

Tachycardia

Disease Report

REPORT CATEGORY —



HEART & BLOOD
VESSELS

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

Tachycardia is a condition in which the heart beats faster than normal. The normal resting heart rate for adults is 60 to 100 beats per minute (bpm). Tachycardia is defined as a heart rate of more than 100 bpm.

There are several types of this condition depending on the part of the heart being affected, bpm, and other factors. The most common ones include:

- **Atrial fibrillation (AFib):** fast and irregular heartbeat starting in the upper chambers (atria); the most common type of tachycardia
- **Atrial flutter:** similar to AFib, but heartbeats are more organized
- **Supraventricular tachycardia (SVT):** includes different types of tachycardia that start above the lower chambers (ventricles)
- **Ventricular tachycardia:** fast heartbeat that starts in the ventricles and greatly affects heart function

The main symptom of tachycardia is feeling a racing, pounding heartbeat (palpitations). Tachycardia can also cause other symptoms such as [\[R\]](#):

- Shortness of breath
- Chest pain
- Dizziness
- Fainting

In some cases, tachycardia can be a serious condition that requires medical treatment. However, it can often be managed through lifestyle changes and medications.

If you have tachycardia and are experiencing symptoms, it's important to speak with your healthcare provider for proper evaluation and treatment.

Risk Factors

Key Takeaways:

- Up to **60%** of differences in people's chances of having tachycardia may be due to genetics.
- Other risk factors include: stress, excessive caffeine intake, smoking, high/low blood pressure & electrolyte imbalance.
- If you are at high genetic risk, you may lower the overall risk by taking action on risk factors that you can change.
- Symptoms include palpitations, shortness of breath, chest pain, dizziness, and fainting.
- Click the **Recommendations** tab for potential dietary and lifestyle changes, and **next steps** for relevant labs.

Tachycardia can be caused by various factors, including [\[R\]](#):

- Stress
- Excessive caffeine intake
- Smoking
- Certain medications
- Heavy alcohol use or alcohol withdrawal
- Use of illegal drugs

Conditions that may contribute to tachycardia include [\[R\]](#):

- High or low blood pressure
- Electrolyte imbalance
- Heart disease
- Overactive thyroid (hyperthyroidism)
- Anemia

Up to **60%** of differences in people's chances of having tachycardia may be due to genetics [\[R\]](#).



TYPICAL LIKELIHOOD

Typical likelihood of tachycardia based on 186,698 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HP	rs2359171	AA
PITX2	rs2129977	GA
PITX2	rs112599895	AG
PITX2	rs143269342	CC
TBX5	rs883079	TT
GJA5	rs79187193	GG
PITX2	rs75021220	CT
PITX2	rs3853445	TT
PITX2	rs6847935	AT
PITX2	rs6843082	AG
NEURL1	rs11598047	AG
PBXIP1	rs11264280	CT
PITX2	rs17570669	AA
SCN5A	rs7373065	TC
PITX2	rs13105878	AC
MYOZ1	rs6480708	AC
MYOZ1	rs60212594	CG
CLIC6	rs2834618	GT
UBE4B	rs187585530	GG
METTL11B	rs72700114	GG
TXNDC12	rs146518726	GG
C11ORF45	rs76097649	GG
PITX2	rs149829837	TT
RPL3L	rs140185678	GG
PITX2	rs2595104	GG
SH3PXD2A	rs35176054	TT
SELL	rs12122060	TT
FBXO32	rs78332318	CC
KCNN3	rs34292822	GG
FBXO32	rs62521286	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			DOSAGE
1	Low-Intensity Exercise	1 hour	2	Avoid Illicit Drugs	
3	Aerobic Exercise (Cardio)	1 hour	4	Avoid Air Pollution	
5	Mediterranean Diet		6	Magnesium Sulfate	200 mg
7	Vitamin C	500 mg	8	Magnesium	250 mg
9	Acupuncture	1 hour	10	Yoga	30 minutes
11	Avoid Strenuous Activity		12	Maintain Optimal Vitamin D Levels	1000 iu
13	Mindfulness-Based Stress Reduction (MBSR)	2 hours	14	Avoid Cannabis	
15	Compression Therapy		16	Melatonin	500 mcg
17	L-Carnitine	500 mg	18	Avoid Grapefruit Juice	
19	Deep Breathing	5 minutes	20	Coenzyme Q10 (CoQ10)	100 mg

1



Low-Intensity Exercise

IMPACT4 / 5

EVIDENCE5 / 5

How to implement

Incorporate 60 minutes of low-intensity activities, such as walking or gentle yoga, into your daily routine. Aim to do this 5 days a week to achieve the best results.

TYPICAL STARTING DOSE

1 hour

Description

Low-intensity exercise, such as walking or gentle yoga, provides numerous health benefits, including improved cardiovascular health, stress reduction, and enhanced overall fitness without the strain of high-intensity workouts.

How it helps

Sedentary lifestyle is linked to an almost **2.5 times** higher risk of AFib, so health experts encourage increasing physical activity. **Moderate exercise helps reduce the risk of AFib**, especially in men [\[R, R, R, R, R\]](#).

In people with **AFib and postural tachycardia syndrome (POTS)**, moderate exercise may help improve [\[R, R, R, R, R, R\]](#):

- Fitness
- Heart function
- Weight
- Wellbeing

However, **intense workout may contribute to AFib and flutter**. The risk may be particularly high for [\[R, R, R, R\]](#):

- Elite athletes (especially in extreme endurance sports)
- Older people
- Men

Exercise may also contribute to **ventricular tachycardia** in people with heart conditions [\[R, R\]](#).

2



Avoid Illicit Drugs

IMPACT3 / 5

EVIDENCE3 / 5

How to implement

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

Description

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

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

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

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

How it helps

People with a substance use disorder may have a **50% higher risk of AFib**. The following drugs may raise the risk [\[R, R, R\]](#):

- Methamphetamines (by 86%)
- Cocaine (by 61%)
- Opiates (by 74%)
- Cannabis (by 20-35%)

Cannabis use is also linked to 10-20% higher odds of **ventricular tachycardia** [\[R\]](#).

In line with this, experts recommend avoiding illicit drugs to lower your risk of tachycardia. Talk to your doctor if you need help ending drug use [\[R\]](#).

3



Aerobic Exercise (Cardio)

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

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

TYPICAL STARTING DOSE

1 hour

Description

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

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

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

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

How it helps

Sedentary lifestyle is linked to an almost **2.5 times** higher risk of AFib, so health experts encourage increasing physical activity. **Moderate exercise (including cardio) helps reduce the risk of AFib**, especially in men [\[R, R, R, R, R\]](#).

In people with **AFib and POTS** (postural tachycardia syndrome), moderate exercise may help improve [\[R, R, R, R, R, R\]](#):

- Fitness
- Heart function
- Weight
- Wellbeing

However, **intense workouts may contribute to AFib and flutter**. The risk may be particularly high for [\[R, R, R, R\]](#):

- Elite athletes (especially in extreme endurance sports)
- Older people
- Men

Exercise may also contribute to **ventricular tachycardia** in people with heart conditions [\[R, R\]](#).

4



Avoid Air Pollution

IMPACT2 / 5

EVIDENCE3 / 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

Exposure to any air pollutant is linked to a higher risk of AFib. Examples include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Particulate matter (PM2.5 and PM10)
- Nitrogen dioxide (NO2)
- Sulfur dioxide (SO2)
- Ozone (O3)
- Carbon monoxide (CO)

Every **10-unit increase in PM2.5** exposure is linked to additional tachycardia risk. The effect is particularly strong in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- People with heart disease
- People with an implanted heart device - ICD (**24%** higher AFib risk)
- Older people (**11%** higher AFib risk)

Tips for lowering exposure to air pollution include [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Monitoring air pollution levels regularly
- Using an appropriate face mask when pollution levels are high
- Avoiding outdoor exercise when pollution levels are high
- Cleaning and maintaining air filtration systems
- Not burning wood or trash
- Using protective respiratory equipment at work, if needed

5



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

To help reduce the risk of tachycardia, experts recommend eating a diet that is [\[R\]](#):

- Rich in fruits, vegetables, and whole grains
- Low in salt, sugar, and unhealthy fats

The Mediterranean diet is a great example. Following this diet may be linked to a **32%** lower risk of AFib [\[R, R\]](#).

In people with AFib, the Mediterranean diet may **reduce the risk of complications and boost antioxidant protection** [\[R, R, R\]](#).

6



Magnesium Sulfate

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take 200-400 mg of magnesium sulfate orally with water once daily, ideally in the evening or as directed by your healthcare provider. Continue this supplementation as recommended by your healthcare provider, often for several weeks to months for optimal benefits.

TYPICAL STARTING DOSE

200 mg

Description

Magnesium sulfate, also known as Epsom salt, is used in baths and topical applications to soothe sore muscles, alleviate stress, and promote relaxation. It is believed to be absorbed through the skin, providing a calming effect on muscles and the nervous system.

How it helps

A meta-analysis of 22 studies found that magnesium sulfate reduced ventricular arrhythmia (11.88% vs. 24.24%) and supraventricular arrhythmia (10.36% vs. 23.91%) compared to a placebo [R].

Magnesium sulfate may help stabilize the electrical impulses in the heart. This could lead to a slower, more regularly functioning heart rate.

7



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

500 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

AFib is a common complication of surgery. Vitamin C supplementation (1-4 g/day for 2-5 days around surgery) may reduce the rates of this complication by **25-55%**. Interestingly, most studies in the US didn’t find this benefit [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Vitamin C blood levels don’t have a clear link with AFib risk [\[R\]](#), [\[R\]](#), [\[R\]](#).

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* [\[R\]](#), [\[R\]](#).

8



Magnesium

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Take up to 350 mg of magnesium daily as a supplement, preferably with a meal to enhance absorption.

TYPICAL STARTING DOSE

250 mg

Description

Magnesium is an essential mineral involved in various bodily functions, including muscle contractions, nerve signaling, and bone health. Maintaining adequate magnesium levels through diet or supplements can support overall well-being and reduce the risk of magnesium deficiency-related health issues.

[Magnesium](#) is an essential mineral. Your body needs it for [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Muscle, nerve, and bone function
- Blood sugar and blood pressure control
- DNA and protein production
- Strong immunity

Women need **310-320 mg** of magnesium per day, while men need **400-420 mg** [\[R\]](#).

Foods rich in magnesium include **nuts, seeds, and leafy greens**. Magnesium is also available as a supplement [\[R\]](#).

How it helps

A meta-analysis of 22 studies found that magnesium sulfate reduced ventricular arrhythmia (11.88% vs. 24.24%) and supraventricular arrhythmia (10.36% vs. 23.91%) compared to a placebo [\[R\]](#).

Magnesium can help stabilize the electrical impulses in the heart, reducing the irregular heartbeats that define tachycardia.

9



Acupuncture

IMPACT

2 / 5

EVIDENCE

2 / 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

Acupuncture may reduce heart rate and improve symptoms in people with [\[R\]](#), [\[R\]](#):

- Atrial fibrillation (AFib)
- Supraventricular tachycardia (SVT)
- Sinus tachycardia

According to a single study, **acupressure** (2x/day) may reduce heart rate and blood pressure in people with AFib [\[R\]](#).

Please note: *Acupuncture is generally safe for most people. However, it may come with extra risks for pregnant women, people with pacemakers, and people with bleeding disorders. Consult your doctor or a licensed acupuncturist for more information* [\[R\]](#).

10



Yoga

IMPACT

2 / 5

EVIDENCE

2 / 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

Intense stress can cause heart rhythm problems and increase AFib risk by up to **37%**. For this reason, experts recommend reducing stress and practicing relaxation techniques like yoga [\[R, R\]](#).

Yoga is a popular relaxation technique. In people with AFib, it may improve [\[R, R\]](#):

- AFib episodes
- Heart rate and blood pressure
- Anxiety and depression
- Quality of life

11



Avoid Strenuous Activity

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

Refrain from participating in high-intensity physical activities such as running, heavy weightlifting, and high-impact sports. Opt instead for low-impact exercises like walking, swimming, or yoga. It's important to listen to your body's signals and rest as needed, avoiding these strenuous activities until advised otherwise by a health professional.

Description

Avoiding strenuous physical activity in certain medical conditions or during illness can help prevent injury and promote better recovery. It allows the body to conserve energy and supports the healing process.

Strenuous activity is physical activity that requires a lot of effort. Exercise done at 70-85% of a person’s heart rate is considered strenuous. Examples include [\[R\]](#):

- Running, cycling, or swimming at high speed
- Running or hiking uphill
- Jumping rope
- Single tennis
- Sports that involve a lot of running (soccer, basketball, hockey, etc.)

On the other hand, strenuous daily activities include [\[R\]](#):

- Lifting and carrying heavy objects
- Gardening with heavy digging
- Shoveling snow
- Fast dancing

How it helps

Intense workout may contribute to AFib and flutter. The risk may be particularly high for [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

- Elite athletes (especially in extreme endurance sports)
- Older people
- Men

Exercise may also contribute to **ventricular tachycardia** in people with heart conditions [\[R\]](#), [\[R\]](#).

12

Maintain Optimal Vitamin D Levels

IMPACT

2 / 5

EVIDENCE

1 / 5

How to implement

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE

1000 iu

Description

Vitamin D, often referred to as the "sunshine vitamin," can be synthesized by the skin when exposed to sunlight, as well as being found in fish, eggs, and fortified milk. It helps regulate calcium absorption, promoting strong bones and a healthy immune system. Vitamin D deficiency can lead to conditions like rickets in children and osteoporosis in adults.

Your body needs [vitamin D](#) for strong bones. Vitamin D also plays a role in [\[R\]](#):

- Mood
- Immunity
- Heart health
- Blood sugar control

[Sunlight](#) is our main source of vitamin D. Experts recommend getting at least **5-15 minutes of midday sun, 2-3 times per week**. People with darker skin and those living at high latitudes may need longer periods of sun exposure [\[R\]](#), [\[R\]](#).

Foods like fish, eggs, and fortified milk provide small amounts of vitamin D. **People lacking vitamin D should consider taking a supplement** [\[R\]](#).

How it helps

High vitamin D levels and supplementation with this vitamin may be linked to a lower risk of AFib. However, not all studies found this link. The link may be stronger in **older people and those recovering from a surgery** [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

More recent studies suggest that vitamin D levels **don't have a causal effect on AFib** [\[R\]](#), [\[R\]](#).

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 [GC](#) gene variant is linked to lower vitamin D levels and a higher AFib risk [\[R\]](#).

YOUR GENETIC VARIANTS			
GENE	SNP	GENOTYPE	EVIDENCE
GC	rs2282679	GT	

13



Mindfulness-Based Stress Reduction (MBSR)

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Enroll in an 8-week MBSR course, which includes a weekly 2.5-hour class, one all-day class after the sixth week, and 45 minutes of daily home practice guided by assignments and instructional recordings.

TYPICAL STARTING DOSE

2 hours

Description

Mindfulness-Based Stress Reduction (MBSR) is a structured program that teaches mindfulness techniques to reduce stress and improve overall mental and emotional health. MBSR has been shown to help individuals cope with chronic pain, anxiety, and other stress-related conditions.

How it helps

In a non-placebo-controlled trial of 46 adolescents with a cardiac diagnosis (half of them with postural orthostatic tachycardia syndrome), practicing mindfulness-based stress reduction improved distress [\[R\]](#).

14



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

Cannabis use is also linked to 10-20% higher odds of **ventricular tachycardia** [\[R\]](#).

In line with this, experts recommend avoiding illicit drugs to lower your risk of tachycardia. Talk to your doctor if you need help ending drug use [\[R\]](#).

15



Compression Therapy

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Wear compression stockings or sleeves daily, especially during long periods of standing or sitting. Choose a compression level appropriate for your condition (mild, moderate, or high), as advised by a healthcare professional. Start wearing them in the morning before swelling occurs and keep them on until bedtime.

Description

Compression therapy involves wearing specialized garments that apply pressure to the limbs, promoting better circulation and reducing swelling. It is commonly used to manage conditions like venous disorders and can help alleviate symptoms, improve vascular health, and enhance overall well-being.

In compression therapy, different methods are used to apply pressure to the legs. These methods include [\[R\]](#):

- Bandages
- Wraps
- Compression stockings
- Pneumatic pressure devices

Compression therapy supports blood flow. It may help [\[R, R, R\]](#):

- Prevent blood clots and deep vein thrombosis (DVT)
- Reduce some kinds of swelling
- Reduce symptoms of restless legs syndrome

How it helps

According to limited evidence, abdominal and lower leg compression may improve the symptoms of **postural tachycardia syndrome (POTS)** [\[R, R\]](#).

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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

In a placebo-controlled trial of 76 patients undergoing coronary artery bypass graft surgery, supplementation with melatonin (12 mg, the evening before and 1 hour before surgery) failed to reduce atrial fibrillation incidence but did reduce its duration and the levels of h-CRP and CK-MB [\[R\]](#).

In a placebo-controlled trial of 78 patients with postural tachycardia syndrome, supplementation with melatonin (3 mg/day in the morning) reduced standing tachycardia [\[R\]](#).

17



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

In 2 similar studies with 80 patients experiencing angina and ventricular ectopic beats (VEB), L-carnitine (2g, 3x/day for 2 weeks) significantly reduced VEB and enhanced the anti-arrhythmic effects of propafenone and mexiletine when combined with these medications [\[R\]](#), [\[R\]](#).

L-carnitine supplements may help by aiding the heart in utilizing energy more efficiently.

18



Avoid Grapefruit Juice

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Do not consume grapefruit juice or any food products containing grapefruit juice. This includes avoiding grapefruit itself and checking the ingredients lists of beverages and processed foods to ensure they do not contain grapefruit or its derivatives.

Description

Avoiding grapefruit juice when taking certain medications is advisable, as it can interfere with drug metabolism and potentially lead to adverse effects or reduced medication effectiveness.

How it helps

Grapefruit juice may prolong the QT interval, a measure of heart electrical activity. This effect may occur in both healthy people and those with long QT syndrome. Women may be more susceptible to this effect [\[R\]](#), [\[R\]](#).

Please note: *Grapefruit juice can interact with many medications, including those for high cholesterol, high blood pressure, anxiety, and more. If you are taking medications, make sure to consult your doctor before eating grapefruit or drinking grapefruit juice [\[R\]](#).*

19



Deep Breathing

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Practice deep breathing exercises for 5-10 minutes at least twice a day, ideally in the morning and before bed. Sit or lie down in a comfortable position, slowly inhale through your nose, allowing your chest and lower belly to rise, hold the breath for a moment, and then exhale slowly through your mouth or nose.

TYPICAL STARTING DOSE

5 minutes

Description

Deep breathing techniques, such as diaphragmatic or abdominal breathing, can promote relaxation, reduce stress, and improve lung capacity. Regular deep breathing exercises can contribute to overall mental and physical well-being by reducing tension and increasing oxygen supply to the body.

How it helps

In a study comparing head-down deep breathing to the modified Valsalva maneuver for supraventricular tachycardia, both were similarly effective and safe in the emergency department [\[R\]](#).

Deep breathing promotes relaxation and can help to slow down your heart rate, which is typically higher in tachycardia.

20



Coenzyme Q10 (CoQ10)

IMPACT1 / 5

EVIDENCE1 / 5

How to implement

Take a 100 mg Coenzyme Q10 (CoQ10) supplement once daily with a meal that contains fat for better absorption.

TYPICAL STARTING DOSE

100 mg

Description

Coenzyme Q10 (CoQ10) is a naturally occurring antioxidant that plays a crucial role in cellular energy production. It is often taken as a supplement to support heart health, improve energy levels, and provide antioxidant protection, especially for individuals with certain medical conditions or as they age.

[Coenzyme Q10](#) (CoQ10) is a compound that helps enzymes work better. By doing so, CoQ10 helps improve [R](#), [R](#), [R](#), [R](#):

- Energy levels
- Antioxidant protection
- Heart health
- Muscle strength
- Blood sugar control

The amount of CoQ10 made by your body decreases as you get older. Luckily, you can also get it from food or supplements. Good sources of CoQ10 include [R](#), [R](#):

- Organ meats
- Fatty fish
- Whole grains

How it helps

In people with AFib, CoQ10 supplementation may improve heart function and greatly reduce the risk of **ventricular arrhythmia**. However, it may not reduce the number of AFib episodes [R](#).

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

	T4 Free (FT4)	1.26 ng/dL		9 Nov 2025
	TSH	2.76 mIU/mL		9 Nov 2025
	Ferritin	102.2 ng/mL		9 Nov 2025
	Glucose, Fasting	97 mg/dL		9 Nov 2025
	Magnesium	2.17 mg/dL		9 Nov 2025
	T3, Free (FT3)	3.34 pg/mL		9 Nov 2025
	Hemoglobin	17.1 g/dL		9 Nov 2025
	Potassium, Serum	5.2 mmol/L		9 Nov 2025
	T3 Total	0.95 ng/mL		9 Nov 2025

	Calcium	9.2 mg/dL		9 Nov 2025
	Iron	228 mcg/dL		9 Nov 2025