SelfDecode™

Sepsis

Disease Report

REPORT CATEGORIES

INFLAMMATION & AUTOIMMUNITY

IMMUNITY & INFECTIONS

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

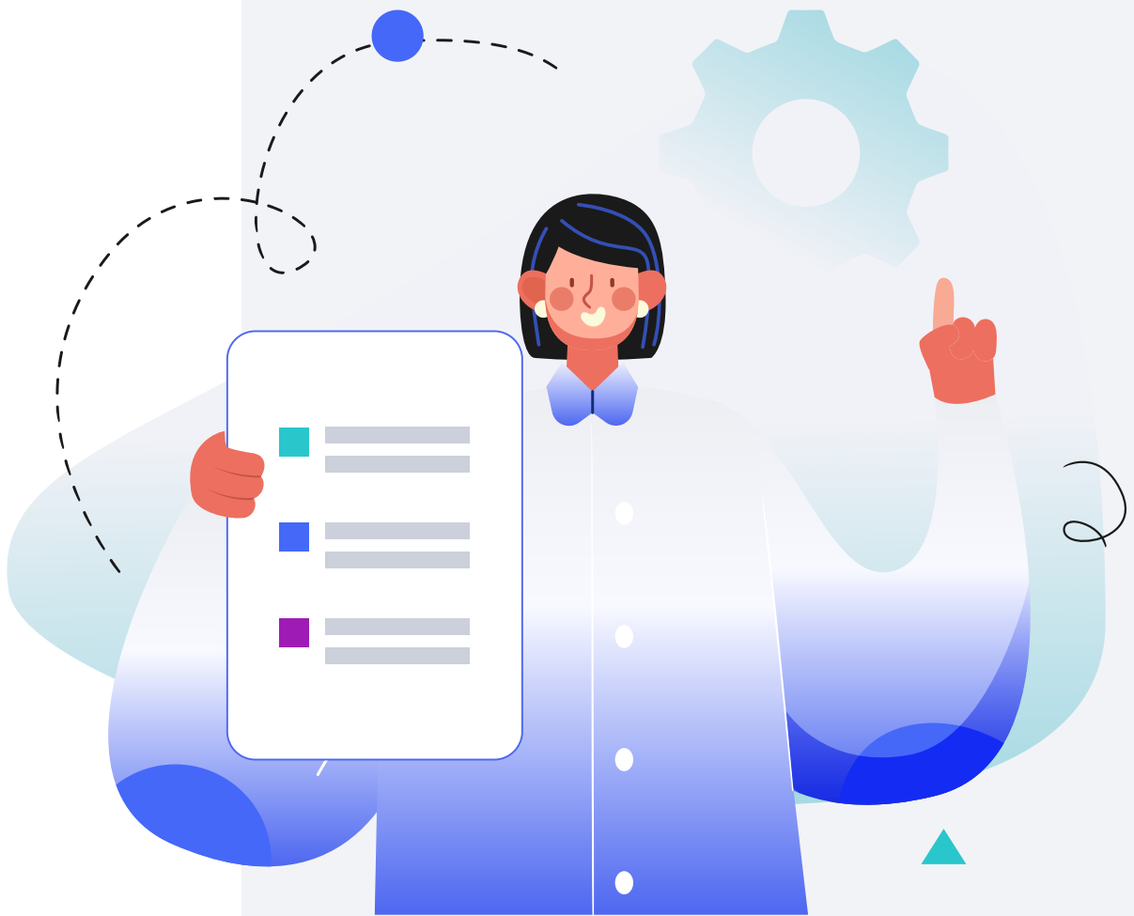
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

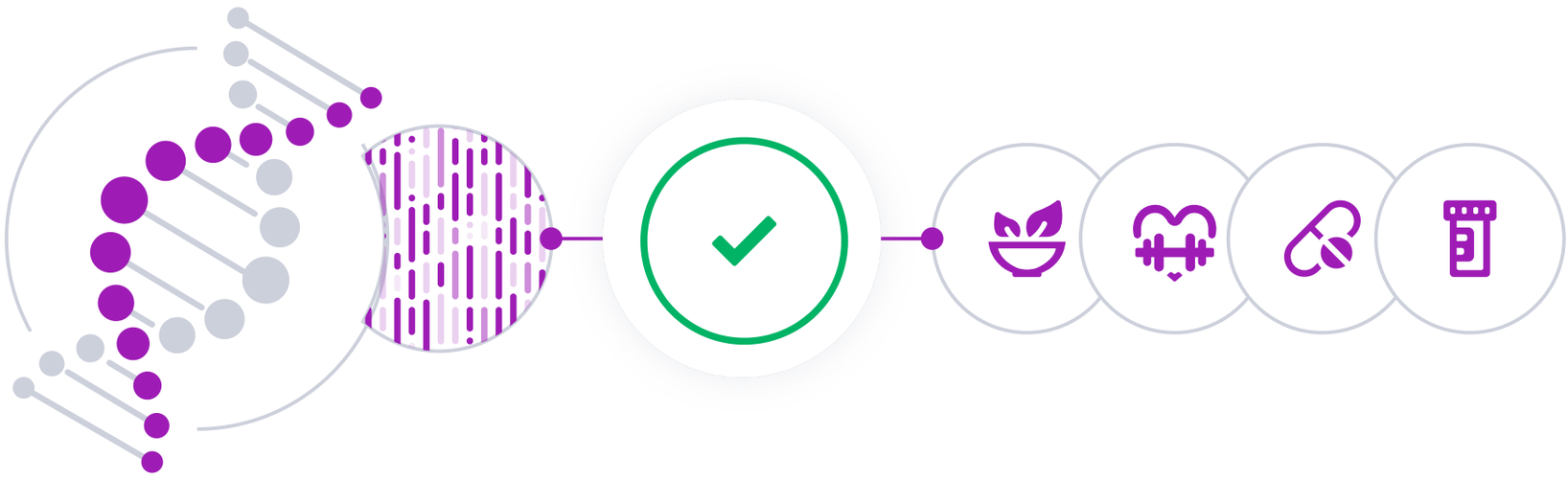


DISCLAIMER

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

How this works

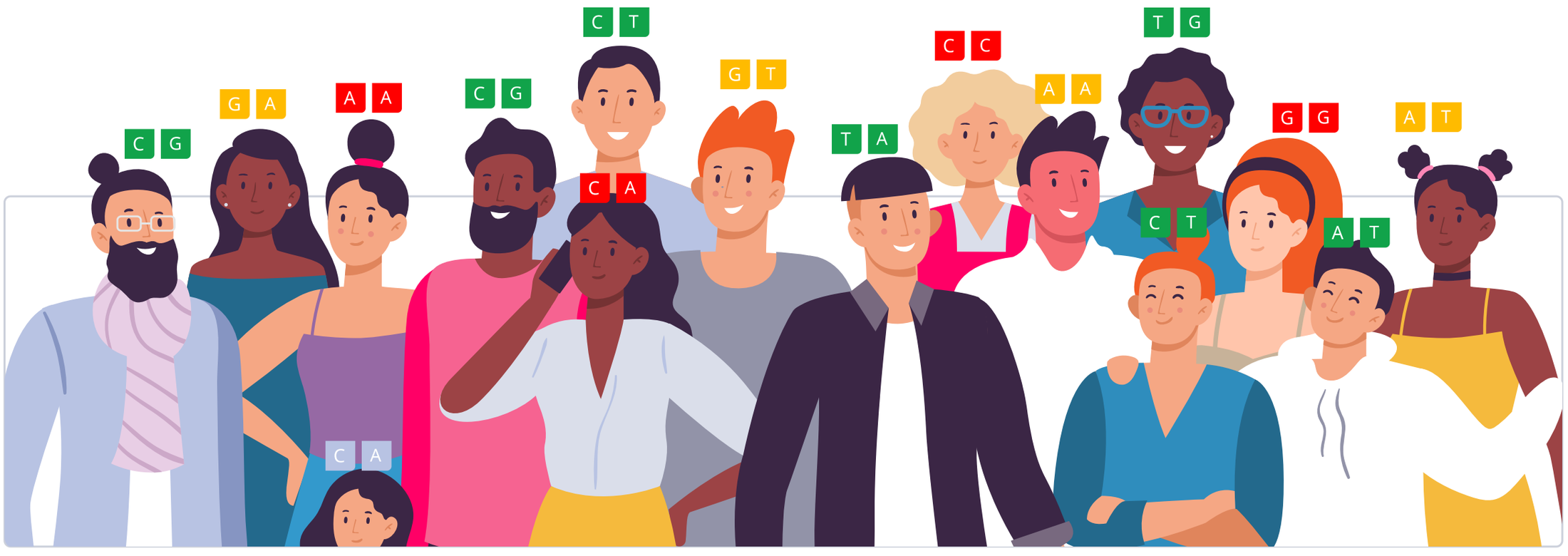
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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

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

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



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

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

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

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

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

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

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

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

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

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

Impact

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

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

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

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

Recommendation Evidence

5 / 5

Recommendations that are considered effective and generally recommended by experts and medical bodies.

4 / 5

Recommendations that are considered likely effective and that have multiple independent meta-analyses and a great many studies supporting them.

3 / 5

Recommendations that are considered possibly effective and have many studies supporting them

2 / 5

Recommendations that have insufficient evidence, with two or several clinical trials supporting them, or many studies but with ambiguous results.

1 / 5

Recommendations that have insufficient evidence, with a single clinical trial, or with many studies most of which didn't find support for the recommendation.

0 / 5

No evidence in humans.

Genotype-specific Evidence

High-quality

Direct evidence that a recommendation helps more in people with your gene variant (many clinical trials, afew large clinical trials, or a meta-analysis).

Medium-quality

Direct evidence that a recommendation helps more in people with your gene variant (a few clinical trials or one large clinical trial).

Low-quality

Direct evidence that a recommendation helps more in people with your gene variant (a single clinical trial or more trials with inconsistent results).

Indirect

A recommendation may help more in people with your gene variant because it targets a specific gene or protein affected by your variant (e.g., MTHFR, dopamine).

In theory

A recommendation may help more in people with your gene variant because it targets a specific mechanism affected by your variant (e.g., inflammation, oxidative stress).

Some things to keep in mind:

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

Introduction

Sepsis is a life-threatening medical condition that arises when the body's response to an infection injures its own tissues and organs. It can lead to systemic inflammation, tissue damage, organ failure, and death if not recognized early and treated promptly.

The symptoms of sepsis vary but typically include a combination of the following:

- High fever, chills, or very low body temperature
- Rapid heart rate
- Rapid breathing or shortness of breath
- Confusion or disorientation
- Extreme pain or discomfort
- Pale or discolored skin
- Sweaty or clammy skin
- Decreased urine output

Sepsis is triggered by an infection. The most common infections leading to sepsis are those of the lungs, urinary tract, skin, and gastrointestinal tract. These infections can be caused by bacteria, viruses, fungi, or parasites. However, bacterial infections are the most typical causes.

Risk Factors and Treatment

While sepsis can occur in anyone with an infection, certain individuals are at higher risk:

- People with weakened immune systems, including those with conditions like HIV/AIDS, cancer, or those taking immunosuppressive medications.
- Very young children and older adults, whose immune systems are typically not as robust.
- Patients with chronic illnesses, such as diabetes, kidney or liver disease.
- People who have recently had surgery or have invasive devices like catheters or breathing tubes.
- Hospitalized patients, especially those in intensive care units.

Treatment of sepsis needs to be quick and aggressive, usually in a hospital setting. The mainstay of sepsis treatment includes:

- Antibiotics to fight infection. Initial broad-spectrum antibiotics are refined once the specific infection-causing agent is identified.
- Intravenous fluids to maintain blood pressure and circulation.
- Vasopressors if blood pressure cannot be maintained with fluids alone.
- Support for other affected organs may involve dialysis for kidney failure, mechanical ventilation for respiratory failure, or surgery to remove sources of infection such as abscesses or infected tissues.

TYPICAL LIKELIHOOD

Typical likelihood of sepsis based on 939,004 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
GPM6A	rs79422343	TT
RIN3	rs149187226	GG
CHRM2	rs142021422	CC
KLHDC10	rs181021474	TT
RALGDS	rs140871186	CC
MAST4	rs577432066	GG
MAD1L1	rs147296048	AA

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

Your Recommendations

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

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

		DOSAGE
1	Vitamin C	2000 mg
2	Chinese Rhubarb	500 mg
3	Dietary Omega-3 Fatty Acids	
4	Melatonin	500 mcg
5	N-acetylcysteine (NAC)	1200 mg
6	Selenium Supplements	50 mcg
7	Avoid Iron Supplements (Unless Deficient)	
8	Thiamine Supplements	100 mg

1

Vitamin C

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

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

TYPICAL STARTING DOSE

2000 mg

Description

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

Foods rich in Vitamin C include: [R]

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

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

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

How it helps

A review of multiple studies on vitamin C's effects in medical contexts found mixed results. While some studies suggested a potential reduction in mortality, SOFA score, and vasopressor use with vitamin C treatment, others found no significant mortality reduction. Subgroup analyses indicated improved survival with vitamin C treatment for 3-4 days and short-term mortality reduction [R, R, R, R].

Three separate meta-analyses evaluated the effectiveness of intravenous vitamin C (IVVC) in treating sepsis. The first analysis found no significant benefits, the second suggested potential improvements in mortality and SOFA score, and the third showed reduced duration of vasopressor use but increased adverse events with IVVC therapy [R, R, R, R].

Overall, vitamin C did not significantly reduce 28-day mortality, ICU mortality, or in-hospital mortality. However, a subgroup analysis suggested reduced 28-day mortality in certain cases. Vitamin C did shorten ICU stays without adverse renal events and possibly improve short-term mortality, overall mortality, and SOFA scores in sepsis patients. Another study showed no significant differences in long-term mortality, ICU mortality, or acute kidney injury between groups, but there was a reduction in SOFA scores on day 3 [R, R, R, R].

Multiple meta-analyses on vitamin C in septic patients: 584 patients - reduced ICU mortality and vasopressor dose, unchanged ICU stay. 1400 patients - improved SOFA scores, no mortality difference. 868 patients - no in-hospital mortality change, improved SOFA scores, and vasopressor duration. 1572 patients - no effect on mortalities, various parameters [R, R, R, R].

Please note: *Supplementing with vitamin C is linked to a slightly higher risk of kidney stones in men. Talk to your doctor before taking vitamin C* [R, R].

2

Chinese Rhubarb

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take a supplement containing Chinese rhubarb extract, typically available in tablet or capsule form. The common dosage ranges from 500 to 1,000 mg per day, taken with water. It is advised to consult with a healthcare provider for the exact dosage based on individual health needs. Use this supplement daily for a period as recommended by the healthcare provider, usually not exceeding 8 weeks without medical advice.

TYPICAL STARTING DOSE

500 mg

Description

Chinese rhubarb is another traditional Chinese herbal remedy known for its potential to support digestive health and relieve constipation. It contains compounds that may have mild laxative effects.

Rhubarb (also named *Rhei* or *Dahuang*) is one of the most ancient herbs in traditional Chinese medicine. Rhubarb includes approximately 60 species of plants of the genus *Rheum L.* [R, R].

The rhubarb rhizome is considered a top medicinal plant in Chinese medicine. It is used for [R, R]:

- Constipation
- Kidney disease
- Herpes
- Gum disease

It may help due to its antibacterial and anti-inflammatory effects [R].

How it helps

A meta-analysis of 15 randomized controlled trials and 869 patients found that treatment with crude rhubarb reduced IL-6, TNF-α, procalcitonin, von Willebrand factor, prothrombin time, acute physiology and chronic health evaluation II scores, and gastrointestinal dysfunction. Platelet numbers increased significantly, but 28-day mortality remained unchanged [R].

Please note: *Be careful with rhubarb if you are prone to allergies. High doses of rhubarb may cause diarrhea and abdominal cramps. Avoid long-term use due to dependence risk. Rhubarb is not safe for people with gut conditions, women who are pregnant or breastfeeding, and children under 12 years of age. Make sure to consult your doctor before taking rhubarb* [R, R].

3

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

A study using genetic data suggests that certain polyunsaturated fatty acids (PUFAs) may affect the risk of sepsis and sepsis-related death. Omega-3 and DHA were associated with a lower risk of sepsis, while a higher omega-6:3 ratio was linked to a higher risk of sepsis-related death. Further research is needed for confirmation [R].

4

Melatonin

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mcg

Description

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

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

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

How it helps

A meta-analysis of three studies (120 participants) found melatonin adjunctive therapy significantly reduced CRP levels (-1.739 mg/L; 95% CI: -3.205 to -0.273; P = 0.020) and improved sepsis condition in neonates (RR: 2.212; 95% CI: 1.452 to 3.371; P < 0.0005) within 3 days. Larger, high-quality studies are needed for conclusive evidence [R].

5

N-acetylcysteine (NAC)

IMPACT 0 / 5

EVIDENCE 0 / 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

N-acetylcysteine (NAC) helps in sepsis by acting as an antioxidant. This reduces oxidative stress and inflammation in the body, which are common issues in sepsis. It can also enhance immune response, helping the body fight off infection more effectively.

6

Selenium Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

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

TYPICAL STARTING DOSE

50 mcg

Description

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

Selenium supports [R]:

- Reproduction
- Thyroid function
- DNA production
- Immune response

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

How it helps

Selenium is an essential nutrient with antioxidant properties. In the context of sepsis, selenium supplements may help reduce oxidative stress and inflammation. This can potentially improve the immune response and reduce the severity of sepsis, as suggested by some clinical studies showing beneficial effects in patients with sepsis or septic shock.

7 Avoid Iron Supplements (Unless Deficient)

IMPACT 0 / 5

EVIDENCE 0 / 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

Genetically higher iron levels may be causally associated with hospitalization due to sepsis [R, R, R].

Please note: *Some people deficient in iron may need to take iron supplements. Your doctor should help you make that decision based on your actual iron levels.*

8 Thiamine Supplements

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Take thiamine supplements orally, starting with a dose of 100 mg daily. This can be taken with or without food, but consistently at the same time each day for at least one month to help improve deficiency symptoms.

TYPICAL STARTING DOSE

100 mg

Description

Your doctor may recommend thiamine supplements. You can also discuss magnesium supplements with your doctor if your magnesium levels are low [R].

How it helps

In a study with 80 sepsis patients, four groups received Vitamin C, Thiamine, both, or neither. Mortality rates were similar across groups. Patients receiving both Vitamin C and Thiamine showed greater improvement in SOFA scores. Malondialdehyde levels were higher in sepsis patients, and Vitamin C and Thiamine levels were lower compared to healthy controls. [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.

ESR	1 mm/hr	0 6 15 100	9 Nov 2025
WBC	6.92 x10^3/mm3	2 4 6.5 11 40	9 Nov 2025
Platelet Count	215 x10^3/mm3	30 150 200 270 450 999	9 Nov 2025
hs-CRP	1.6 mg/L	0 0.5 3 100 500	9 Nov 2025