SelfDecode™

Diphtheria

Disease Report

REPORT CATEGORIES —

IMMUNITY & INFECTIONS

RESPIRATORY HEALTH

Sample Client

Report date: 15 January 2026

Powered by omicsedge

Table of Contents

03 How this works

04 Impact

05 Evidence

06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

13 Next Steps

13 Your Lab Results

Personal information

NAME

Sample Client

SEX AT BIRTH

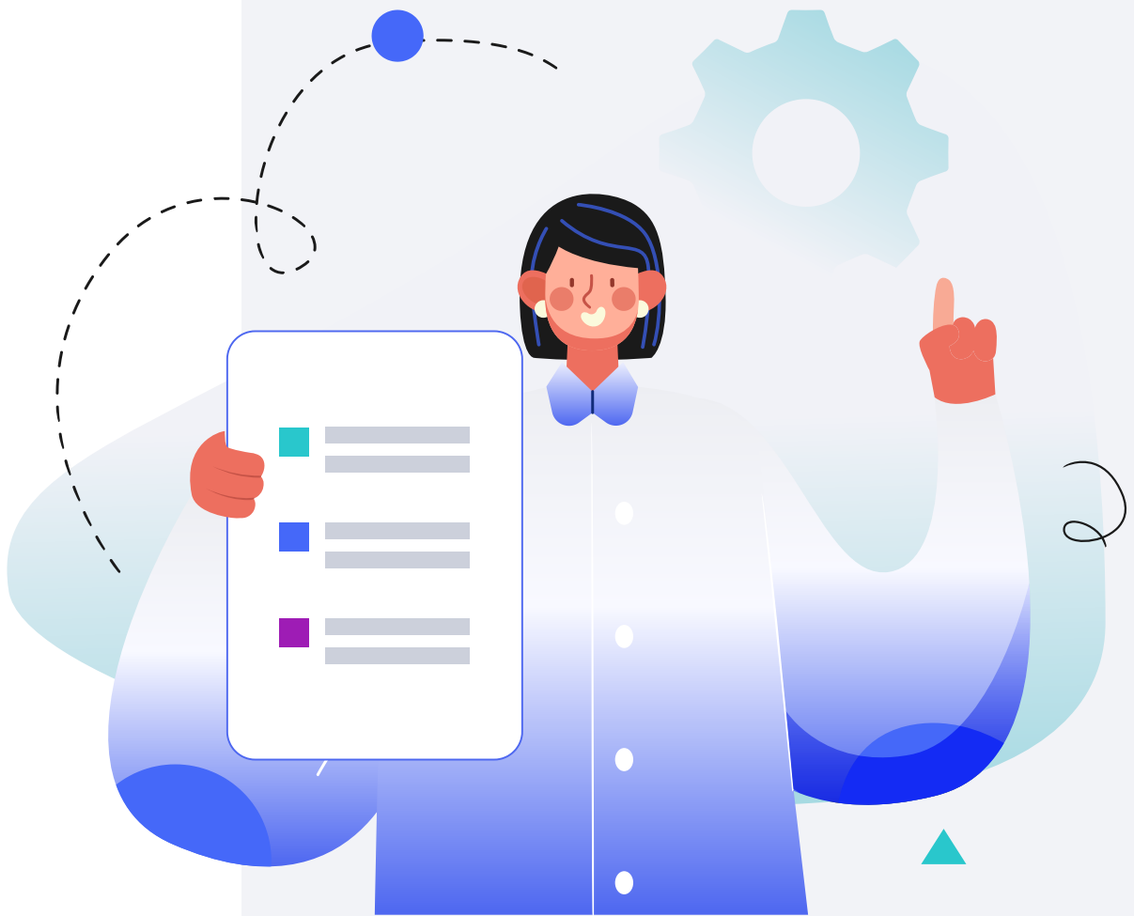
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

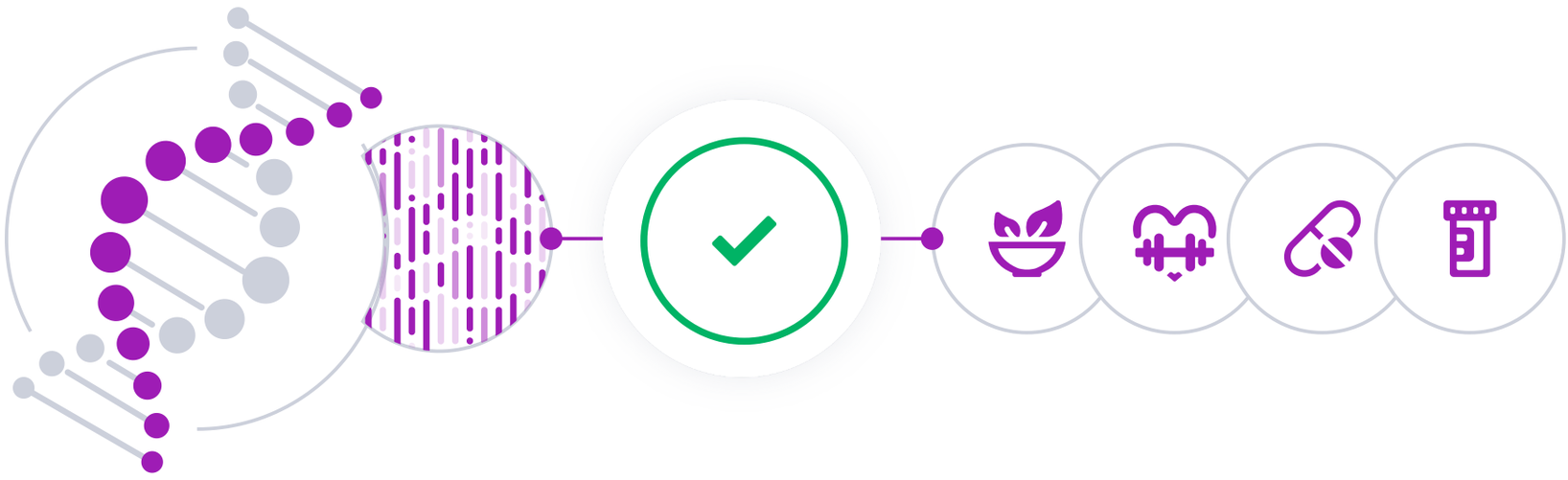


DISCLAIMER

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

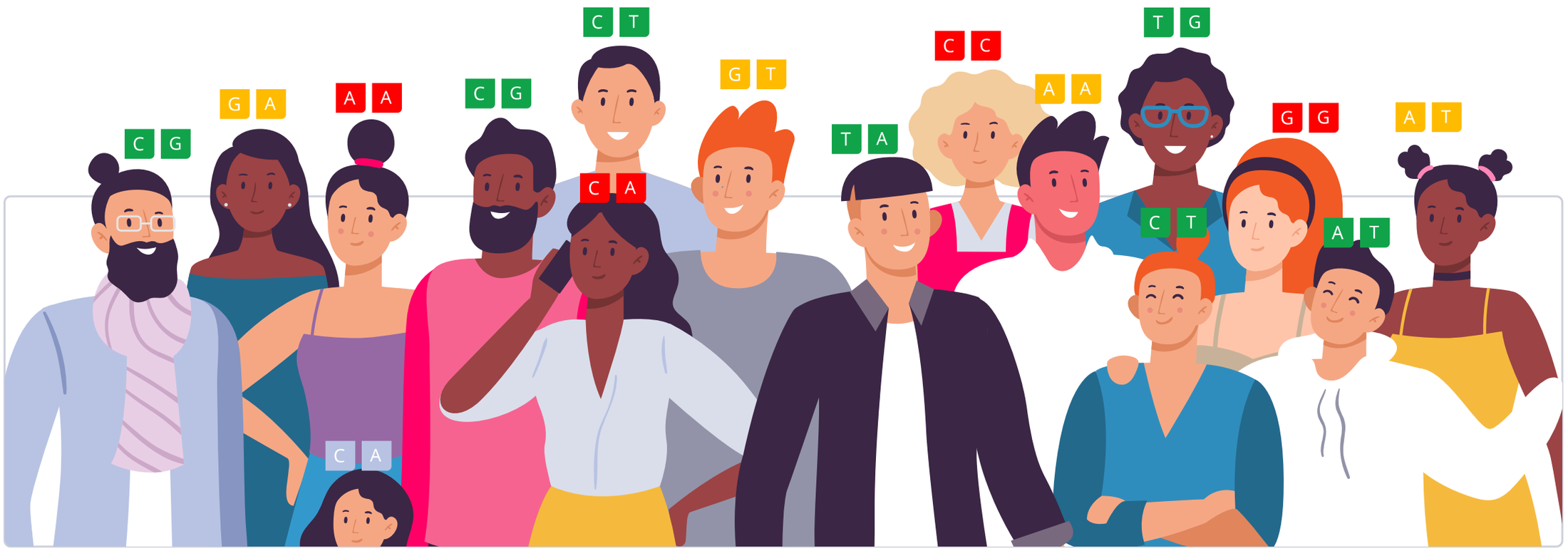
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

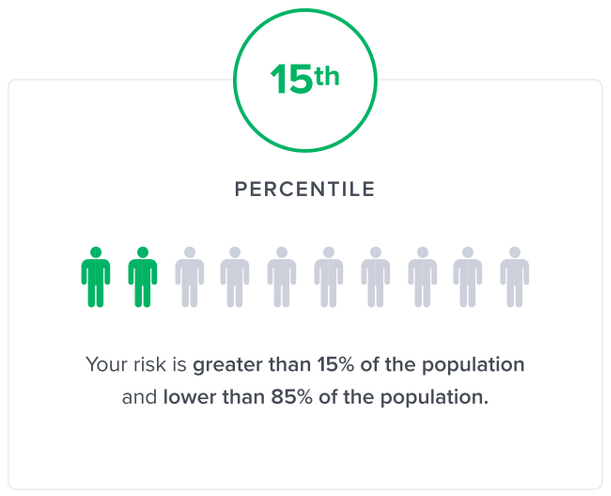
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.



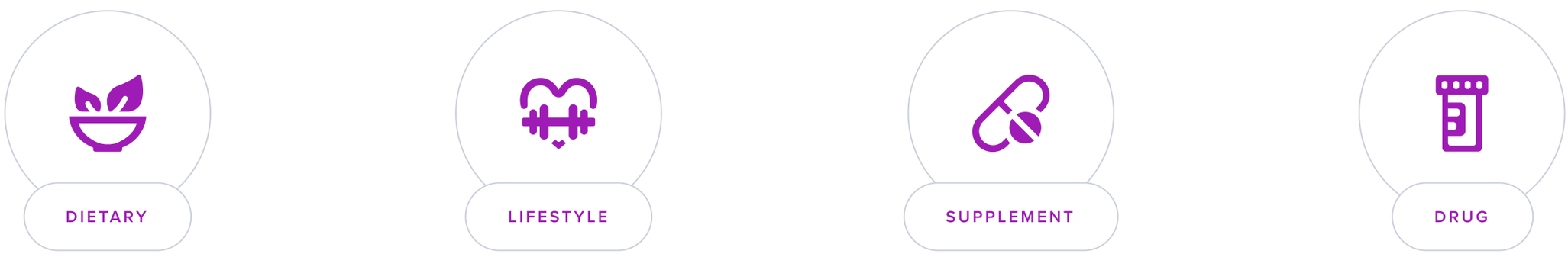
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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

Diphtheria is a serious bacterial infection caused by the bacterium *Corynebacterium diphtheriae*. It typically affects the mucous membranes of the respiratory tract, and it is characterized by sore throat, low-grade fever, and an adherent membrane on the tonsils, pharynx, and/or nasal cavity.

Transmission of the bacteria occurs through respiratory droplets from coughing or sneezing of an infected person or someone carrying the bacteria without symptoms. Despite being rare in many countries due to widespread vaccination, diphtheria remains a threat in places where immunization coverage is inadequate.

Complications and Treatment

A notable complication of diphtheria is the production of a potent toxin by the bacteria, which can lead to significant damage to the heart, kidneys, and nervous system. Effects such as myocarditis, neuritis, and kidney problems can be life-threatening.

Timely administration of diphtheria antitoxin and antibiotics are essential for treatment, along with supportive care for complications. Vaccination, typically part of the childhood vaccine schedule, remains the most effective way to prevent the disease and is crucial for maintaining public health and preventing outbreaks.

TYPICAL LIKELIHOOD

Typical likelihood of diphtheria based on 568 genetic variants we looked at

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.

1. Avoid Air Pollution
2. Honey
3. Regular Hand Washing
4. Avoid Crowds

1

Avoid Air Pollution

IMPACT 1 / 5

EVIDENCE 1 / 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

Avoiding air pollution is crucial in managing diphtheria as it minimizes irritation and inflammation of the respiratory tract, thereby reducing the risk of complications and promoting optimal healing in patients.

2

Honey

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Consume 1-2 tablespoons of raw honey daily, either directly or by mixing it into warm water, tea, or yogurt. Continue this practice regularly to observe benefits.

Description

Honey is a natural sweetener known for its antimicrobial properties and potential benefits for wound healing. It contains antioxidants and may have soothing effects on sore throats and coughs.

Honey is a thick, sweet substance. It’s made by honeybees from the nectar of flowering plants. There are many different types of honey. Besides sugar, honey also contains amino acids (protein building blocks), vitamins, and minerals [R].

People use honey for its anti-inflammatory and antioxidant properties. It can potentially help with [R]:

- Heart problems
- Gut problems
- Cough
- Burns

How it helps

Honey can alleviate throat discomfort by coating the throat, reducing irritation, and providing a soothing effect. Additionally, its antimicrobial properties may help inhibit the growth of pathogens associated with diphtheria, potentially supporting the body's healing process.

3

Regular Hand Washing

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Wash your hands with soap and water for at least 20 seconds, making sure to scrub all surfaces of your hands, including the backs, between your fingers, and under your nails. Do this several times a day, especially before eating, after using the bathroom, after blowing your nose, coughing, or sneezing, and after touching garbage.

Description

Regular hand washing is a simple yet highly effective hygiene practice that helps prevent the spread of infectious diseases and illnesses. It is essential for reducing the transmission of harmful pathogens and maintaining overall health.

How it helps

Regular hand washing is one of the most effective ways to prevent the spread of diphtheria. By washing hands frequently with soap and water, individuals can remove bacteria and toxins from their skin, significantly reducing the risk of infection. Since diphtheria is transmitted through respiratory droplets and close contact, maintaining good hand hygiene is essential for personal and public health.

4

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

Avoiding crowded places can help reduce the risk of diphtheria exposure, especially during outbreaks. Crowded environments facilitate the spread of infectious droplets from person to person. By minimizing exposure to large groups, individuals can lower their chances of contracting diphtheria and other respiratory infections.

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
Neutrophils (%)	69.3 %	40 · 80	9 Nov 2025
Neutrophils (Absolute)	4.8 x10^9/L	0.5 · 1.5 · 4.2 · 8	9 Nov 2025