SelfDecode™

Tuberculosis

Disease Report

REPORT CATEGORIES

IMMUNITY & INFECTIONS

RESPIRATORY HEALTH

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

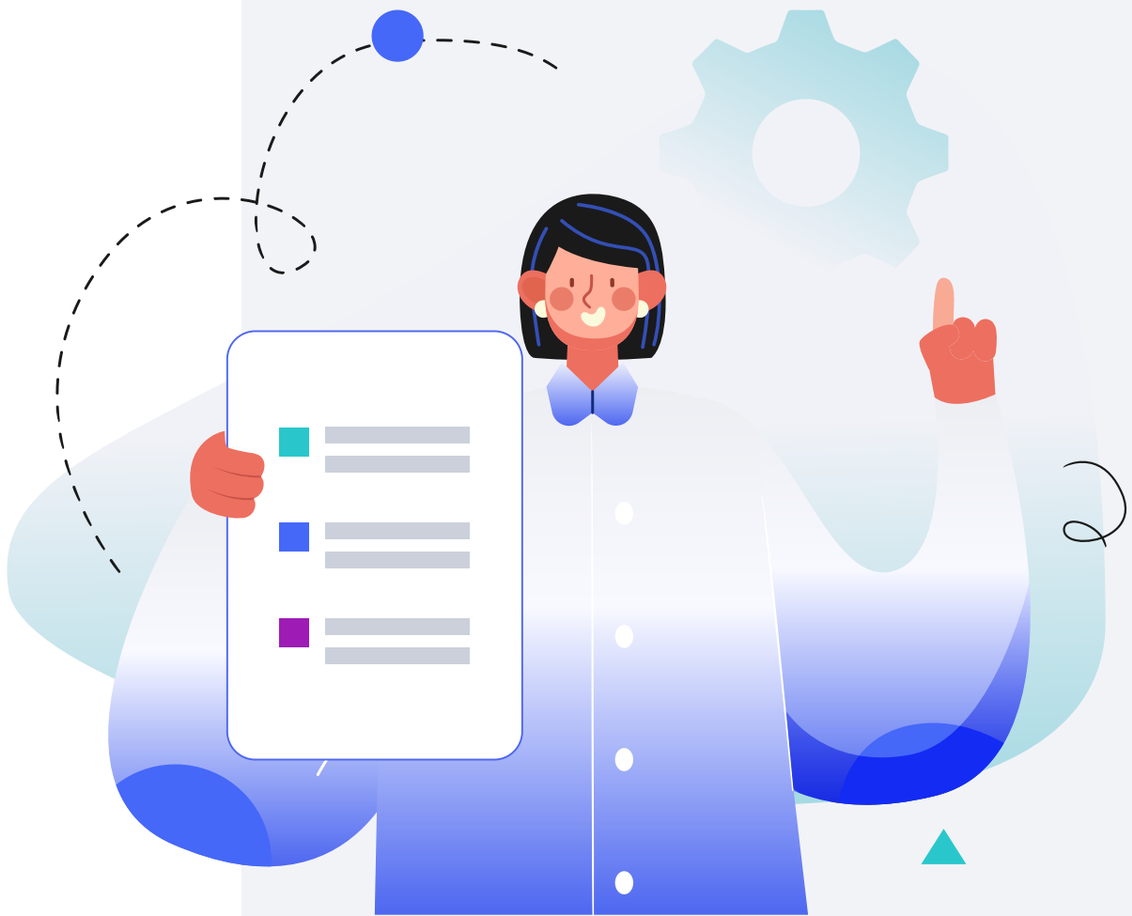
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

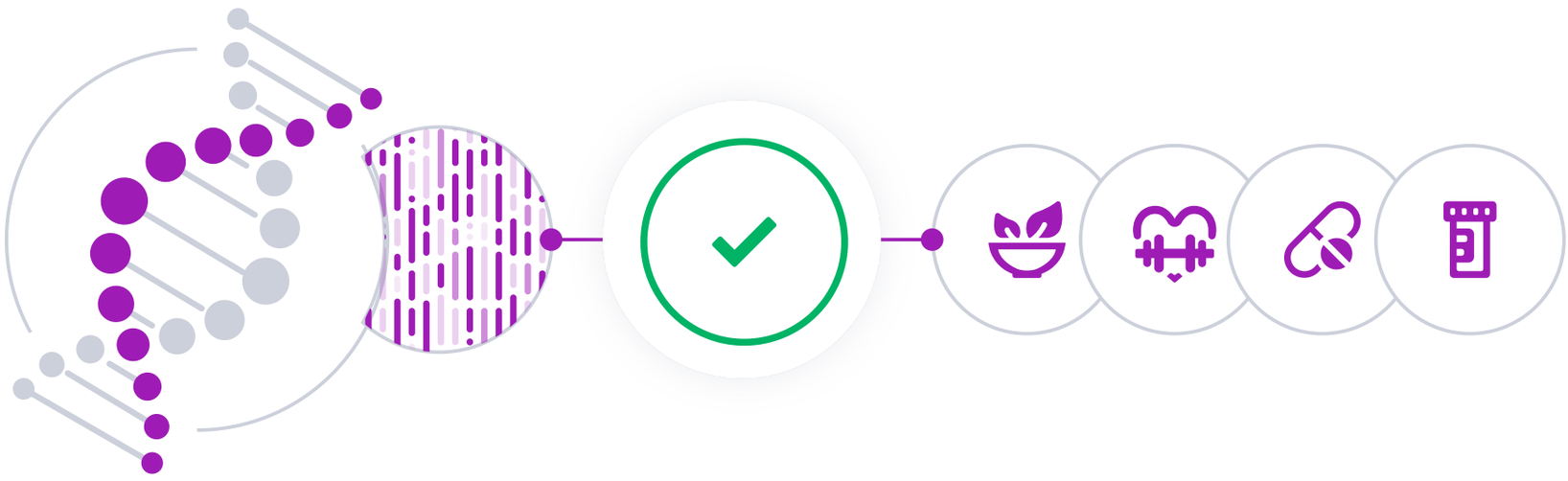


DISCLAIMER

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

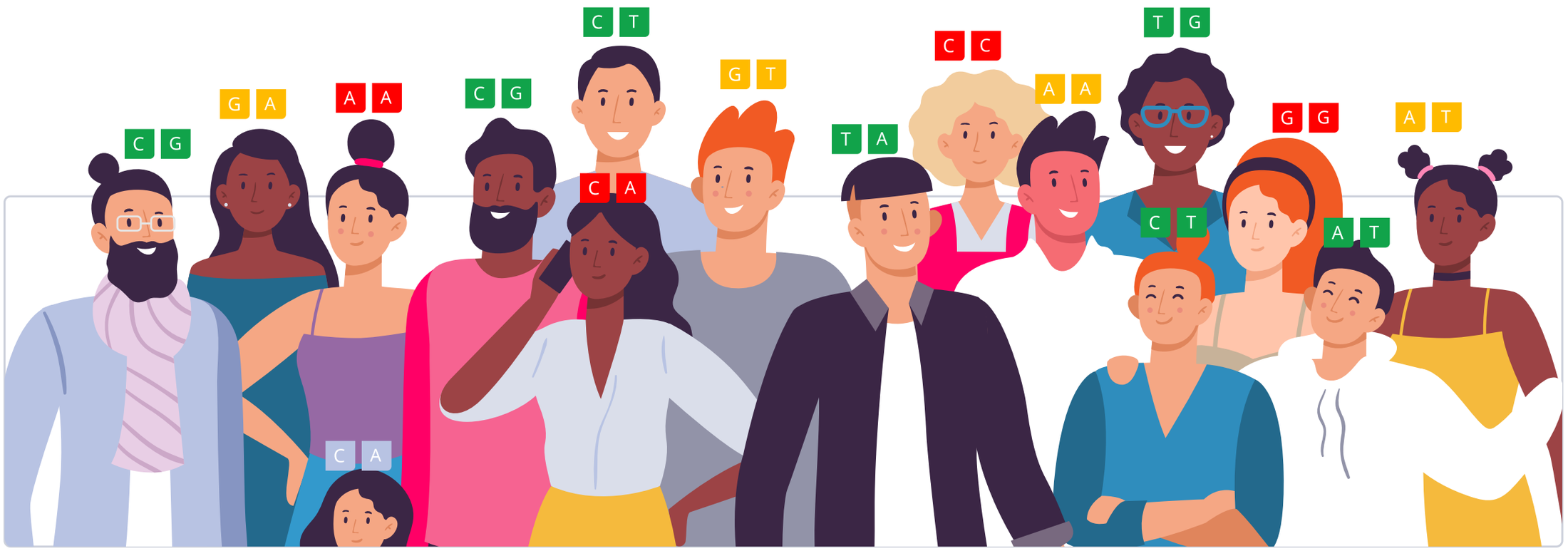
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

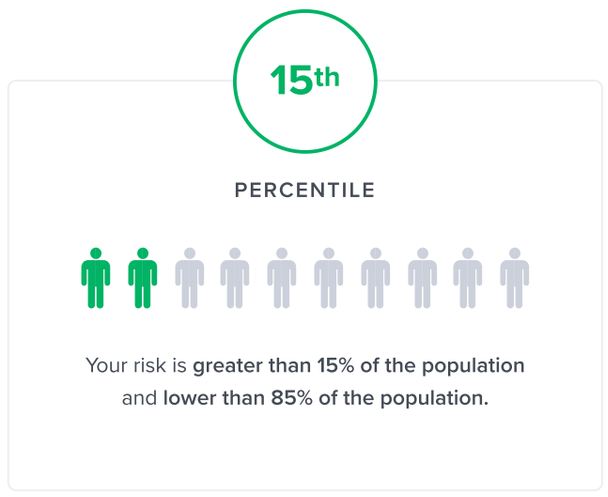
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

Tuberculosis is a potentially severe infectious disease that mainly affects the lungs, though it can spread to other organs of the body such as the brain, kidneys, or spine. The disease is caused by the bacterium *Mycobacterium tuberculosis* and is transmitted from person to person through airborne particles expelled when someone with the active pulmonary form of the disease coughs, speaks, or sneezes.

Symptoms of active tuberculosis in the lungs include a persistent cough that can produce blood-tinged sputum, chest pain, and a loss of appetite, often accompanied by weight loss and fever.

Treatment

A significant challenge with tuberculosis is that individuals can carry a latent form of the infection, which means they harbor the bacteria without showing symptoms and are not infectious. However, this latent tuberculosis can become active and infectious, particularly in those with weakened immune systems, such as people living with HIV, individuals receiving certain treatments like chemotherapy, or those with general poor health.

Effective and timely treatment is critical and typically involves a course of multiple antibiotics over several months to eradicate the bacteria and prevent the development of antibiotic resistance.

TYPICAL LIKELIHOOD

Typical likelihood of tuberculosis based on 246,777 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
NAA60	rs40363	GG
SLC10A1	rs17175227	GG
PDLIM1	rs1934954	TT
DCUN1D5	rs7947821	TT
CNOT6L	rs958617	GG
DYNC2H1	rs12294076	TT
C2CD2	rs451390	GG
NAV3	rs6538140	GG
PLD5	rs6676375	TT
SPANXN2	rs139956886	C
H2AW	rs1925714	GG
SPON1	rs1819084	AC
ZNF630	rs142513793	C
IL2RB	rs3218255	GA
LRRC3B	rs2202157	TC
DSCAM	rs2837857	TC
LIPA	rs117041426	GG
ZFPM2	rs17217757	CG
NALCN	rs1572320	AA
GPC5	rs1428	AC
TES	rs4143615	CT
LARS1	rs17426347	CA
/	rs8180820	GC
/	rs111875628	AG
FAM47A	rs5928363	A
DYNC2H1	rs12283022	AA
DMRTA1	rs586716	AA
GMDS	rs2505675	CC
RTL1	rs6575836	AA
/	rs191940547	AA
PCCB	rs752923	TT
/	rs1075309	CC

GENE	SNP	GENOTYPE
VWA8	rs1900442	CC
MYT1L	rs75609205	GG
TTC39C	rs62094793	CC
CDRT15	rs56167424	TT
GEM	rs146050799	CC
DSEL	rs12717067	CC
GPC5	rs77768762	GG
CCDC73	rs2057178	GG
/	rs6723483	TT
NEDD4	rs62045225	TT
PTPRD	rs10959019	GG
DSEL	rs9957826	GG

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	Avoid Air Pollution	
2	Zinc	15 mg
3	Maintain Optimal Vitamin D Levels	1000 iu
4	Breath Awareness	5 minutes
5	Emoxypine	
6	Acetyl-L-Carnitine	500 mg
7	Tea	
8	N-acetylcysteine (NAC)	1200 mg
9	Avoid Secondhand Smoke	
10	Exercise At Least One Hour a Day	1 hour
11	Avoid Crowds	

1

Avoid Air Pollution

IMPACT 2 / 5

EVIDENCE 2 / 5

How to implement

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

Description

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

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

Air pollution plays a role in [R, R, R, R, R]:

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

How it helps

A systematic review confirmed a strong link between tobacco smoking and tuberculosis risk. Passive smoking and indoor air pollution also showed some association. Domestic solid fuel use had inconclusive evidence regarding active tuberculosis. Exposure to certain air pollutants (PM2.5, PM10, SO2) was linked to increased incidence, while others (CO, NO2, O3) had no significant associations. Indoor air pollution was strongly associated with tuberculosis, being cases 30% more likely to be exposed [R, R, R, R, R, R].

2

Zinc

IMPACT 2 / 5

EVIDENCE 1 / 5

How to implement

Take a 15 mg zinc supplement daily, ideally with a meal to enhance absorption.

TYPICAL STARTING DOSE

15 mg

Description

Zinc is an essential mineral found in various foods, including meat, dairy, and nuts. It is crucial for immune function, wound healing, DNA synthesis, and maintaining healthy skin and nails. Zinc supplements are sometimes used to support immune health and manage zinc deficiencies.

Zinc is an essential mineral. Your body needs it to [R, R]:

- Defend against disease
- Protect DNA from damage
- Heal wounds
- Control blood sugar

Some of the best sources of zinc include **shellfish, pork, beef, and beans**. It is also available as a supplement [R].

Adults should get **8-11 mg of zinc** per day [R].

How it helps

Zinc and vitamin A supplementation in adults with pulmonary TB may enhance early sputum smear conversion, serum zinc, retinol, and hemoglobin levels but doesn't guarantee treatment success [R].

A study on pulmonary tuberculosis treatment outcomes with vitamin A and zinc supplementation found no significant impact on sputum smear or culture conversion, weight gain, or radiologic resolution at 8 weeks [R].

3

Maintain Optimal Vitamin D Levels

IMPACT 1 / 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

People with low vitamin D levels are at increased risk of incident, but not latent tuberculosis [R, R, R].

Supplementation with vitamin D as an add-on to conventional treatment may have few or no beneficial effects on treatment effectiveness but may reduce the time to sputum culture conversion [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].

4

Breath Awareness

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Set aside 5-10 minutes each day in a quiet, comfortable space to focus on your breath. Inhale slowly through your nose, allowing your chest and lower belly to rise, and exhale gently, either through the nose or mouth. Practice this daily, aiming to gradually increase the duration as it becomes a habit.

TYPICAL STARTING DOSE

5 minutes

Description

Breath awareness and specific breathing techniques, such as deep breathing or mindfulness-based practices, can help reduce stress, improve focus, and enhance overall mental well-being. These techniques are valuable tools for managing anxiety and promoting relaxation.

How it helps

In a non-placebo-controlled trial of 73 patients with tuberculosis, practicing breath awareness 6 hours/week for 2 months reduced symptom scores and increased weight. However, yoga was more effective at improving the level of infection, radiographic picture, and aerobic capacity [R].

5

Emoxypine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Emoxypine is typically available in oral capsules, tablets, or injectable forms, with the dosage depending on the condition being treated. For general antioxidant or neuroprotective purposes, the oral dose ranges from 125–250 mg taken 2–3 times daily, while more intensive treatments may require higher doses or injectable administration under medical supervision. It is usually recommended to take Emoxypine with meals to minimize gastrointestinal discomfort. Treatment duration can vary from a few weeks to several months, depending on the therapeutic goal.

Description

Emoxypine (2-ethyl-6-methyl-3-hydroxypyridine succinate) is a synthetic antioxidant and nootropic compound primarily used in Russia and some Eastern European countries. It is derived from pyridoxine (vitamin B6) and known for its neuroprotective, anti-stress, and anti-inflammatory properties.

Emoxypine can reduce anxiety, stress, and symptoms of depression by normalizing neurotransmitter levels and protecting brain cells from oxidative stress. Additionally, it has applications in managing cognitive impairment, improving memory, and protecting against age-related neurodegeneration. Emoxypine is also used for cardiovascular health, as it can improve blood flow and protect tissues from ischemia-reperfusion injuries.

Emoxypine works by scavenging free radicals, enhancing membrane fluidity, and improving the body's antioxidant defenses.

How it helps

Administration of Emoxypine, especially in combination with vitamin C, sped up *Mycobacterium tuberculosis* eradication and decay cavity closure, reduced inflammation, and decreased the need for surgery in several trials on patients with infiltrative tuberculosis [R, R, R]

6

Acetyl-L-Carnitine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

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

TYPICAL STARTING DOSE

500 mg

Description

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

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

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

- Nerve damage
- Mood problems
- Cognitive decline

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

How it helps

In a study with 10 active pulmonary tuberculosis (TBC) patients, Acetyl-L-carnitine (ALC) administered orally at 2 gm/day for 30 days showed potential in preserving or enhancing lymphocyte-mediated antibacterial activity compared to placebo, indicating selective modulation of the host's immune responses to M. tuberculosis infection [R].

7

Tea

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Drink 1-3 cups of tea daily, choosing from green, black, or herbal varieties according to preference. It's beneficial to consume tea throughout the day, either hot or cold, for ongoing hydration and health benefits.

Description

Tea is a beverage made by steeping the leaves of the Camellia sinensis plant in hot water. It comes in various types, including black, green, white, and herbal teas, and is known for its diverse flavors and potential health benefits due to polyphenols and other bioactive compounds.

Green and black tea are made from the same plant (*Camellia sinensis*). This plant is processed in different ways to make each type of tea [R, R].

Tea contains many active compounds. These include antioxidants like EGCG and amino acids like L-theanine. Active components of tea help support [R, R, R, R, R, R]:

- Heart health
- Cognition
- Immunity
- Relaxation

How it helps

Certain gene variants have been associated with an increased risk of tuberculosis but drinking tea regularly may counteract its negative effects [R].

8

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) can help patients with tuberculosis by acting as an antioxidant. It aids in reducing oxidative stress in the body, which is higher in those with tuberculosis. This effect can support the body's immune response against the bacterial infection. Furthermore, NAC has been shown to improve the efficacy of tuberculosis treatment when used alongside conventional medications.

9

Avoid Secondhand Smoke

IMPACT 0 / 5

EVIDENCE 0 / 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

Smoking can damage the lungs and impair the immune system, making it harder to fight off infections like tuberculosis. Avoiding cigarette smoke, including second-hand smoke, can help maintain lung health and reduce the risk of TB infection.

10

Exercise At Least One Hour a Day

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

Description

Exercise can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [R].

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal**.

How it helps

Regular exercise strengthens the immune system and improves overall health, which may help the body resist infections like tuberculosis or aid in faster recovery from illnesses.

11

Avoid Crowds

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Minimize your time in crowded places by scheduling your errands during off-peak hours, avoiding public events known to draw large crowds, and choosing less crowded routes or modes of transportation.

Description

Avoiding crowded environments, especially during contagious disease outbreaks, can reduce the risk of viral transmission and help protect public health. It promotes social distancing measures that are crucial for preventing the spread of infectious diseases.

How it helps

Tuberculosis (TB) is a contagious disease primarily affecting the lungs and is spread through the air from person to person. Avoiding crowded places can reduce the risk of exposure to TB bacteria, especially in areas where TB is more prevalent or in confined spaces with poor ventilation.

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.

WBC	6.92 x10^3/mm3	2 · 4 · 6.5 · 11 · 40	9 Nov 2025
Lymphocytes (Absolute)	1.48 x10^9/L	1 · 1.5 · 3.7 · 4	9 Nov 2025
Monocytes (Absolute)	0.44 x10^9/L	0.1 · 0.35 · 0.8	9 Nov 2025