SelfDecode™

Asthma

Disease Report

REPORT CATEGORIES

- ALLERGIES
- INFLAMMATION & AUTOIMMUNITY
- RESPIRATORY HEALTH

Sample Client

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Personal information

NAME

Sample Client

SEX AT BIRTH

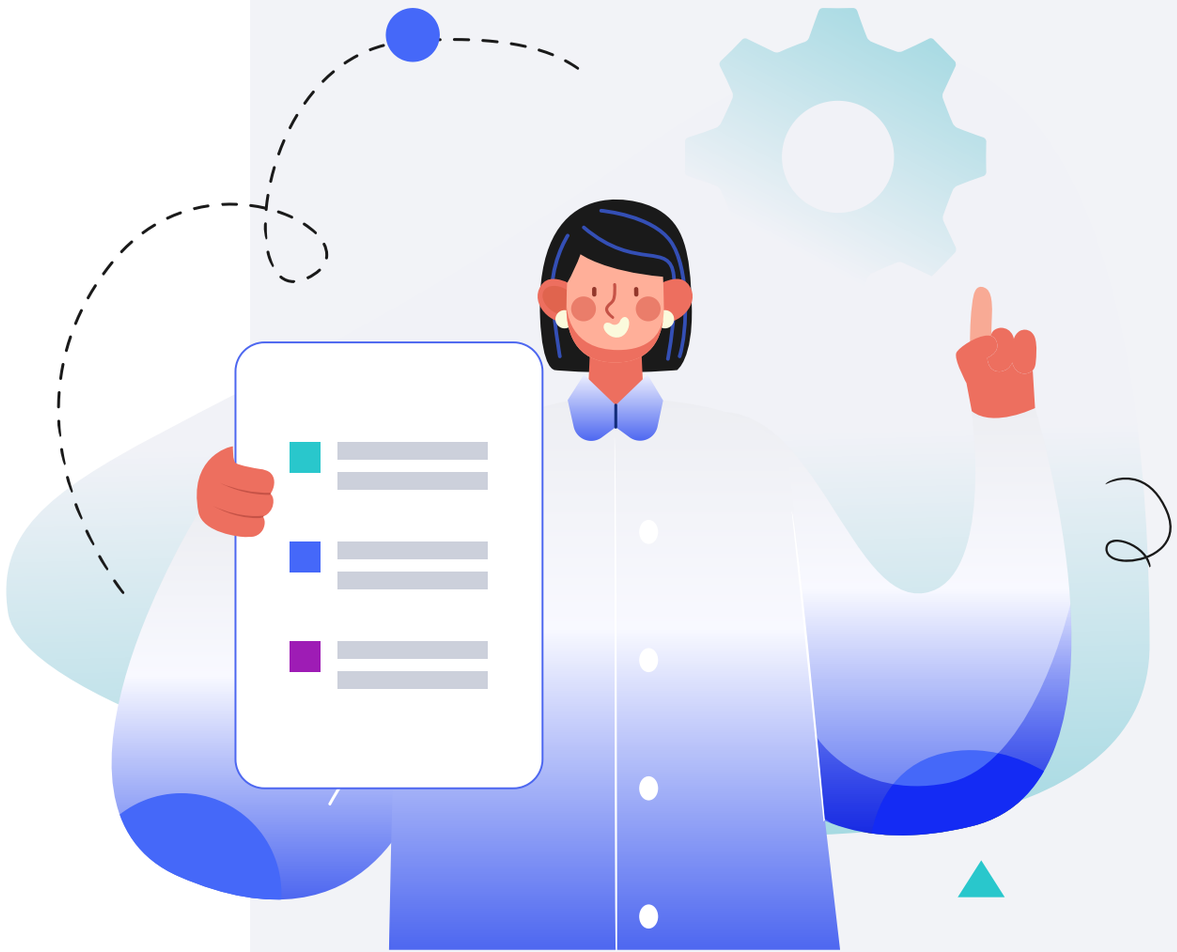
Male

HEIGHT

5ft 9" 175.0cm

WEIGHT

165lb 75.0kg



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.

Introduction

Asthma can be challenging to live with. Long-distance running probably isn't for you, hiking at high altitudes is a no-go, and you won't be winning a breath-holding contest any time soon.

But if you understand your condition and manage it well, you can live a very normal life.

Asthma is a relatively common condition, with 1 in 13 Americans currently living with it. While there is a lot of useful information out there for those living with asthma, there is still a lot we don't know [R].

For example, we don't know exactly what causes asthma, and there is also no cure. But one thing is abundantly clear: **there is a genetic element to determining your risk of asthma** [R, R].

While it may seem unfair that your genes can predispose you to this condition, there is a potential upside if you can identify the genetic culprits.

By doing so, you may be able to use information contained in your DNA to take targeted action and potentially reduce the risk of asthma. This may help you better manage the condition and breathe a sigh of relief!

The genetic culprit could be a variant of the ***CCND1*** gene, which may increase your risk of asthma if you are obese. This indicates that you could benefit from watching your weight. Or, they could be variants of the ***NQO1*** or ***TGFB1*** genes, which may add to your risk of asthma in the presence of air pollution [R, R, R].

These are just some examples of how genetics and asthma may be linked.

Read on to find out more about:

- **How your genetics play a role in asthma**
- **Your genetic risk score based on over 1,900 genetic variants**
- **Personalized recommendations based on your genetics**

Longevity Screener

Longevity Screener analyzes your DNA and biometric data to holistically determine your risk of developing serious medical conditions.

Your lifetime risk is Normal

Your 10-year risk is Normal

Summary or results

Your results are indicating a Normal risk of developing Asthma in your lifetime and within the next decade.

Monitor your risk by regularly checking your related labs and implementing the recommendations provided.

The risk of developing Asthma can be influenced by non-genetic factors such as elevated BMI.

What to do if you get a High risk

Analyze your labs

Analyze your lab results to establish a baseline and track any changes or improvements in your health markers over time.

Find out your out-of-optimal labs

We will pinpoint any values that fall outside the optimal range, allowing you to focus on what matters most.

Optimize labs

Aim to bring all your lab results to optimal levels through lifestyle changes, treatments, and ongoing monitoring for the best health outcomes.

Disclaimer

The Longevity Screener feature is designed to provide insights based on genetic predispositions and basic health data to help you understand factors that may influence your longevity. This tool is for informational purposes only and does not constitute medical advice, diagnosis, or treatment. Always consult with a qualified healthcare provider before making any decisions related to your health, lifestyle, or medical treatments. The information provided by the Longevity Screener is based on current scientific research and should be used as a supplementary tool in conjunction with professional medical advice.

About Asthma

Key Takeaways:

- Up to **70%** of differences in people's chances of developing asthma may be due to genetics.
- About **300 million** people worldwide are believed to have asthma, and many will develop it at a young age.
- Asthma triggers include viral infections, tobacco smoke, cold air, pollen, some medications, chemical fumes, and stress.
- A high genetic risk may mean greater susceptibility to triggers, so take actions to reduce your risk.
- Click the **Recommendations** tab for potential dietary and lifestyle changes and **next steps** for relevant labs.

Asthma is a chronic condition of the airway and lungs. In response to a trigger, the airway becomes inflamed. This reaction narrows the tubes that carry air into the body [R].

The symptoms of an asthma attack include [R, R]:

- Difficulty breathing
- Coughing
- Wheezing
- Tightness in the chest

About 300 million people are believed to have asthma worldwide. Asthma is more common in children than in adults. It is also much more common in people living below the poverty line [R, R].

In people with asthma, attacks can be triggered by [R, R]:

- Viral infections
- Tobacco smoke
- Pollen
- Some medications
- Chemical fumes
- Stress
- Cold air

TYPICAL LIKELIHOOD

Typical likelihood of asthma based on 1,049,396 genetic variants we looked at

64th PERCENTILE

Your risk is **greater than 64% of the population** and **lower than 36% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
STAT6	rs3024971	TT
PTGER4	rs7720838	TT
LPP	rs9865818	GG
RUNX3	rs760805	TT
LRRC32	rs2155219	GT
TSLP	rs1438673	CT
HLA-DQA1	rs6906021	CT
SH2B3	rs10774625	AG
GSDMB	rs9303280	TC
NFATC2	rs6021270	TC
GATA3	rs10795656	GA
/	rs115468973	TT
/	rs201184533	CC
/	rs116189786	AA
IL2RA	rs12722502	CC
IL18R1	rs78545931	AA
IL18RAP	rs72823641	TT
CCR7	rs112401631	TT
LINGO4	rs12123821	CC
KIAA1109	rs17454584	AA

Asthma attacks can range from mild to severe. At their worst, they can close the airway and be fatal [R, R].

Asthma has no known cure. If you have asthma, your doctor may prescribe an inhaler to control attacks. Your doctor can also help you recognize triggers that can lead to an attack. Then you can take steps to avoid them [R, R, R].

The exact cause of asthma is unknown, but genetics is thought to play a major role [R].

In fact, **up to 70% of differences in people's chances of developing asthma may be attributed to genetics.** Genes involved in asthma may influence [R, R, R]:

- Inflammation (*IL33*, *IL1RL1*, *TSLP*, *ORMDL3*)
- Autoimmune reactions (*HLA-DQA1*, *HLA-DQB1*, *HLA-DQA2*)
- Lung cell death (*GSDML*)

Genetically high white blood cell count may be causally associated with asthma in people with African ancestry. In contrast, genetically higher IGF-1 levels may be causally associated with a lower risk of asthma [R, R].

GENE	SNP	GENOTYPE
IL33	rs144829310	GG
IL2RA	rs61839660	CC
IL1RL1	rs950880	CC
IRF4	rs11242709	CC
IL13	rs20541	GG
SERPINB10	rs12964116	AA
OVOL1	rs479844	AA
NOD2	rs2066844	CC
TLR1	rs17616434	CC
OR2B6	rs7767176	GG
SMAD3	rs17228058	AA
FLG	rs61816761	GG
KRT24	rs8067124	AA
LINGO4	rs115045402	GG
LRRC32	rs55646091	GG
HLA-DRB5	rs1064713	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 PAHs Exposure	
2	Avoid Air Pollution	
3	Airway Muscle Training	30 minutes
4	Swimming	30 minutes
5	Breathing Techniques	10 minutes
6	Yoga	30 minutes
7	Avoid Formaldehyde Exposure	
8	Avoid Ozone Exposure	
9	Black Seed (Black Cumin)	1000 mg
10	Pycnogenol	100 mg
11	Black Seed Oil	2 tsp
12	Quercetin	200 mg
13	Vitamin C	500 mg
14	Air Purifier	
15	Lactobacillus Rhamnosus GG	10 billion CFU

1

Avoid PAHs Exposure

IMPACT 4 / 5

EVIDENCE 3 / 5

How to implement

Minimize your exposure to Polycyclic Aromatic Hydrocarbons (PAHs) by avoiding or reducing consumption of charred, grilled, or smoked foods, not smoking or avoiding secondhand smoke, and limiting time spent in areas with heavy traffic or industrial fumes. Use exhaust fans in kitchens and ensure proper ventilation when cooking at high temperatures to reduce indoor levels of PAHs.

Description

PAHs or Polycyclic Aromatic Hydrocarbons are harmful substances found in smoke and grilled foods. Try to limit exposure to them for better health. For example, avoid inhaling smoke from cigarettes or barbeques and choose alternative cooking techniques over grilling. Minimizing PAHs can reduce the risk of several health issues, particularly lung and skin diseases.

How it helps

A systematic review of 30 studies associated PAHs and asthma [R].

The risk may be even higher in smokers. A study of 3804 participants associated urinary 2-OHPHE with a 7-fold higher risk of asthma in male smokers and a 2.91-fold higher risk in female smokers [R].

PAHs can trigger inflammation in your lungs and worsen asthma symptoms.

PERSONALIZED TO YOUR GENES

Exposure to PAHs may increase the risk of asthma more in people with your *CTLA4* gene variant [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
CTLA4	**rs11571319**	AG	

2

Avoid Air Pollution

IMPACT 4 / 5

EVIDENCE 3 / 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

Air pollution may contribute to the development of asthma. It may also trigger or worsen attacks. However, not all studies found a connection to asthma [R, R, R, R].

Air purifiers with HEPA filters may help with allergy-induced asthma. These filters remove small particles of pollution from the air. Lower quality filters probably won't help as much [R].

Air pollution may contribute to asthma by [R, R, R]:

- Causing oxidative stress
- Increasing inflammation
- Causing the airway to overreact to allergens

PERSONALIZED TO YOUR GENES

People with your *NQO1* gene variant may be more prone to asthma when exposed to air pollution [R].
In people with your *TGFB1* gene variant, air pollution may increase the odds of asthma [R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
NQO1	**rs2917666**	GG	

GENE	SNP	GENOTYPE	EVIDENCE
B3GNT8	**rs1800469**	AA	

3

Airway Muscle Training

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Perform airway muscle training exercises daily for at least 30 minutes. This can involve using specific devices designed to resist airflow in and out, thereby strengthening the respiratory muscles, or practicing breathing exercises that focus on inhaling and exhaling against resistance. Consistency is key, so aim to integrate this practice into your daily routine for ongoing respiratory health.

TYPICAL STARTING DOSE

30 minutes

Description

Airway muscle training is exercise that builds strength in the throat and tongue muscles. This can involve anything from controlled breathing to singing long notes. People use airway muscle training to improve sleep apnea, respiratory conditions, and exercise performance.

Airway muscle training is exercise that builds strength in the throat and tongue muscles. This can involve anything from controlled breathing to singing long notes. People use airway muscle training to improve [R, R, R, R]:

- Sleep apnea
- Respiratory conditions like COPD
- Exercise performance

How it helps

Three meta-analyses (the largest one with 17 studies and 599 participants) found that respiratory muscle training improves maximal inspiratory pressure (by 13.34-21.95 cmH2O) asthma symptoms, and quality of life, but found mixed results for FEV1 and exercise capacity [R, R, R].

Airway muscle training strengthens the muscles involved in breathing, reducing the difficulty for asthmatic patients to breathe.

4

Swimming

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Incorporate swimming into your routine for at least 30 minutes, 3 times a week. Choose a pace and stroke that keeps your heart rate elevated yet allows you to breathe comfortably. Continue this practice regularly for long-term health benefits.

TYPICAL STARTING DOSE

30 minutes

Description

Swimming is a whole-body workout that engages various muscle groups, promoting strength and endurance. It helps keep the heart and lungs healthy, improves flexibility, and can even help reduce stress. Regular swimming is a great way to maintain a balanced, fit, and healthy lifestyle.

How it helps

Both a meta-analysis and a Cochrane review of multiple studies found that swimming provides benefits for children with asthma. It improves forced expiratory volume in one second (L), forced vital capacity (%), lung function, and cardio-pulmonary fitness, but not forced expiratory volume in one second (%) or peak expiratory flow (%) [R, R].

5

Breathing Techniques

IMPACT 3 / 5

EVIDENCE 3 / 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

Experts agree that breathing exercises may help with asthma [R, R, R].

In people with asthma, the **Buteyko breathing technique** may [R, R, R, R, R, R]:

- Improve the quality of life
- Reduce the need for medication
- Slow breathing rate

Yoga may similarly improve the quality of life and asthma symptoms [R, R, R].

Breathing techniques may help by boosting lung function. However, not all studies found this benefit [R, R, R].

PERSONALIZED TO YOUR GENES

Your *GSDMB* gene variant is linked to higher odds of asthma and more severe symptoms. It likely plays a role in narrowing the airways [R, R, R]. **You may benefit from breathing techniques in particular.**

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
GSDMB	**rs7219923**	CT	

6

Yoga

IMPACT 3 / 5

EVIDENCE 3 / 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

Yoga, especially the variations that focus on breathing techniques, may cause small improvements in quality of life, symptoms, and medication usage in people with asthma [R, R, R].

7

Avoid Formaldehyde Exposure

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

To minimize formaldehyde exposure, choose household products and building materials labeled low-VOC (Volatile Organic Compounds) or formaldehyde-free. Ensure proper ventilation in your living and working spaces, especially when using products known to contain formaldehyde like certain adhesives, cleaning agents, and cosmetics. Aim to reduce use of pressed wood products and seek out alternatives when possible.

Description

Avoiding exposure to formaldehyde, a chemical commonly found in building materials and certain products, is crucial to prevent respiratory problems and potential carcinogenic effects.

How it helps

Avoiding formaldehyde exposure can reduce asthma symptoms and attacks. Formaldehyde can irritate the airways and trigger an overactive immune response, exacerbating asthma.

Three meta-analyses (the largest one with 90 studies) associated each 10-µg/m3 increase in formaldehyde exposure with **10-20% higher risk of asthma** in children, while **high exposure increases the risk by 81%**. Moreover, formaldehyde **increases the risk of asthma exacerbations by 8%** [R, R, R].

8

Avoid Ozone Exposure

IMPACT 3 / 5

EVIDENCE 3 / 5

How to implement

Stay indoors during times when ozone levels are reported to be high, typically on hot sunny days, especially during afternoon and early evening hours. Ensure that air filters in your home and vehicle are regularly maintained to decrease indoor ozone levels. Limit outdoor exercise or strenuous physical activity during high ozone days to reduce ozone exposure.

Description

Avoiding prolonged exposure to ground-level ozone, a component of air pollution, can protect lung health and reduce the risk of respiratory problems. Reducing outdoor activities during high ozone levels and using air purifiers indoors can minimize exposure.

How it helps

Ozone exposure may be associated with asthma [R].

9

Black Seed (Black Cumin)

IMPACT 3 / 5

EVIDENCE 2 / 5

How to implement

Take 1000 mg of black seed (black cumin) supplement daily, preferably split into two doses of 500 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE

1000 mg

Description

Black seed, also known as black cumin or Nigella sativa, has been used for its potential health benefits in traditional medicine. It is believed to have anti-inflammatory, antioxidant, and immune-boosting properties.

Black seed (black cumin) and its oil are used in cooking and traditional medicine [R].

People use black seed for [R, R, R, R, R]:

- Asthma
- Allergies
- High blood sugar
- High blood pressure
- Joint pain

How it helps

Black seed may help improve asthma symptoms and well-being. Studied forms and doses include [R, R, R, R, R, R]:

- **Extract** (1 g/day for 1-3 months)
- **Oil** (1.5-3 g/day for 1-2 months)

Black seed may help by [R, R, R]:

- Lowering inflammation
- Balancing the immune response

PERSONALIZED TO YOUR GENES

Your *TSLP* gene variant is linked to asthma. It likely increases allergic inflammation. Black seed may help balance the immune response and lower inflammation [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
TSLP	**rs1837253**	CC	

10

Pycnogenol

IMPACT 3 / 5

EVIDENCE 2 / 5

How to implement

Take 100 mg of pycnogenol supplement daily. This can be taken in a single dose or divided into two doses of 50 mg each, one in the morning and one in the evening.

TYPICAL STARTING DOSE

100 mg

Description

Pycnogenol (pine bark extract) is derived from the bark of the maritime pine (Pinus pinaster). It has been used in traditional n European folk medicine for centuries, and more recently as a supplement. The extract contains a group of bioactive compounds known as proanthocyanidins, which may be beneficial in supporting cardiovascular health, promoting skin health, and aiding in the management of various conditions related to inflammation and oxidative stress.

Pycnogenol comes from the bark of pine trees that grow in the Mediterranean [R, R].
It may improve [R, R, R, R, R, R]:

- Athletic performance
- Seasonal allergies
- Cognitive function
- Joint health
- Varicose veins

How it helps

Pycnogenol (100-200 mg/day for 1-6 months) may improve asthma symptoms. It likely helps by [R, R, R, R, R]:

- Blocking the release of histamine
- Lowering inflammation
- Supporting lung function

PERSONALIZED TO YOUR GENES

Your *STAT6* gene variant is linked to asthma. It may affect the activity of STAT6, an inflammatory protein. Pine bark extract may help by blocking STAT6 [R, R, R, R].

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
STAT6	**rs3122929**	TC	

11

Black Seed Oil

IMPACT 3 / 5

EVIDENCE 2 / 5

How to implement

Take one to two teaspoons (5-10ml) of black seed oil twice daily, preferably before meals. For capsule forms, follow the manufacturer's instructions, commonly 500mg capsules twice daily. Continue this regimen for up to 8 weeks to evaluate its effects.

TYPICAL STARTING DOSE

2 tsp

Description

Both black seed extract and black seed oil have been traditionally used for their potential health benefits, including anti-inflammatory and antioxidant properties. They may support overall wellness and immune function when incorporated into a balanced diet.

Black seed (black cumin) and its oil are used in cooking and traditional medicine [R].

People mainly use black seed for [R, R, R]:

- Allergies
- Joint pain

How it helps

Black seed may help improve asthma symptoms and well-being. Studied forms and doses include [R, R, R, R, R, R]:

- **Extract** (1 g/day for 1-3 months)
- **Oil** (1.5-3 g/day for 1-2 months)

Black seed may help by [R, R, R]:

- Lowering inflammation
- Balancing the immune response

12

Quercetin

IMPACT 3 / 5

EVIDENCE 2 / 5

How to implement

Take 250-1000 mg of quercetin supplement daily with a glass of water, preferably with a meal to aid in its absorption.

TYPICAL STARTING DOSE

200 mg

Description

Quercetin is a natural plant flavonoid found in various foods, particularly in fruits and vegetables like apples, onions, and broccoli. It is used as a dietary supplement and is valued for its potential antioxidant and anti-inflammatory properties.

Quercetin is a plant-based antioxidant. It supports the immune system and helps lower inflammation [R, R].

Good sources of quercetin include [R]:

- Apples
- Onions
- Tea

People mainly use quercetin supplements to relieve allergies [R, R, R].

How it helps

A formulation with quercetin (2 tabs/day for 30 days) added to conventional therapy reduced the symptoms of asthma and rhinitis, and the need for medication in a study of 30 people [R].

Please note: *quercetin may inhibit the production of the thyroid hormone T4 (thyroxine). Individuals with thyroid disorders, particularly hypothyroidism or low T4 levels, should exercise caution when using quercetin and always consult with a healthcare provider before taking this supplement* [R].

Please note: *quercetin may interfere with iron absorption due to its iron-chelating properties, potentially exacerbating anemia or making it harder to manage. If you have anemia, consult your healthcare provider before using quercetin supplements* [R].

PERSONALIZED TO YOUR GENES

The *IL33* gene helps make interleukin-33 (IL-33), a protein that activates different immune cells and promotes inflammation. IL-33 stimulates Th2 immunity, which is usually overactive in people with allergies [R, R].

Your genotype for **rs928413** has been associated with relatively higher odds of allergies. It likely increases IL-33 levels [R].

Quercetin is a plant antioxidant recognized as one of the best natural antihistamines. It may reduce airway inflammation by inhibiting IL-33 [R, R, R, R].

>>> To learn more about the link between the IL33 gene and allergic conditions, check out the full SelfDecode blog post here.

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
ERMP1	**rs928413**	GG	●●

13

Vitamin C

IMPACT 2 / 5

EVIDENCE 3 / 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

Vitamin C has powerful antioxidant properties which may reduce inflammation in your airways, a key issue in asthma. Additionally, it can boost your immune system, potentially decreasing the frequency of asthma attacks triggered by infections.

A meta-analysis of 40 studies associated lower vitamin C intake and serum levels with a **12% higher risk of asthma** [R].

However, a meta-analysis of 62 studies found **no association** between vitamin C and asthma development [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].

14

Air Purifier

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

Install an air purifier in your home, ideally in the rooms you spend the most time in, such as your bedroom and living room. Keep the air purifier on for at least 12 hours each day, or continuously if possible, to effectively reduce airborne contaminants. Regularly clean or replace the filters according to the manufacturer's instructions to maintain its efficiency.

Description

Air purification is the process of cleaning the air around us. Using a high-quality air purifier with a HEPA filter helps remove harmful particles like dust, smoke, and bacteria. Having clean air to breathe can help boost your health by reducing allergies, asthma problems, and even certain infections.

How it helps

Air purification can help manage asthma by removing common indoor triggers like dust, pollen, and pet dander from the environment. This reduces the chance of these irritants triggering an asthma attack.

A meta-analysis of 10 trials and 482 patients with asthma concluded that air purification improves quality of life and decreases fractional exhaled nitric oxide levels (by 6.67 ppb). In a placebo-controlled trial of 30 children with asthma, air purification reduced medication use. However, using a novel Dyson high-efficiency particulate air purifier for 78 weeks failed to improve asthma control, quality of life, or measures of lung function in a placebo-controlled trial of 50 participants with asthma [R, R, R].

15

Lactobacillus Rhamnosus GG

IMPACT 2 / 5

EVIDENCE 3 / 5

How to implement

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus rhamnosus GG (LGG) is a probiotic that has been shown to have a number of health benefits, including reducing the risk of diarrhea, improving gut health, and boosting the immune system. LGG can be taken as a supplement or found in some yogurts and other fermented foods.

How it helps

A meta-analysis of 17 trials with 5,264 children found that probiotic supplementation didn't significantly reduce the risk of asthma development overall. However, a subgroup analysis showed that *Lactobacillus rhamnosus* GG had a modest reduction in asthma risk. No clear benefits were observed for wheeze, allergic rhinitis, or positive aeroallergen skin-prick test results with probiotic supplementation [R].