SelfDecode™

Shortness of Breath

DNA Health Report

REPORT CATEGORY

RESPIRATORY HEALTH

Sample Client

Report date: 15 January 2026

Powered by omicsedge

Table of Contents

Personal information

NAME

Sample Client

SEX AT BIRTH

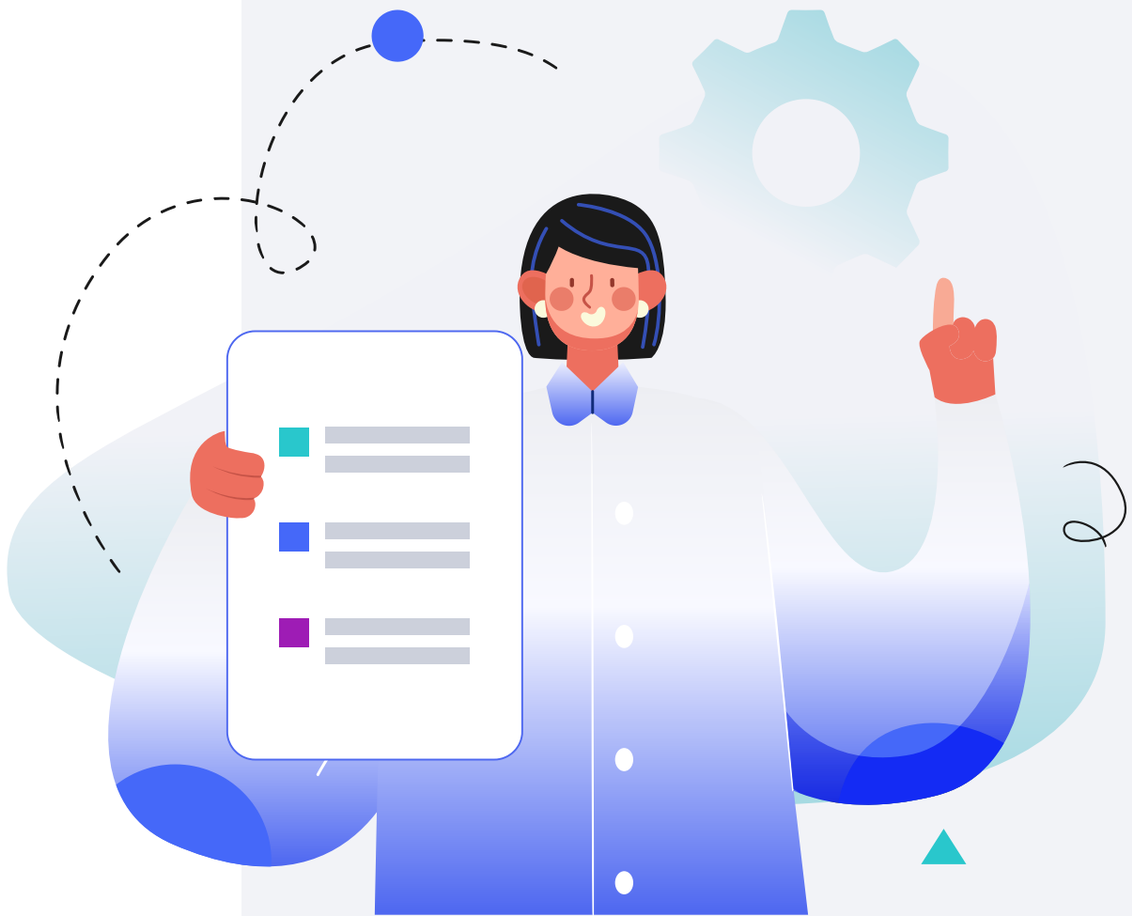
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

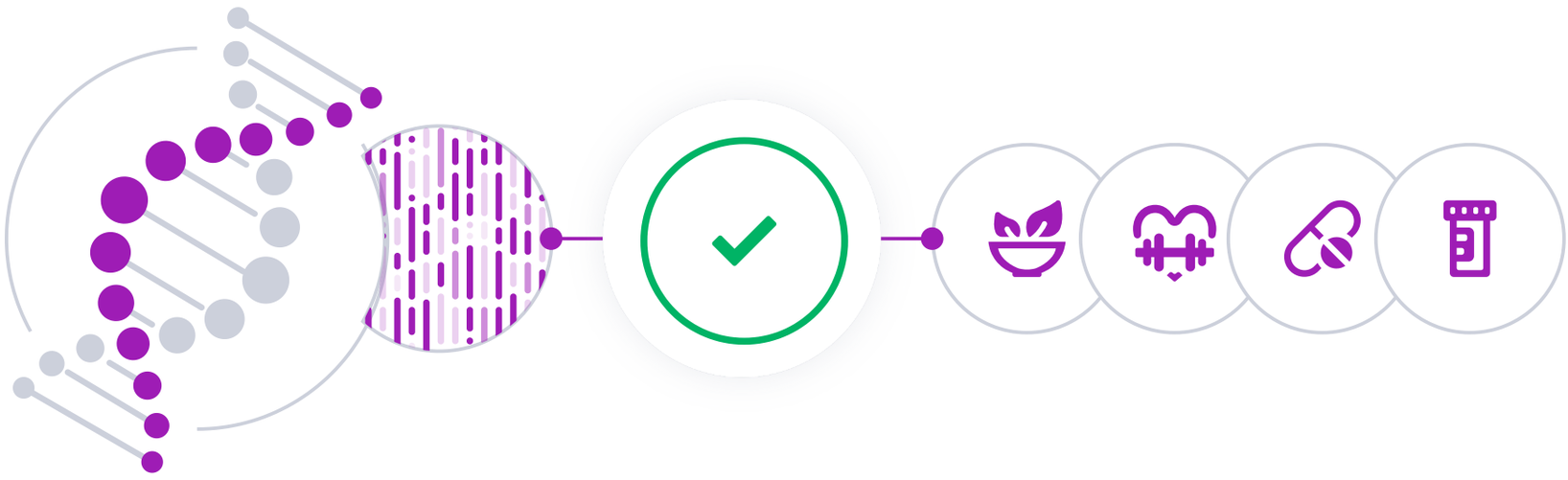


DISCLAIMER

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

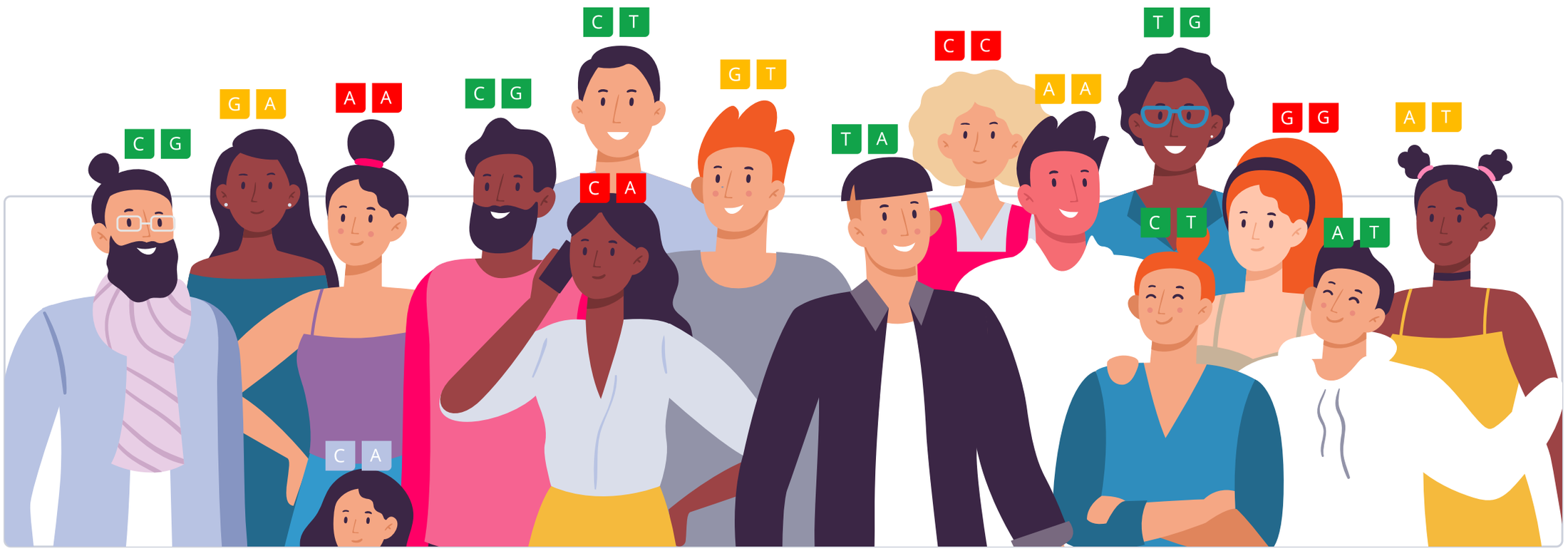
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

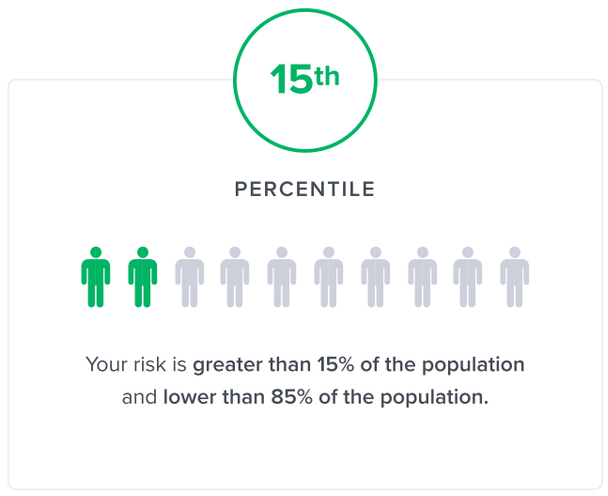
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

Shortness of breath, medically known as dyspnea, is a feeling of not being able to get enough air. It's usually described as feeling smothered or tightness in the chest. It can occur as a result of strenuous activity, but it can also be a sign of a health problem when it happens at rest or with minimal activity.

Common symptoms associated with shortness of breath include:

- Difficulty inhaling or exhaling fully
- Feeling smothered or claustrophobic
- Tightness or pain in the chest
- Gasping for air or wheezing
- Increased heart rate

Risk Factors

Factors or conditions that might lead to shortness of breath include:

- Lung diseases such as asthma, COPD, or pulmonary fibrosis
- Heart conditions like heart failure, arrhythmias, or heart attack
- Anemia (low red blood cell count)
- Obesity
- High altitude
- Anxiety and panic attacks
- Allergies
- Certain medications
- Genetics

Genetics can play a role in predisposing individuals to conditions that have dyspnea as a symptom. For instance, certain genetic mutations might increase the risk of developing asthma or COPD.

LESS LIKELY

Less likely to have dyspnea based on 1,673 genetic variants we looked at

PERCENTILE

Your risk is **greater than 10% of the population** and **lower than 90% of the population.**

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	Nasal Dilators	
2	Buteyko Technique	20 minutes
3	Deep Breathing	5 minutes
4	Oxygen Therapy	15 hours
5	Optimize Indoor Air Quality	
6	Paced Breathing	5 minutes
7	Aerobic Exercise (Cardio)	1 hour
8	Breathing Techniques	10 minutes
9	Avoid Secondhand Smoke	
10	Diaphragmatic Breathing	10 minutes

1

Nasal Dilators

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Insert a nasal dilator into each nostril before bedtime or before engaging in physical activity. Use daily for continuous relief from nasal congestion or during activities that require enhanced air flow, such as exercise.

Description

Nasal dilators are devices designed to widen nasal passages, enhancing airflow during sleep and reducing the symptoms of snoring and sleep apnea, which can contribute to better sleep quality and overall restfulness.

Nasal dilators are devices that facilitate breathing during sleep by keeping the nose passages open. There are two types of nasal dilators [R]:

- Nasal strips: adhesive strips applied externally on the nose bridge across the nostrils
- Internal dilators: devices placed inside the nostrils

People wear nasal dilators to improve snoring.

How it helps

Nasal dilators improve airflow by mechanically widening the nasal passages, which can alleviate respiratory symptoms during sleep. This enhancement may contribute to reduced shortness of breath, improved sleep quality, and overall respiratory efficiency for affected individuals.

2

Buteyko Technique

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Practice the Buteyko breathing exercises for 15-20 minutes daily, ideally in a quiet, comfortable place without distractions. The method emphasizes nasal breathing, reduced breathing rate, and breath-holding to increase carbon dioxide levels in the blood, thereby promoting better oxygenation. Consistency is key, and it is recommended to continue practicing daily for several months to notice significant improvements in breathing-related conditions.

TYPICAL STARTING DOSE

20 minutes

Description

The Buteyko Technique is a breathing method that aims to improve respiratory health and reduce symptoms of conditions like asthma and anxiety. It involves exercises to control and optimize breathing patterns, potentially enhancing lung function and overall well-being.

How it helps

The Buteyko Technique helps alleviate shortness of breath by promoting optimal breathing patterns, which enhances oxygen delivery and reduces hyperventilation. This technique can improve lung function and overall respiratory efficiency, thereby mitigating dyspnea symptoms.

3

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

Deep breathing exercises enhance lung capacity and optimize oxygen intake, which alleviates the sensation of shortness of breath. Additionally, these techniques promote relaxation and decrease anxiety, effectively reducing the physiological response associated with dyspnea.

4

Oxygen Therapy

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Use oxygen therapy by inhaling supplemental oxygen through a mask or nasal prongs for at least 15 hours daily, as prescribed by a healthcare provider. This is typically a continuous treatment for individuals with chronic respiratory conditions and should be followed every day, under medical supervision, to ensure proper oxygen levels in the blood.

TYPICAL STARTING DOSE

15 hours

Description

Oxygen therapy involves the administration of supplemental oxygen to individuals with breathing difficulties or low oxygen levels. It is used to improve oxygen intake, promote tissue healing, and enhance overall respiratory function.

How it helps

Oxygen therapy enhances oxygen saturation in the blood, alleviating shortness of breath by ensuring that vital organs receive adequate oxygen. This therapy is particularly effective in managing respiratory conditions that impair normal lung function.

5

Optimize Indoor Air Quality

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

To optimize indoor air quality, regularly clean or replace air filters in your HVAC system at least every three months, use an air purifier in rooms where you spend the most time, ensure proper ventilation by opening windows when weather permits, and reduce the use of air fresheners and candles that can add pollutants to the air. Aim to maintain these practices year-round to consistently improve indoor air quality.

Description

Optimizing indoor air quality involves implementing measures to reduce pollutants and allergens in indoor environments. It can promote respiratory health, reduce allergy symptoms, and create a more comfortable living space.

Cars, factories, and other sources increase outdoor air pollution [R].

But air pollution can also happen indoors. Indoor air pollutants include vapors from cooking and cleaning, mold, and smoke [R, R].

Sick building syndrome is a collection of symptoms that seem to be caused by exposure to these air pollutants. People with this syndrome tend to have [R, R, R]:

- Breathing problems
- Headaches
- Drowsiness
- Brain fog

How it helps

Optimizing indoor air quality helps alleviate shortness of breath by reducing exposure to airborne irritants and allergens, which can exacerbate respiratory symptoms. Improved air quality supports lung function and enhances overall respiratory comfort in affected individuals.

6

Paced Breathing

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Sit in a comfortable position or lie down. Inhale slowly through your nose for 4 seconds, hold your breath for 7 seconds, and then exhale slowly through your mouth for 8 seconds. Repeat this breathing pattern for 5-10 minutes daily, or whenever you feel stressed or anxious.

TYPICAL STARTING DOSE

5 minutes

Description

Paced breathing is a relaxation technique that involves controlling the rhythm and depth of breaths. It can help reduce stress, anxiety, and lower blood pressure, promoting relaxation and mental well-being.

How it helps

Paced breathing exercises help patients manage their anxiety levels by promoting a sense of control, which can alleviate the subjective sensation of breathlessness. This technique enhances respiratory efficiency and allows for better oxygenation, thereby reducing episodes of dyspnea.

7

Aerobic Exercise (Cardio)

IMPACT 1 / 5

EVIDENCE 1 / 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

Aerobic exercise enhances respiratory efficiency and strengthens the muscles involved in breathing, which can alleviate the sensation of shortness of breath. Additionally, improving cardiovascular fitness supports better oxygen delivery throughout the body, further helping to manage symptoms.

8

Breathing Techniques

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Practice deep breathing exercises for 10 minutes daily, preferably in a quiet space where you won't be disturbed. 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. This can be done at any time of day to reduce stress and improve focus.

TYPICAL STARTING DOSE

10 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.

Most breathing techniques involve taking slow and even breaths. Their main goal is to prevent rapid breathing (**hyperventilation**) [R].

Breathing techniques tend to help with [R, R, R]:

- Stress
- Anxiety
- Sleep problems
- Asthma

One example is the **Buteyko breathing technique**. It's often used by people with asthma or other conditions that affect the lungs [R].

Another example is **yogic breathing**. **Yoga** is a practice that combines breathing techniques with exercise and meditation [R, R].

How it helps

Breathing techniques help alleviate shortness of breath by promoting relaxation and reducing anxiety, which can exacerbate dyspnea. Additionally, these techniques enhance lung function and oxygen exchange, contributing to improved respiratory health.

9

Avoid Secondhand Smoke

IMPACT 1 / 5

EVIDENCE 1 / 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

Avoiding secondhand smoke reduces irritation and inflammation of the airways, which can exacerbate shortness of breath. This helps to maintain optimal lung function and improves overall respiratory health, especially in individuals with pre-existing conditions.

10

Diaphragmatic Breathing

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Practice diaphragmatic breathing for 10-15 minutes per day. Sit or lie down in a comfortable position, place one hand on your chest and the other on your belly. Breathe in slowly through your nose, ensuring your belly moves out more than your chest. Exhale slowly through your mouth or nose, consciously relaxing the belly. Repeat this process, focusing on the movement of your belly rather than your chest.

TYPICAL STARTING DOSE

10 minutes

Description

Diaphragmatic breathing, also known as deep breathing, can help reduce stress and anxiety by activating the body's relaxation response. It promotes better oxygen exchange, reduces muscle tension, and supports overall mental and physical well-being.

How it helps

Diaphragmatic breathing improves respiratory efficiency by promoting full lung expansion and enhancing oxygen uptake, which can alleviate the sensation of shortness of breath. Additionally, it activates the relaxation response, helping to decrease anxiety and stress that may exacerbate breathing difficulties.

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.

Hemoglobin

17.1 g/dL

9 Nov 2025