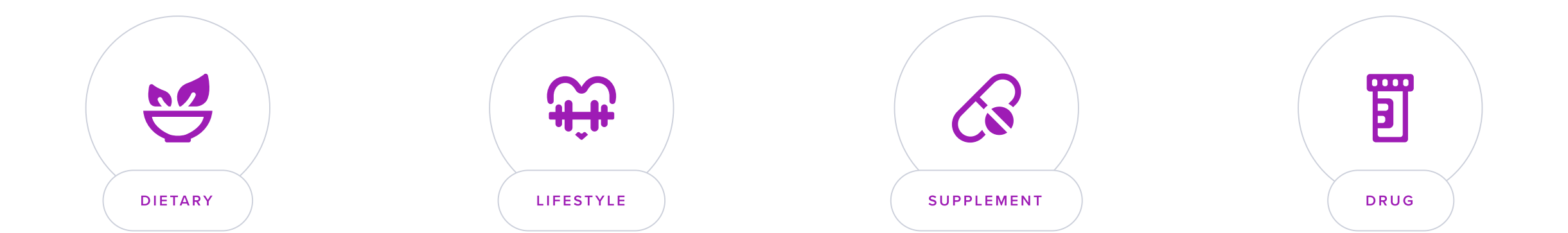
You have 2 risk alleles

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

Starting a family can be really exciting, and the majority of people will conceive within 6-12 months of trying. But that’s not always the story. For others, the process takes longer [\[R\]](#).

Struggling to conceive can be a very harrowing experience. But rest assured that a lot of people who suffer from fertility issues do go on to have children.

One thing you can do if you’re looking to get pregnant is to consider how your lifestyle may impact your fertility [\[R\]](#).

We’re all unique, so some people may need to take particular caution over certain aspects of their lifestyle. The good news is that you can use information contained in your DNA to identify which fertility-boosting adjustments may be most appropriate for you.

For example, smoking and alcohol may be more likely to impact your fertility if you carry a specific variant of the [NAT2](#) gene [\[R\]](#).

Read on to find out more about:

- **How your genetics play a role in female fertility**
- **Your genetic risk score based on over 500 genetic variants**
- **Personalized recommendations based on your genetics**

About Female Fertility

Key Takeaways:

- Genes affecting fertility may impact puberty and menopause.
- Even without heritability numbers, managing risk factors like diet and not smoking, can help mitigate your overall risk.
- Risk factors include age, smoking, over/underweight, past sexually transmitted infections, alcohol use, and PCOS.
- Responses to infertility can range from diet changes to In Vitro Fertilization.
- About **1 in 10** American women have fertility problems.

It's fairly normal for it to take a while to get pregnant. However, a person may be **infertile** if there is no successful pregnancy after [\[R\]](#), [\[R\]](#):

- 6 months of trying, for women over 35
- 12 months of trying, for women under 35

About **1 in 10 American women** have fertility problems. These problems become more common as women get older, even before menopause. This is because age can have a negative impact on ovulation [\[R\]](#), [\[R\]](#), [\[R\]](#).

A lack of ovulation means that an egg is not released from one of the ovaries. Without an egg to be fertilized, a baby cannot develop [\[R\]](#), [\[R\]](#), [\[R\]](#).

Aging is one of the most important risk factors for fertility problems. Others include [\[R\]](#):

- Smoking
- Being overweight or underweight
- Past sexually transmitted infections
- Alcohol use

Conditions like *polycystic ovary syndrome* (PCOS) can also have a negative impact on fertility. **PCOS is one of the most common causes of female infertility** [\[R\]](#).



MORE LIKELY

More likely to have fertility problems based on 569 genetic variants we looked at



Your risk is greater than 85% of the population and lower than 15% of the population.

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
RPS27AP5	rs72736636	CC
SEPTIN7	rs145844500	GG
PDE3A	rs146328472	GG
ZNF469	rs62047095	CC
USP3	rs117261523	TT
TRIP4	rs146498400	TT
LLCFC1	rs74746719	CC
DNAJC19	rs180915700	TT
DAPK2	rs145589988	GG
USP3	rs147469276	GG
SNAP25	rs79262309	TT
SDC2	rs148898608	TT
CDH19	rs146642675	GG
ARHGEF7	rs117622286	CC
RBPJ	rs190883507	CC
DMAC1	rs79443685	TT
GAP43	rs187126706	CC
PARP8	rs142362248	AA
PES1	rs150906026	AA
ASCC1	rs140500790	CC
FAM83F	rs143963382	CC
USP24	rs61774767	GG
DIAPH3	rs138463456	AA
/	rs140378815	GG

Many women with fertility problems would still like to have children. Fortunately, there are options for some of them. Fertility treatments include [R](#), [R](#):

- Diet changes
- Weight management programs
- Medication
- Surgery
- *In vitro* fertilization (IVF)

Fertility treatments can come with their own complications [R](#), [R](#), [R](#).

Studies suggest a role of genetics in female fertility. Genes involved in female fertility may influence [R](#), [R](#), [R](#):

- Puberty ([KISS1](#), [GNRH1](#), [DLK1](#))
- Menopause ([BMP15](#), [FMR1](#))

GENE	SNP	GENOTYPE
EXD3	rs182317439	GG
/	rs149110975	TT
CPQ	rs149587064	CC
DAOA	rs117949591	CC
DNAJB12	rs143910543	CC
NECTIN1	rs61901122	TT
GPC5	rs144456435	TT
/	rs139663059	TT
SPINK2	rs547161444	AA
ABHD17C	rs75271743	GG
COL9A1	rs112327742	CC
KCNK9	rs148836647	TT
ANAPC16	rs17647694	GG
TNRC6B	rs148140984	CC
MICU1	rs3998174	TT
RUNX1T1	rs147914982	CC

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

Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You’ll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

DOSAGE		DOSAGE			
1	Methylfolate	400 mcg	2	Choose Healthy Fats	
3	Avoid PFAS Exposure		4	Maintain Optimal Vitamin D Levels	1000 iu
5	Limit Caffeine Intake		6	Dietary Folate	
7	Mediterranean Diet		8	Acupuncture	1 hour
9	Cognitive-Behavioral Therapy (CBT)		10	Relaxation Techniques	30 minutes
11	Limit Meat Intake		12	Inositol	2 g
13	Chasteberry	150 mg	14	Music Therapy	30 minutes
15	Black Cohosh	40 mg	16	D-chiro-inositol (DCI)	600 mg
17	Coenzyme Q10 (CoQ10)	100 mg	18	Myo-inositol	4 g
19	Avoid PBDE		20	Avoid Iron Supplements (Unless Deficient)	
21	Avoid Exposure to Heavy Metals		22	Aerobic Exercise (Cardio)	1 hour
23	Avoid Arsenic Exposure		24	Melatonin	500 mcg
25	Avoid Cannabis		26	Avoid Phthalate Exposure	
27	Dietary Omega-3 Fatty Acids		28	Avoid BPA (Bisphenol A) Exposure	
29	Avoid Cadmium Exposure		30	Mindfulness	30 minutes
31	Avoid Organophosphate Pesticide Exposure		32	Avoid Lead Exposure	

33

Astaxanthin

12 mg

34

L-Carnitine

500 mg

35

Avoid Exposure to Parabens

36

Avoid Triclosan

37

Yoga

30 minutes

1



Methylfolate

IMPACT

3 / 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

Women are often advised to take folate supplements (up to 1 mg/day) before and during pregnancy. This may prevent brain or spinal cord birth defects in the developing fetus. It may also increase the chances of getting pregnant [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Women with higher folate levels in the blood may have more successful fertility treatments [\[R\]](#), [\[R\]](#).

A multivitamin containing folate may also improve ovulation and increase pregnancy rates [\[R\]](#), [\[R\]](#), [\[R\]](#).

Folate may improve fertility by supporting [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Egg development
- Menstrual cycles
- Fetal growth and development

Please note: *You shouldn't consume more than 1,000 micrograms of folate from supplements per day* [\[R\]](#).

 PERSONALIZED TO YOUR GENES

Your ***MTHFR*** gene variant may be linked to higher odds of birth defects. Its link with fertility issues is less clear. Optimal folate intake from food or supplements may cancel out the effects of this variant [\[R\]](#), [\[R\]](#), [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

2



Choose Healthy Fats

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

Incorporate sources of unsaturated fats such as olive oil, avocados, nuts, seeds, and fatty fish into your daily diet. Aim for at least two servings of fatty fish per week and use olive oil for cooking and salad dressings. Replace saturated fats found in red meat, butter, and processed foods with these healthier options whenever possible.

Description

Choosing healthy fats, such as those found in avocados, nuts, and fatty fish, can support cardiovascular health, reduce inflammation, and promote overall well-being. A diet balanced in healthy fats can help manage cholesterol levels and reduce the risk of heart disease.

Based on their structure, the fats in our diet can be broadly divided into *saturated* and *unsaturated* fat. Trans fat is a type of unsaturated fat [\[R, R, R\]](#).

In large amounts, trans fat and saturated fat may have a negative impact on your heart and reproductive health. Processed foods and animal products like red meat and dairy are rich in these fats [\[R, R, R, R, R\]](#).

Some types of unsaturated fat can protect your heart and support fertility. **Experts say you should add more unsaturated fats to your diet.** Some good sources include [\[R, R, R\]](#):

- Nuts
- Seeds
- Fish

Unsaturated fats include polyunsaturated fats or PUFAs (omega-3 and omega-6) and monounsaturated fats or MUFAs [\[R, R\]](#).

How it helps

Diets high in **saturated and trans fats** may decrease the chances of getting pregnant. They may also decrease the success rate of some fertility treatments [\[R, R, R, R\]](#).

Diets higher in PUFAs and MUFAs, such as the Mediterranean diet, may support ovulation. In this way, they may reduce the risk of infertility and support some fertility treatments [\[R, R, R, R, R, R, R\]](#).

Healthy fats may help with fertility by supporting normal:

- Menstrual cycles [\[R\]](#)
- Egg maturation [\[R, R\]](#)

3

Avoid PFAS Exposure

IMPACT

3 / 5

EVIDENCE

3 / 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 13 studies associated PFOA exposure with 12% reduced fecundability and 33% higher risk of infertility in women, while PFOS slightly reduced fecundability (by 6%) [\[R\]](#).

Another meta-analysis (11 studies) associated exposure to PFOS or PFOA with increased time to pregnancy in parous women [\[R\]](#).

PFAS can disrupt hormonal balance and affect ovarian function.

4

Maintain Optimal Vitamin D Levels

IMPACT

3 / 5

EVIDENCE

3 / 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

Women with low vitamin D may have a harder time getting pregnant. They may also have more complications like preterm labor [\[R\]](#), [\[R\]](#).

In line with this, higher vitamin D levels may support fertility treatments. Some studies link higher vitamin D to higher rates of successful pregnancy. However, the evidence is mixed [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

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

PERSONALIZED TO YOUR GENES

Your [MTHFR](#) gene variant is linked to lower vitamin D levels in women with fertility issues. This may negatively affect pregnancy [\[R\]](#). Take care to get enough vitamin D.

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
MTHFR	rs1801133	AA	

5



Limit Caffeine Intake

IMPACT

3 / 5

EVIDENCE

3 / 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

Caffeine intake (up to 200 mg/day) may not increase the risk of infertility or affect assisted reproduction [\[R, R, R\]](#).

However, consuming 300-400 mg/day of caffeine may increase the risk of spontaneous abortion by 11-37%, while 600 mg/day may increase it by 132%. Every 100-mg increase in caffeine intake increases the risk of [\[R, R, R, R\]](#):

- Spontaneous abortion (by 14%)
- Stillbirth (by 19%)
- Premature delivery (by 2%)
- Low birth weight (by 7%)
- Small for gestational age (by 14%)

 PERSONALIZED TO YOUR GENES

High caffeine intake may increase the risk of recurrent pregnancy loss in people with your [CYP1A2](#) gene variant [\[R\]](#).

High caffeine intake may increase the risk of miscarriage in people with your [CYP1B1](#) gene variant [\[R\]](#).

High caffeine intake may increase the risk of recurrent pregnancy loss in people with your [CYP1A2](#) gene variant [\[R\]](#).

High caffeine intake may increase the risk of miscarriage in people with your [CYP1B1](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
CYP1A2	rs762551	AA	
CYP1B1	rs1056836	GG	
CYP1A2	rs762551	AA	
CYP1B1	rs1056836	GG	

6



Dietary Folate

IMPACT

3 / 5

EVIDENCE

2 / 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

High folate levels may be associated with greater success of in-vitro fertilization (IVF). According to research on over 800 women, higher folate is linked to a 330% higher chance of pregnancy, 62% higher live birth rates, and 52% higher rates of twin birth [\[R\]](#), [\[R\]](#), [\[R\]](#).

7



Mediterranean Diet

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It’s rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

How it helps

High adherence to a Mediterranean diet may be associated with a 78% lower risk of difficulty getting pregnant [\[R, R\]](#).

Research of women undergoing IVF also found benefits of following a Mediterranean diet, such as increased [\[R, R, R, R\]](#):

- Implantation
- Pregnancy
- Live birth rates

Women younger than 35 years old may benefit the most.

8



Acupuncture

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Visit a licensed acupuncturist for a session, typically lasting between 30 to 60 minutes, once or twice a week. Depending on your specific condition, a course of treatment might range from a few weeks to several months.

TYPICAL STARTING DOSE

1 hour

Description

Acupuncture is a part of traditional Chinese medicine. It involves inserting thin needles at specific points on the body. People use it to relieve pain and allergies, as well as reduce nausea and improve sleep.

[Acupuncture](#) is a part of traditional Chinese medicine. It involves **inserting thin needles at specific points on the body**. People use it to [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Relieve pain
- Improve sleep quality
- Relieve allergies
- Reduce nausea

How it helps

Research of over 4,000 women found that acupuncture may help with infertility by [\[R\]](#), [\[R\]](#):

- Boosting pregnancy rates by 84-134%
- Increasing ovulation rates and endometrial thickness
- Lowering LH levels
- Cutting pregnancy losses by 81%

However, the quality of the studies was low [\[R\]](#), [\[R\]](#).

Additionally, acupuncture during embryo transfer was linked to a 32% increase in pregnancies and a 30% rise in live births, along with a reduction in miscarriages, based on the analysis of 20 studies of 5,130 women undergoing assisted reproduction [\[R\]](#).

9



Cognitive-Behavioral Therapy (CBT)

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Schedule weekly sessions with a certified cognitive-behavioral therapist for a period of 5 to 20 weeks. Engage actively in exercises assigned by your therapist both during sessions and as homework to apply CBT strategies to daily life.

Description

Cognitive-behavioral therapy (CBT) is a psychotherapeutic approach that has been effective in treating various mental health conditions by helping individuals identify and change negative thought patterns and behaviors. It is widely used for conditions like depression, anxiety, and phobias.

Psychotherapy (talk therapy) involves talking about your health with a licensed therapist. It may improve the way you react to certain experiences [\[R\]](#).

Talk therapy is a great way to improve many conditions, including [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Depression
- Anxiety disorders
- PTSD
- OCD
- Substance use disorder
- Bipolar disorder

Cognitive-behavioral therapy (CBT) is a type of talk therapy. CBT aims to change the way you think about your life and yourself. Through CBT, a therapist can help you develop healthy coping mechanisms [\[R\]](#).

How it helps

The analysis of 39 studies of 2,746 people concluded that psychosocial interventions, especially cognitive-behavioral therapy for couples may help both reduce psychological distress and increase pregnancy rates. However, not all studies found benefits for pregnancy rates [\[R\]](#), [\[R\]](#), [\[R\]](#).

10



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

Stress may be linked to decreased odds of becoming pregnant [\[R\]](#).

It may also decrease the success of some fertility treatments. However, many studies didn’t find this connection [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Relaxation techniques such as mindfulness and yoga may help improve pregnancy rates and reduce stress in women with fertility problems [\[R\]](#), [\[R\]](#), [\[R\]](#).

11



Limit Meat Intake

IMPACT2 / 5

EVIDENCE3 / 5

How to implement

Substitute red and processed meats with plant-based proteins, such as beans, lentils, and tofu, for at least two meals per week. Gradually increase the number of meat-free meals by incorporating more fruits, vegetables, and whole grains into your diet daily.

Description

Limiting meat intake involves consuming fewer animal-based products, often as part of a plant-based diet. This dietary choice can provide health benefits such as lower cholesterol levels, reduced risk of certain chronic diseases, and a decreased environmental footprint.

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

You should choose high-quality foods that give you the “best” version of each macronutrient. For example, too much saturated fat and protein from certain animal sources may increase the risk of heart disease and infertility [\[R, R, R\]](#).

Consider replacing red meat with other high-protein foods, such as [\[R, R\]](#):

- Eggs
- Fish
- Soy
- Beans

How it helps

Women who eat a lot of meat may be less fertile. They may also have less success with fertility treatments [\[R, R\]](#).

Eating a lot of red meat can make it more difficult for an egg to develop and get fertilized [\[R, R, R\]](#).

A diet low in red meat, such as the Mediterranean diet, may improve fertility. It may also help some fertility treatments work better. However, one study did not find this benefit [\[R, R, R, R, R\]](#).

Other diets that replace meat with plant-based protein may also increase fertility [\[R, R\]](#).

12



Inositol

IMPACT

2 / 5

EVIDENCE

3 / 5

How to implement

Take inositol as a daily supplement, usually available in powder or capsule form. The typical dosage ranges from 2 grams to 18 grams per day, divided into smaller doses taken with meals and water to aid absorption. It's important to start with a lower dose and gradually increase to avoid digestive side effects.

TYPICAL STARTING DOSE

2 g

Description

Inositol is a naturally occurring compound that plays a role in cell signaling and neurotransmitter function. It has been studied for its potential in promoting mental health and managing conditions like anxiety and depression when used as a supplement under the guidance of a healthcare professional.

Inositol is a type of sugar that our bodies need to function. It was considered a vitamin (vitamin B8) until it was discovered that our bodies can make it from another common sugar, glucose [\[R\]](#).

[Myo-inositol](#) is the most common form of inositol. It plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart health
- Normal blood sugar levels
- Mental health
- Cognitive function
- Reproductive health

Myo-inositol can convert to [D-chiro-inositol](#) in the body. These two forms of inositol are often combined in supplements. People use them to improve blood sugar control and PCOS [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

Myo-inositol may improve fertility. It may help alone or in combination with folic acid. It may also increase the success of fertility treatments in some women [\[R\]](#), [\[R\]](#).

Inositol may help by [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Supporting a healthy menstrual cycle
- Protecting against egg loss
- Improving egg quality

13



Chasteberry

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 150-500 mg of chasteberry extract daily, ideally in the morning to align with the body's natural hormonal rhythms. This dose is typically recommended for a duration of at least three months to evaluate its effectiveness on symptoms.

TYPICAL STARTING DOSE

150 mg

Description

Chasteberry, also known as chaste tree or Vitex, is an herb commonly used to support women's health, particularly in addressing symptoms of premenstrual syndrome (PMS) and hormonal imbalances. It may help regulate the menstrual cycle and alleviate some PMS symptoms.

Chasteberry is the fruit of the chaste tree (*Vitex agnus-castus*), a plant native to Europe and Asia [\[R\]](#), [\[R\]](#).

Early studies note that chasteberry may help with menstrual problems [\[R\]](#).

How it helps

In one study, a chasteberry supplement (30 drops, 2x/day for 3 months) doubled pregnancy rates among 96 women with luteal phase disorders, amenorrhea, and unexplained infertility. Another study observed that taking a chasteberry preparation (50 drops, 3x/day for 3-6 months), 38 out of 67 women with fertility issues experienced increased spontaneous menstruation, higher progesterone levels during the luteal phase, shorter menstrual cycles, earlier ovulation, and successful pregnancies [\[R\]](#), [\[R\]](#).

Moreover, a study involving 52 women with irregular periods due to high prolactin levels found that chasteberry supplementation (20 mg/day for 3 months) helped regulate their menstrual cycles and improve fertility by normalizing prolactin levels [\[R\]](#).

Please note: Chasteberry may not be safe for women who are pregnant or breastfeeding. It may also not be safe for women with hormone-related conditions, such as some cancers. Chasteberry may interact with some medications. Talk to your doctor before taking chasteberry [\[R\]](#).

14



Music Therapy

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Engage in music therapy sessions for at least 30 minutes a day, three times a week. These sessions can involve listening to music, playing an instrument, singing, or writing songs, facilitated by a certified music therapist if possible.

TYPICAL STARTING DOSE
30 minutes

Description

Music therapy is a therapeutic approach that uses music to address physical, emotional, cognitive, and social needs. It can improve mental health, enhance emotional expression, and support overall well-being.

[Music](#) therapy is a form of therapy that involves making, reflecting on, and/or listening to music. It can be applied individually or in groups and may not require the presence of a therapist [\[R\]](#).

Music therapy provides tools for body relaxation and positive imagery. It aims to improve communication, quality of life, and well-being [\[R\]](#), [\[R\]](#).

How it helps

A meta-analysis of 7 trials and 793 infertile women undergoing assisted reproductive technologies found that music therapy reduces anxiety and pain while increasing satisfaction scores [\[R\]](#).

Music therapy can help alleviate stress, which is often associated with fertility issues among women.

15



Black Cohosh

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take a black cohosh supplement of 20 to 40 mg twice daily for up to six months to manage menopause symptoms. Make sure to check the label for a product standardized to contain 2.5% triterpene glycosides.

TYPICAL STARTING DOSE
40 mg

Description

Black cohosh is an herbal remedy often used by some individuals to alleviate symptoms of menopause, such as hot flashes and mood swings.

How it helps

In two studies of 217 women with and without PCOS, black cohosh (20-120 mg/day for 10 days) combined with standard therapy improved progesterone levels, ovulation, endometrial thickness, and pregnancy rates. However, this same combination did not improve pregnancy outcomes in another group of 134 women [\[R\]](#), [\[R\]](#), [\[R\]](#).

16



D-chiro-inositol (DCI)

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take a supplement containing 600-1200 mg of D-chiro-inositol daily, preferably with meals to enhance absorption. This dosage may vary based on individual health conditions and goals, so it's essential to consult with a healthcare professional for personal guidance.

TYPICAL STARTING DOSE

600 mg

Description

D-chiro-inositol is a compound related to inositol that is used as a dietary supplement, particularly in the management of polycystic ovarian syndrome (PCOS). It may help improve insulin sensitivity and hormonal balance in individuals with PCOS.

How it helps

Research of over 200 women with polycystic ovary syndrome (PCOS) revealed that DCI supplements may improve oocyte quality and restore regular menstrual cycles and healthy hormone levels. DCI may also reduce acne and excess body hair and lower insulin resistance [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

The Mediterranean diet may help with fertility by increasing the amount of folate in the blood and follicular fluid. This nutrient is essential for proper embryo implantation and development [\[R\]](#), [\[R\]](#).

17



Coenzyme Q10 (CoQ10)

IMPACT2 / 5

EVIDENCE2 / 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

Supplementing with **CoQ10 (180-1,200 mg/day for 2-12 weeks)** may increase pregnancy rates in women undergoing fertility treatments [R](#).

CoQ10 may help with fertility treatments by improving egg quality [R](#).

Note that CoQ10 is fat-soluble. This means that taking it with a fatty meal should help you absorb it better [R](#).

Please note: *CoQ10 may reduce the effectiveness of blood thinners such as warfarin. Talk to your doctor before taking CoQ10* [R](#).

18



Myo-inositol

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Take 2 grams of myo-inositol supplement orally twice a day, preferably with meals to enhance absorption. This regimen should be followed daily for at least 6 months to observe significant benefits.

TYPICAL STARTING DOSE

4 g

Description

Myo-inositol is a naturally occurring compound that plays a role in various cellular functions. It is used in dietary supplements and is believed to have potential benefits for mental health, hormone regulation, and insulin sensitivity.

Inositol is a type of sugar that our bodies need to function. It was considered a vitamin (vitamin B8) until it was discovered that our bodies can make it from another common sugar, glucose [\[R\]](#).

[Myo-inositol](#) is the most common form of inositol. It plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart health
- Normal blood sugar levels
- Mental health
- Cognitive function
- Reproductive health

Myo-inositol can convert to [D-chiro-inositol](#) in the body. These two forms of inositol are often combined in supplements. People use them to improve blood sugar control and PCOS [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

A review of 8 studies with 812 women concluded that myo-inositol (2-4 g/day over 1-6 months) improves fertility by increasing ovulation in women with polycystic ovary syndrome (PCOS) and lowering male sex hormones in those with and without this condition [\[R\]](#).

Myo-inositol may also improve in vitro fertilization when combined with standard therapy [\[R\]](#), [\[R\]](#).

However, myo-inositol alone may not improve ovarian reserve in women with PCOS undergoing IVF [\[R\]](#).

19



Avoid PBDE

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

To avoid PBDEs, replace old furniture that might contain these chemicals, vacuum and dust your home regularly to reduce dust particles that might contain PBDEs, and use products labeled as PBDE-free. Ensure you check labels on electronics, furnishings, and textiles for mention of being PBDE-free.

Description

Polybrominated Diphenyl Ethers (PBDEs) are commonly found in flame retardants used in household items. These chemicals are linked to health issues like hormone disruption and neurodevelopmental problems. Opt for PBDE-free products, improve ventilation, and frequently clean to minimize dust, which can contain PBDE particles, promoting a healthier living environment.

How it helps

PBDEs are chemicals found in many everyday items and they're known to disrupt hormones, which can potentially affect fertility. By avoiding them, you may reduce the risk of hormone-related fertility issues, providing a more conducive environment for fertilization.

A [study of 207 women](#) associated PBDE exposure with a **34% longer time to pregnancy, lower FSH levels, and up to 30% higher risk of abortion** [\[R\]](#).

20



Avoid Iron Supplements (Unless Deficient)

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

How it helps

A study involving 582 women seeking fertility treatments suggests that those taking high levels of supplemental iron (above 45 mg/day) may have a 17-32% lower ovarian reserve compared to those who took 20 mg/day or less. However, the evidence quality is low [\[R\]](#).

21

Avoid Exposure to Heavy Metals

IMPACT

1 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

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

- Lead
- Cadmium
- Arsenic
- Chromium
- Mercury

How it helps

A meta-analysis of 16 studies associated high levels of lead, mercury, cadmium, chromium, manganese, and arsenic with low fertilization and pregnancy rates in women undergoing in vitro fertilization. Additionally, lead, cadmium, barium, and uranium were associated with infertility, lead, cadmium, and antimony with miscarriage, aluminum, magnesium, and cadmium with congenital heart disease, arsenic, cadmium, mercury, and lead with PCOS, lead with endometriosis, and mercury with uterine leiomyomata [\[R\]](#).

Heavy metals can create imbalances in hormone levels and damage eggs or embryos.

Aerobic Exercise (Cardio)

1 / 5

2 / 5

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.

1 hour

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.

Lifestyle changes involving diet and exercise may improve pregnancy rates and live birth rates in overweight or obese infertile women. In addition, diet improvement alone and the combination of diet, exercise, and behavioral modification counseling may benefit natural conception [R].

However, strenuous, intense exercise (more than 5h/week) is associated with decreased ovulation [R].

Exercise may help by supporting a healthy body weight, which may improve ovulation and the likelihood of pregnancy [R, R].

23

Avoid Arsenic Exposure

IMPACT

1 / 5

EVIDENCE

2 / 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

A study of 838 women found that infertile women had higher urinary cadmium and arsenic levels [\[R\]](#).

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 [\[R\]](#).

Arsenic can harm ovarian health and disrupt hormone regulation.

24



Melatonin

IMPACT1 / 5

EVIDENCE2 / 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

A meta-analysis of 5 trials and 680 female participants found no benefits of melatonin supplementation on fertility parameters such as clinical pregnancy, number of oocytes retrieved, or miscarriage rates. However, another meta-analysis found that melatonin increased top-quality embryos but not live birth rates in women undergoing artificial reproductive technologies [\[R, R\]](#).

Melatonin may help by protecting eggs from oxidative stress, which can improve their quality.

25

Avoid Cannabis

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Stop any form of cannabis use, including smoking, vaping, edibles, and topical applications. If you currently use cannabis, it's recommended to cease usage immediately and seek support or counseling if necessary for cessation.

Description

Avoiding cannabis is advised in situations where its use is prohibited by law or poses health risks, particularly for individuals with a history of substance abuse or mental health conditions. Responsible use and adherence to local regulations are essential to minimize potential negative consequences.

[Cannabis](#) (marijuana) is a plant used for its medicinal and recreational properties. It contains substances called *cannabinoids*, such as [CBD](#) and THC [\[R\]](#).

Cannabis misuse can have long-term consequences, such as [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Lung damage
- Mental health problems
- Cognitive impairment

How it helps

Cannabinoids, the active compounds in cannabis, may worsen fertility and pregnancy outcomes. However, current research, mainly focusing on cannabis use during pregnancy and breastfeeding, does not reveal their exact impact [\[R\]](#), [\[R\]](#).

26

Avoid Phthalate Exposure

IMPACT

1 / 5

EVIDENCE

1 / 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

NHANES: After adjusting for age and race, Σ DEHP was associated with increased odds of infertility for the second quartile (OR = 2.35) and third quartile (OR = 2.83) when compared to the first quartile (reference). The adjusted OR for the highest quartile of Σ DEHP found no association and it was not statistically significant [\[R\]](#).

27



Dietary Omega-3 Fatty Acids

IMPACT

1 / 5

EVIDENCE

1 / 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

Greater omega-3 levels may be associated with a higher probability of live birth for women undergoing assisted reproductive techniques [\[R\]](#).

A study of 55 women found that following a diet enriched in marine omega-3s found increased EPA and DHA around the ovules. However, another study of 64 women linked lower omega-3 levels with better ovarian stimulation [\[R\]](#), [\[R\]](#).

Omega-3 may help by supporting ovule maturation [\[R\]](#).

28



Avoid BPA (Bisphenol A) Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To avoid BPA exposure, choose BPA-free products, particularly when selecting food containers, water bottles, and baby bottles. Prefer glass, porcelain, or stainless steel containers, especially for hot food or liquids. Reduce use of canned foods as they may be lined with BPA and avoid handling thermal paper receipts, as they can contain BPA. When possible, select fresh or frozen foods over canned goods.

Description

Avoiding BPA (Bisphenol A) exposure involves minimizing contact with products or containers containing this chemical, which is commonly found in plastics and can potentially disrupt hormone regulation.

BPA (bisphenol A) is a chemical used to make certain plastics and resins. BPA-containing plastics are often used in containers that store food and beverages. Plastics marked with **recycling code 3 or 7** may contain BPA [\[R\]](#).

BPA is a well-known hormone disruptor. Research has linked BPA exposure to diabetes, heart disease, altered behavior, and more [\[R\]](#).

How it helps

A study of 789 participants associated a high exposure to BPA with a 13% higher risk of female infertility [\[R\]](#).

BPA can disrupt hormonal balance, potentially leading to ovulation issues and poorer egg quality.

29

Avoid Cadmium Exposure

IMPACT

1 / 5

EVIDENCE

1 / 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 study of 838 women found that infertile women had higher urinary cadmium and arsenic levels [\[R\]](#).

Cadmium can disrupt hormone activity that's crucial for fertility. The metal's adverse effects include damage to the lining of the uterus and ovaries.

30



Mindfulness

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Set aside 5-10 minutes each day to practice mindfulness meditation. Find a quiet place, assume a comfortable seated position, close your eyes, focus on your breathing, and observe your thoughts and sensations without judgment.

TYPICAL STARTING DOSE

30 minutes

Description

Mindfulness involves paying focused and non-judgmental attention to the present moment. It can reduce stress, improve emotional regulation, and enhance overall mental clarity and well-being.

Mindfulness is the practice of being aware of the present moment. When practicing mindfulness, a person acknowledges their thoughts, feelings, and sensations without any judgment [R].

Mindfulness and other types of [meditation](#) may improve [R]:

- Weight and anxiety
- Low mood
- Sleep disturbances
- Pain
- High blood pressure

How it helps

In a study of 92 infertile women, a 10-week mindfulness-based program decreased depression, shame, entrapment, and defeat while improving mindfulness and coping skills [R].

31

Avoid Organophosphate Pesticide Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

To reduce organophosphate pesticide exposure, buy organic produce when possible, thoroughly wash and peel fruits and vegetables, avoid using chemical pesticides in your home and garden, and wear protective clothing and a mask if you must handle pesticides for agricultural or landscaping work.

Description

Reducing organophosphate exposure involves minimizing contact with pesticides and insecticides containing these chemicals, which can protect against potential health risks such as neurotoxicity and respiratory issues, particularly for individuals working in agriculture or pest control.

Organophosphates (OP) are the most widely used pesticides worldwide. They include [\[R\]](#):

- Parathion
- Malathion
- Chlorpyrifos
- Diazinon
- Phosmet

Chronic exposure to OPs has been linked to [\[R\]](#), [\[R\]](#):

- Fertility problems
- Cognitive problems
- Nerve damage
- Cancer and gene damage

How it helps

Reducing organophosphate pesticide exposure can enhance female fertility as these chemicals can interfere with the hormones that are vital for conception. They can negatively impact both the quality of a female's eggs and her ovarian function, hindering fertilization.

A [study of 659 women](#) associated high levels of **dimethylphosphate with a 2.53-fold higher risk of female infertility** [\[R\]](#).

32

Avoid Lead Exposure

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

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

Description

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

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

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

How it helps

A study of 838 women associated high blood and urinary lead levels with an increased risk of infertility in women aged 35-44 years and those who were overweight [\[R\]](#).

Lead can harm the reproductive system and interfere with hormone regulation, negatively affecting fertility.

33



Astaxanthin

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take an astaxanthin supplement daily, with a typical dosage ranging from 4 to 12 mg. It is best taken with a fat-containing meal to enhance absorption.

TYPICAL STARTING DOSE

12 mg

Description

Astaxanthin is a powerful antioxidant found in certain microalgae and seafood. It is known for its potential benefits in reducing oxidative stress, supporting skin health, and promoting eye health.

[Astaxanthin](#) is a naturally-occurring orange-red pigment carotenoid found in algae, shrimp, lobster, crab, and salmon [\[R\]](#). As an antioxidant, astaxanthin is **10 times stronger than zeaxanthin, lutein and [beta-carotene](#), and 100 times stronger than [vitamin E](#)** [\[R\]](#). People take astaxanthin to:

- Support skin health [\[R, R\]](#)
- Reduce exercise fatigue [\[R, R\]](#)
- Prevent heart disease [\[R, R, R\]](#)

How it helps

Astaxanthin, a potent antioxidant, could improve egg quality and ovarian function by reducing oxidative stress in the body that negatively impacts fertility. However, it should be added as part of a comprehensive plan and not relied upon solely to improve fertility.

In a [placebo-controlled trial of 50 infertile women with endometriosis undergoing assisted reproduction](#), supplementation with astaxanthin (6 mg/day) for 12 weeks **increased TAC and SOD while lowering MDA**. Astaxanthin also **improved the number of oocytes retrieved, number of mature oocytes, and high-quality embryos** [\[R\]](#).

34



L-Carnitine

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take 500 mg of L-carnitine supplement daily with a glass of water, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

500 mg

Description

L-carnitine is an amino acid-like compound that plays a role in energy metabolism and helps prevent toxic substances from building up in cells. It is often used in dietary supplements for its potential to support muscle recovery, reduce fatigue, and enhance athletic performance.

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

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

People use L-carnitine for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Heart problems
- Overactive thyroid
- Fertility problems
- Blood sugar control
- Weight control

How it helps

L-carnitine may help improve female fertility by increasing the energy supply to the ovaries, which may improve egg quality and ovulation rate. Secondly, it can also reduce oxidative stress, which is often linked to fertility problems.

In a study involving 214 patients who had previously undergone unsuccessful in vitro fertilization-embryo transfer (IVF-ET), oral L-carnitine supplementation for an average of 82 days was administered. There were no significant differences in oocyte retrieval, maturation, and fertilization rates. However, embryo quality on Days 3 and 5 improved significantly following L-carnitine administration, leading to the successful birth of healthy neonates in subsequent IVF-ET cycles [\[R\]](#).

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Avoid Exposure to Parabens

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Check the labels of personal care products such as lotions, shampoos, and cosmetics. If they list methylparaben, propylparaben, butylparaben, or ethylparaben among the ingredients, choose alternative products that are paraben-free. Aim to do this consistently for all personal care purchases.

Description

Avoiding exposure to parabens involves avoiding personal care and cosmetic products that contain these synthetic preservatives. This is done to minimize the potential risk of skin irritation and to reduce the likelihood of exposure to compounds that may disrupt hormone regulation.

How it helps

A study of 789 participants associated a high exposure to ethyl paraben with a 57% higher risk of female infertility [R].

Parabens may contribute to female infertility by disrupting hormone balance.

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Avoid Triclosan

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Check product labels for triclosan and choose alternatives without this chemical. This includes personal care products like toothpaste, soaps, and hand sanitizers. Aim to replace products as they run out with triclosan-free versions.

Description

Avoiding products containing triclosan, an antibacterial and antifungal agent, can help prevent potential side effects and antibiotic resistance. Choosing triclosan-free alternatives supports safer and more sustainable hygiene practices.

How it helps

Two studies of 961 women associated high urinary triclosan levels with decreased antral follicle count and reduced implantation rate in those undergoing IVF. Another study (789 women) associated combined exposure to triclosan, benzophenones, and BPA with female infertility [R, R, R].

Triclosan can disrupt hormone levels, potentially interfering with egg maturation or implantation.

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Yoga

IMPACT

1 / 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

Practicing yoga (2x/week for 6 weeks) reduced infertility-associated stress in a study of 128 women [\[R\]](#).

Next Steps

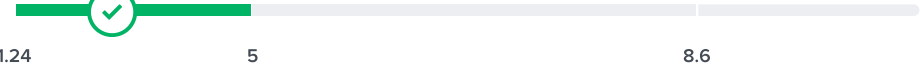
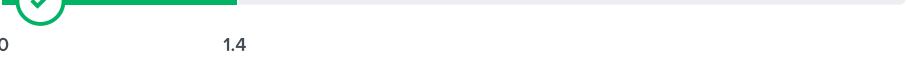
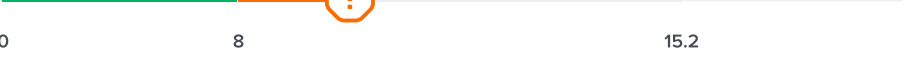
Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your lab results

Your lab results are impacted by the combined effect of your genes, environment and lifestyle.

Lab tests will give you the best picture of your current health status, while your genes provide insight into your health predispositions and which recommendations are best for you.

	TSH	2.76 mIU/mL		9 Nov 2025
	FSH	2.46 mIU/mL		9 Nov 2025
	LH	2.73 mIU/mL		9 Nov 2025
	Zinc	17.12 umol/L		9 Nov 2025
	Vitamin B12	687 pg/mL		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



Estradiol

101.46 pg/mL



9 Nov 2025