

Laryngeal Cancer

Disease Report

REPORT CATEGORY —



CANCER

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

Laryngeal cancer refers to malignant growths that develop in the larynx, or the voice box, which is an integral part of the human respiratory and vocal systems. This type of cancer can disrupt voice function, making it difficult for the affected individual to speak clearly. Symptoms frequently include a persistent sore throat, unexplained voice changes that last more than two weeks, or a cough that does not resolve.

Patients may also experience difficulty swallowing, ear pain, or a lump in the neck. Risk factors for developing laryngeal cancer include tobacco use, heavy alcohol consumption, exposure to certain chemicals, and a history of certain types of human papillomavirus (HPV) infections.

Diagnosis and Treatment

Diagnosing laryngeal cancer usually involves a combination of physical examinations, imaging tests such as CT scans or MRIs, and tissue biopsies. Treatment options for laryngeal cancer may include surgery to remove the tumor, radiation therapy, chemotherapy, or a combination thereof, depending on the stage and location of the cancer.

Surgery can range from minimally invasive procedures that preserve the larynx to more extensive surgeries that may require a partial or total laryngectomy, which involves the removal of part or all of the larynx. Following treatment, patients often require rehabilitative services, such as speech therapy, to adapt to changes in speaking or breathing.



TYPICAL LIKELIHOOD

Typical likelihood of laryngeal cancer based on 17,726 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EPHA7	rs9445023	GG
C16ORF72	rs40129	GG
RBM19	rs10492336	AC
RTTN	rs142021700	TT
AKR1C2	rs77045180	GG
FADS2	rs174549	GG
VCAN	rs310518	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		DOSAGE	
1	Avoid PAHs Exposure	2	Avoid Asbestos
3	Mediterranean Diet	4	Avoid Air Pollution
5	Dietary Vitamin A	6	Dietary Vitamin E
7	Zinc	8	Dietary Vitamin C
9	Turmeric	10	Avoid Secondhand Smoke
11	Fruits And Vegetables	12	Fish
	15 mg		

1



Avoid PAHs Exposure

IMPACT

3 / 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

High exposure to PAHs may increase the risk of laryngeal cancer by 45% and laryngeal cancer mortality by 34% [\[R\]](#).

2



Avoid Asbestos

IMPACT

3 / 5

EVIDENCE

3 / 5

How to implement

Check for the presence of asbestos in materials in old buildings, especially those built before the 1980s, before doing any renovations or demolitions. Avoid disturbing materials that might contain asbestos, such as insulation, tiles, and roofing. If asbestos needs to be removed, hire professionals who specialize in asbestos abatement.

Description

Avoiding asbestos exposure is critical to prevent the development of asbestos-related diseases such as mesothelioma and lung cancer. Asbestos is a known carcinogen found in some construction materials and should be handled with extreme care or avoided altogether.

How it helps

Asbestos fibers, when inhaled, can irritate lung tissues and lead to scarring. Studies have shown that exposure to asbestos increases the risk of developing laryngeal cancer. By avoiding exposure to asbestos, individuals can reduce their risk of this type of cancer.

Exposure to asbestos and polycyclic aromatic hydrocarbons is linked to an increased risk of oral and pharyngeal cancer, while no clear association was found with solvents. Future research should address study limitations [\[R\]](#).

3



Mediterranean Diet

IMPACT2 / 5

EVIDENCE2 / 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

High adherence to a Mediterranean diet may reduce the risk of laryngeal cancer [\[R\]](#).

In people with this condition, survival may be 36% higher if they eat a Mediterranean diet [\[R\]](#).

The Mediterranean diet emphasizes antioxidant and anti-inflammatory foods that can help protect against cancer development.

4



Avoid Air Pollution

IMPACT

2 / 5

EVIDENCE

2 / 5

How to implement

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

Description

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

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

Air pollution plays a role in [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#):

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

How it helps

A meta-analysis of 18 case-control studies found a significant association between household air pollution and various upper aero-digestive tract cancers. Pollution was linked to an increased risk, especially in studies accounting for HPV infection and smoking [\[R\]](#).

5



Dietary Vitamin A

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Include foods high in vitamin A in your daily diet, such as sweet potatoes, carrots, spinach, and fortified foods like milk. Aim for 700-900 micrograms (mcg) of vitamin A per day for adults, depending on your age and sex, with a slightly higher intake recommended for women who are pregnant or breastfeeding.

Description

Vitamin A is essential for maintaining healthy vision, immune function, and skin integrity. It also plays a role in cell differentiation and growth, supporting various bodily functions.

How it helps

Vitamin A plays a vital role in maintaining the health of the mucous membranes, including those in the throat and voice box, which can be particularly beneficial for individuals at risk for or diagnosed with laryngeal cancer. Consuming adequate amounts of dietary Vitamin A has been linked to a reduced risk of developing certain types of cancers, including laryngeal cancer, by helping to protect cells from DNA damage and supporting normal cell growth and differentiation.

6



Dietary Vitamin E

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate foods high in Vitamin E into your daily diet. This includes almonds, hazelnuts, sunflower seeds, and green leafy vegetables such as spinach and broccoli. Aim for a daily intake of 15mg of Vitamin E from your diet, which is roughly a handful of almonds (about 23 almonds) or 2 tablespoons of sunflower seeds.

Description

Dietary vitamin E is a fat-soluble antioxidant vitamin found in nuts, seeds, and vegetable oils. It helps protect cells from oxidative damage and supports immune function.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

How it helps

Vitamin E is known for its antioxidant properties, which help to protect the body's cells from damage by free radicals. This protection is crucial for preventing the development of cancer, including laryngeal cancer. Dietary intake of Vitamin E has been shown to reduce the risk of cancer by supporting the immune system and preventing oxidative damage to DNA and cells that could otherwise lead to the formation of cancer.

7



Zinc

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

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

TYPICAL STARTING DOSE

15 mg

Description

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

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

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

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

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

How it helps

Low blood zinc levels may reduce laryngeal cancer survival more in people with certain gene variants [\[R\]](#).

8



Dietary Vitamin C

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate foods rich in Vitamin C into your daily diet, such as oranges, strawberries, red peppers, kale, and broccoli. Aim to consume 5 servings of fruits and vegetables per day to meet the recommended dietary allowance of Vitamin C, which is 90 mg for adult men and 75 mg for adult women.

Description

Vitamin C is an antioxidant that supports the immune system, collagen production, and wound healing. It also enhances iron absorption from plant-based foods and contributes to overall health.

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

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 is an antioxidant that helps to protect cells from damage by neutralizing harmful free radicals. Intake of dietary vitamin C has been associated with a lower risk of various cancers, including laryngeal cancer. This protective effect is likely due to Vitamin C's ability to boost the immune system, promote healthy cell growth, and prevent DNA mutations that could lead to cancer development.

9



Turmeric

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate 500-1000 mg of turmeric into your daily diet, either by adding ground turmeric spice to your food, such as in curries, soups, and smoothies, or by taking a dietary turmeric supplement. This should be done daily for at least 8 weeks to observe potential health benefits.

Description

Turmeric is a bright yellow spice derived from the root of the *Curcuma longa* plant. It contains curcumin, a potent antioxidant and anti-inflammatory compound. Turmeric is used for various health conditions, including reducing inflammation, alleviating joint pain, and supporting digestive health.

How it helps

Turmeric contains curcumin, a compound that has anti-inflammatory and antioxidant properties. There is evidence to suggest that curcumin can help in preventing the growth of cancer cells, including those in laryngeal cancer. Its ability to reduce inflammation and combat oxidative stress might be beneficial in reducing the risk or aiding in the treatment of this type of cancer.

10



Avoid Secondhand Smoke

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Description

Avoiding secondhand smoke is crucial for maintaining good health. Exposure to secondhand smoke can lead to respiratory problems, cardiovascular disease, and an increased risk of lung cancer, even in non-smokers. Protecting oneself from secondhand smoke involves staying away from smoking areas, ensuring smoke-free environments at home and work, and advocating for smoke-free policies in public spaces.

How it helps

Smoking is one of the leading causes of laryngeal cancer. Tobacco smoke contains numerous carcinogens that damage the DNA in cells of the larynx, leading to cancer. Quitting smoking or avoiding secondhand smoke can greatly reduce the risk of developing laryngeal cancer.

11



Fruits And Vegetables

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Increase your intake of fruits and vegetables to at least five servings per day, aiming for a variety of types and colors to ensure a broad range of nutrients. Each serving size should roughly be the amount you can fit in one hand. Try to incorporate at least one serving of fruits or vegetables into every meal and snack throughout the day.

Description

A diet rich in fruits and vegetables provides essential nutrients, antioxidants, and dietary fiber. This combination supports overall health, helps maintain a healthy weight, and reduces the risk of chronic diseases such as heart disease and certain cancers.

How it helps

A diet rich in fruits and vegetables provides essential vitamins, minerals, antioxidants, and phytochemicals that can help lower the risk of developing laryngeal cancer. These nutrients help protect cells from damage, support the immune system, and can reduce inflammation. Regular consumption of a variety of fruits and vegetables has been associated with a decreased risk of many cancers, including those affecting the larynx.

12



Fish

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Incorporate two servings of fish into your diet each week, focusing on oily fish like salmon, mackerel, or sardines for their high omega-3 fatty acid content. Each serving should be about 3.5 ounces cooked, or about ¾ cup of flaked fish.

Description

Fish, particularly fatty fish like salmon and mackerel, is an excellent source of omega-3 fatty acids, which support cardiovascular health, brain function, and inflammation management. Regular consumption of fish can promote heart health and overall well-being.

Fish is a great source of [omega-3s](#), protein, and other essential nutrients. Omega-3s from fish (EPA and DHA) are some of the healthiest fats we can eat. They help reduce inflammation and **protect the heart, brain, and eyes** [\[R\]](#), [\[R\]](#), [\[R\]](#).

Fatty fish are rich in EPA and DHA. They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal protection, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don’t eat fish regularly [\[R\]](#).

How it helps

Fish, especially those rich in omega-3 fatty acids, can contribute to a healthier diet, which is crucial for laryngeal cancer patients or those at risk. These fatty acids have anti-inflammatory properties that may help reduce the risk of cancer by suppressing abnormal cell growth. Additionally, consuming fish as a lean protein source can support overall health and well-being.

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.