



# ALLERGENOME

Precision Genotype  
Allergies & Sensitivities  
Assessments



Food Allergies  
Indoor Allergies  
Outdoor Allergies  
Sensitivity to Chemicals  
Other Sensitivities





Thank you for using LifeNome, the personalized nutrition, fitness and wellbeing advice based on your genes.

We are excited to provide you with one of the most comprehensive genome-based nutrition and well-being information reports currently available. The information provided by LifeNome does not constitute medical advice and is provided solely as complementary insight to assist you and your doctor in making more personalized decisions for your nutrition and well being.









---

<b>Food Allergies</b>	<b>04</b>
Allergy to Eggs	05
Allergy to Milk	06
Allergy to Peanuts	07
Gluten Sensitivity	08
Lactose Intolerance	09
<b>Indoor Allergies</b>	<b>10</b>
Allergy to Cockroaches	11
Allergy to Dust Mites	12
Allergy to Mold	13
Allergy to Pets	14
<b>Outdoor Allergies</b>	<b>15</b>
Birch Pollen Allergy Resistance	16
Grass Allergy Resistance	17
Hay Fever	18
Histamine Intolerance	19
Mugwort Allergy Resistance	20
<b>Sensitivity to Chemicals</b>	<b>21</b>
Sensitivity to Benzene	22
Sensitivity to Mercury	23
Sensitivity to PCB	24
<b>Other Sensitivities</b>	<b>25</b>
Misophonia	26
Motion Sickness	27
Noise-induced Hearing Loss	28
Resistance to Stomach Flu	29
Seasonality	30




My Genetic Strengths **2**

- Mugwort Allergy Resistance 
- Resistance to Stomach Flu 

My Genetic Risks **8**

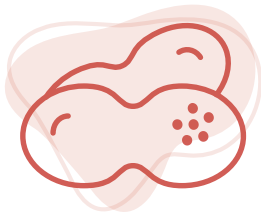
- Gluten Sensitivity 
- Allergy to Cockroaches 
- Sensitivity to PCB 
- Misophonia 
- Motion Sickness 
- Lactose Intolerance 
- Allergy to Mold 
- Histamine Intolerance 

My Genetic Strengths Levels

-  Typical
-  Slightly Advantaged
-  Advantaged

My Genetic Risk Levels

-  Low
-  Slightly Elevated
-  Elevated



The reasons behind rise in food allergies are complex, and have to do with how the food processing has changed. Some people are more susceptible to food allergies and it is partly to do with genetics. The body's immune system keeps you healthy by fighting off infections and other dangers to good health. A food allergy reaction occurs when your immune system overreacts to a substance in a food, identifying it as a danger and triggering a protective response. Food allergy symptoms are most common in babies and children, but they can appear at any age. You can even develop an allergy to foods you have eaten for years with no problems. Remember that genetic predispositions do not always manifest in a specific allergy. Factors such as general health, immune system functioning, as well as other rare and yet unknown genetic and epigenetic mechanisms, have significant contributions too. On the other hand, knowing about your genetic predisposition will help you figure out unusual reactions and symptoms, and perhaps discuss with your physician on your next regular visit.

---

**Food Allergies**

Allergy to Eggs  
Allergy to Milk  
Allergy to Peanuts  
Gluten Sensitivity  
Lactose Intolerance

**04**  
05  
06  
07  
08  
09

## Allergy to Eggs

Typical

higher than  
**90%**  
of the population

MY TOP GENETIC VARIANTS

rs4968011 rs7188980

**3/5**  
MY TOTAL

### WHAT IS ALLERGY TO EGGS?

The body immune system may see the egg protein as a foreign invader and attack it causing allergic reaction. Egg allergy symptoms usually occur a few minutes to a few hours after eating eggs or foods containing eggs, or even touching eggs for some people. Symptoms vary from mild to severe and can include skin rashes, hives, nasal congestion, and vomiting or other digestive problems. Eggs are one of the most common allergy-causing foods for children. Experts estimate that as many as 2 percent of children are allergic to eggs. Fortunately, studies show that about 70 percent of children with an egg allergy will outgrow the condition by age 16. People with an allergy to chicken eggs may also be allergic to other types of eggs, such as goose, duck, turkey or quail. Several genetic variations are associated with increased risk of egg allergy. Just like with other allergies, genetics is only part of the equation. The rates of allergy are increasing throughout the world, affecting up to 30-35% of people at some stage in their lives. Factors such as general health, immune system functioning, as well as other rare and yet unknown genetic and epigenetic mechanisms, have significant contributions too.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Allergy to Eggs out of 5 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ While you do not seem to have known genetic risks for egg allergy, genetics is only part of the equation.
- ♥ If you experience skin inflammation, nasal congestion, runny nose, cramps, nausea, coughing, wheezing, chest tightness or shortness of breath after consuming egg products, you may want to consult your doctor.
- ♥ Most people with egg allergies react to the egg whites, not the yolk. If you suspect you have a reaction to egg, consider making an appointment with the doctor for diagnostic test.

### REFERENCES

Read more about Allergy to Eggs by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)

## Allergy to Milk

Typical

higher than  
**78%**  
of the population

MY TOP GENETIC VARIANTS

rs1800872

rs1800896

rs9898058

6/8

MY TOTAL

### WHAT IS ALLERGY TO MILK?

Milk allergy symptoms (different from lactose intolerance) occur a few minutes to a few hours after drinking milk or eating milk products. Immediately after consuming milk, signs and symptoms of a milk allergy might include: hives, wheezing, vomiting. Signs and symptoms that may take more time to develop include: loose stools, which may contain blood, diarrhea, abdominal cramps, coughing or wheezing, runny nose, watery eyes, itchy skin rash, often around the mouth, and colic, in babies. Approximately 2.5 percent of children younger than three years of age are allergic to milk but over 80% of them outgrow it. Milk allergy differs from lactose intolerance. Unlike a milk allergy, lactose intolerance does not involve the immune system. However, they have common digestive symptoms, such as bloating, gas or diarrhea, after consuming milk and dairy products. Genetic variations associated with milk allergy have recently been identified in a large study.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Allergy to Milk out of 8 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You do not seem to have known genetic risks for milk allergy, but genetics is only part of the equation when it comes to milk allergy. Factors such as general health, immune system functioning, as well as other rare and yet unknown genetic and epigenetic mechanisms, have significant contributions too.
- ♥ Check your lactose intolerance trait within this section as well. These two allergies have different mechanisms within the body. If you only get affected by milk and not by other dairy products that contain lactose, you may have sensitivity to milk.
- ♥ If you are affected by some symptoms mentioned above after consuming milk products, do consider making an appointment with your allergist for a diagnostic test.

### REFERENCES

Read more about Allergy to Milk by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

## Allergy to Peanuts

Typical

higher than  
**58%**  
of the population

MY TOP GENETIC VARIANTS

rs4584173 rs7192 rs9275596

4/5

MY TOTAL

### WHAT IS ALLERGY TO PEANUTS?

Peanut allergy is one of the most common food allergies. In the U.S., approximately three million people report allergies to peanuts and tree nuts. Peanut allergies may be triggered by even the slightest exposure and they are difficult to manage because peanut is used in a variety of food products. Symptoms of peanut allergy vary from a slightly itchy mouth or tingling sensation in or around the mouth or throat after eating peanuts to nausea and runny or congested nose to less common anaphylaxis, which is potentially life-threatening reaction that impairs breathing and can send the body into shock. Based on recent studies, an estimated 25-40 percent of people who have peanut allergy also are allergic to tree nuts. In addition, peanuts and tree nuts often come into contact with one another during manufacturing and serving processes. For these reasons, allergists usually tell their patients with peanut allergy to avoid tree nuts as well. Research by the National Institutes of Health shows that about 20% of children with a peanut allergy outgrow it. Researchers estimated that genetics may account for up to 80% of peanut allergies.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Allergy to Peanuts out of 5 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You do not seem to have a genetic risk for peanut allergies, and in fact only 2% people suffer from actual peanut allergy.
- ♥ However, genetics is only part of the equation when it comes to allergies.
- ♥ In addition to the better known symptoms such as shortness of breath or wheezing and redness or swelling of your skin, individuals with peanut allergies may show milder symptoms such as Itching or tingling in or around the mouth and throat or digestive problems, such as diarrhea, stomach cramps, or nausea. If you experience any of these, try to minimize your contact with nut products to see if the symptoms subside.
- ♥ People with impaired skin barrier function caused by mutations in the filaggrin gene have higher risk to allergies, including peanut allergy (check you skin barrier sensitivity report in the SkinNome package).
- ♥ If you suspect you have allergic reaction to peanuts (or other nuts), see an allergist for diagnosis and treatment. Diagnosing a peanut allergy can be complicated. Symptoms can vary from person to person, and a single individual may not always experience the same symptoms during every reaction. Your allergist will work with you to determine the best ways to manage your symptoms.

### REFERENCES

Read more about Allergy to Peanuts by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)

## Gluten Sensitivity

Elevated

higher than  
**95%**  
of the population

MY TOP GENETIC VARIANTS

rs2187668

rs2305764

rs7454108

5/5

MY TOTAL

### WHAT IS GLUTEN SENSITIVITY?

Gluten is a protein found primarily in grains (wheat, rye, barley). Gluten sensitivity may affect up to 6 percent of the population. It is sometimes called non-celiac gluten sensitivity to distinguish it from celiac disease, which is an autoimmune condition. After eating foods with gluten, people with gluten sensitivity can experience abdominal pain, diarrhea or constipation, and bloating. People sensitive to gluten can also experience other symptoms, such as fatigue, headaches, and joint pain. According to a recent survey, more than 30% of Americans actively try to avoid eating gluten. However, it is unclear whether this is warranted. A recent study found that among 400 individuals who thought they were gluten intolerant, only 55 people (14.5%) actually had an issue with gluten. In some cases, people who eliminate gluten may end up gaining weight because these foods often have more calories than their gluten-containing counterparts.

Symptoms of Gluten Sensitivity include:

- ♥ Digestive issues such as gas, bloating, diarrhea and even constipation.
- ♥ Fatigue, brain fog or feeling tired after eating a meal that contains gluten.
- ♥ Migraine headaches.
- ♥ Joint inflammation
- ♥ Anxiety, depression, mood swings and ADD.

Of course any of these symptoms in and of themselves are not a sufficient reason to suspect gluten sensitivity or intolerance. Several genetic variations were found more frequently in people with gluten sensitivity.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Gluten Sensitivity out of 5 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You seem to have a higher genetic risk for gluten sensitivity than the average population.
- ♥ Even people with genetic predisposition for gluten sensitivity may not experience in real life, since it may not be activated.
- ♥ Take the following gluten sensitivity self-assessment quiz (third party website, opens in a new window) to get some more insights. If the quiz also indicates a higher risk of gluten sensitivity, you may want to consider trying out gluten-free diets for a while to see if suspected symptoms are mitigated or disappear.
- ♥ Foods that are naturally gluten-free include: Fruits, Vegetables, Meat and poultry, Fish and seafood, Dairy, Beans, legumes, and nuts, rice, corn, soy, potato, beans and quinoa
- ♥ Check out gluten-free recipes (third party, opens in new window)
- ♥ As always check with your doctor before making any abrupt changes to your diet.

### REFERENCES

Read more about Gluten Sensitivity by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

[Resource 3](#)



## Lactose Intolerance

Slightly  
Elevated

higher than  
**58%**  
of the population

MY TOP GENETIC VARIANTS

rs182549 rs4988235

**2/2**  
MY TOTAL

### WHAT IS LACTOSE INTOLERANCE?

Lactose intolerance means that the body cannot easily digest lactose, which is a natural sugar found in milk and dairy products. Symptoms include diarrhea, nausea, abdominal cramps, bloating and gas. For some people, these symptoms are very severe and their systems can not tolerate any lactose. For others, the symptoms are milder, and they just have to limit the amount of dairy products they consume. Lactose intolerance symptoms generally show themselves after ingestion of food containing lactose. These include:

- ♥ Milk, milkshakes and other milk-based beverages,
- ♥ Whip cream and coffee creamer,
- ♥ Ice cream, ice milk, and sherbet,
- ♥ Cheese of all kinds,
- ♥ Butter,
- ♥ Puddings and custards,
- ♥ Cream soups and cream sauces.

Lactose intolerance is a consequence of a deficiency of a lactase enzyme. This deficiency may be genetic or acquired. Interestingly, up to 65% world's population have reduced ability to digest lactose. Two genetic variations have been frequently found in people (of European descent) who are lactose intolerant.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Lactose Intolerance out of 2 that we are using to determine your predisposition for this trait.

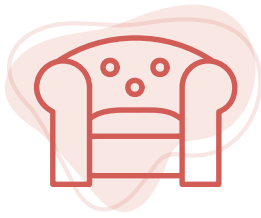
### RECOMMENDATIONS

- ♥ Two well known genetic variants for lactose intolerance have been found in people of European descent, and primarily from the North of Europe. Other ethnicity, including some South Europeans, are likely to have other genetic variants enabling them to digest lactose, and these have not yet been confirmed. So, if you are not of European descent, these results are not applicable to you.
- ♥ You seem to have a slightly higher than average genetic risk of lactose intolerance, but this does not mean that you actually express this sensitivity in your real life.
- ♥ If you do not experience any of the above-mentioned symptoms, there may be no reason cut back on your lactose-rich food.
- ♥ You may also want to check if you may have predispositions for milk allergy.
- ♥ If you experience a few of the above-mentioned symptoms when consuming dairy products, cut back on your lactose-rich food and see if your symptoms subside.
- ♥ There are many alternatives to dairy products including lactose free milk, non-dairy creamers, rice milk drinks and soy milk.
- ♥ Always consult with a physician before making major changes to your diet.

### REFERENCES

Read more about Lactose Intolerance by checking out the following articles:

[Resource 1](#)



Millions of people suffer year-round from allergy symptoms caused by indoor allergens. Although many indoor substances can trigger allergic symptoms, the most common allergens which frequently cause these symptoms are dust mites, pet dander, cockroaches, and mold. Unlike seasonal allergies (such as hay fever), indoor allergies can persist indefinitely if left properly diagnosed. Explore how your genetics may predispose you or protect you from indoor allergens in this section.

---

<b>Indoor Allergies</b>	<b>10</b>
Allergy to Cockroaches	11
Allergy to Dust Mites	12
Allergy to Mold	13
Allergy to Pets	14

## Allergy to Cockroaches

Elevated

higher than  
**95%**  
of the population

MY TOP GENETIC VARIANTS

rs2243123

rs2243149

rs7548864

**3/6**

MY TOTAL

### WHAT IS ALLERGY TO COCKROACHES?

Cockroaches live in many locations around the world, in all types of buildings and all kinds of neighborhoods. The National Pest Management Association reports that over 60 percent of homes in the United States contain cockroach allergens. This number rises to 80-90 percent in urban areas. The saliva, feces and shedding body parts of cockroaches contain a protein that can trigger allergies and even asthma in some people. A cockroach allergy is a trigger of year-round allergy and asthma. Common cockroach allergy symptoms include runny stuffy or itchy nose, itchy or red eyes, skin rash, cough, mucus. People with some genetic variations have higher risk of developing allergies to cockroaches.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Allergy to Cockroaches out of 6 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You may have a higher genetic risk of allergy to cockroaches, but genetics is only part of the equation.
- ♥ A cockroach allergy is a trigger of year-round allergy and asthma. Common cockroach allergy symptoms include runny stuffy or itchy nose, itchy or red eyes, skin rash, cough, mucus. If you suspect that you have a cockroach allergy, you may try over-the-counter medicines such as nasal corticosteroids, antihistamines, decongestants
- ♥ Talk to your doctor about allergy test and what medications may be right for you
- ♥ In any case it is a good idea to minimize your exposure to cockroaches: fix leaky pipes under the sinks and in the basement, seal cracks in the walls
- ♥ Store food in airtight containers, keep tables and floors free from crumbs, cover trash cans
- ♥ Do not use sprays as they can irritate allergies and trigger asthma
- ♥ Use cockroach baits and traps. Consult a pest control company.

### REFERENCES

Read more about Allergy to Cockroaches by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

## Allergy to Dust Mites

Typical

higher than  
**58%**  
of the population

MY TOP GENETIC VARIANTS

rs1464403 rs1800872 rs1800896

**11/11**  
MY TOTAL

### WHAT IS ALLERGY TO DUST MITES?

Dust mites are microscopic creatures, related to ticks and spiders that live in house dust. The proteins in dust mite body parts and feces cause allergic reactions in some people. Dust allergy symptoms are similar to those of pollen allergies and include red, itchy, watery eyes, runny, itchy, stuffy nose, sneezing. These symptoms persist all year round and feel like endless cold or even asthma. It is estimated that up to 20 million Americans have dust mite allergy. When inhaled, dust mite allergen triggers asthma attacks and is one of the most common causes of asthma attacks worldwide. This is primarily because dust mites are found nearly everywhere, especially indoors. All homes contain some amount of dust mites. Because dust mites feed on dead human skin, the allergen tends to be concentrated in mattresses, bedding, upholstered furniture, carpets. Pets contribute dander to the dust and increase the food source for mites. Several genetic variations have been found to be associated with increased risk of allergy to dust-mites.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Allergy to Dust Mites out of 11 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ While your genetics-based score is still within typical range, other factors may contribute to the risk of allergy.
- ♥ If you have year round allergy-like symptoms, dust mites are likely to blame.
- ♥ Even if you do not have these symptoms, reducing your exposure to dust is a good idea.
- ♥ Use natural fiber rugs that can be cleaned easily.
- ♥ Keep air in your house cool and clean.

## Allergy to Mold

Slightly  
Elevated

higher than  
**60%**  
of the population

MY TOP GENETIC VARIANTS

rs11674302

rs17388568

**3/3**

MY TOTAL

### WHAT IS ALLERGY TO MOLD?

Mold are fungi that thrive both outside (in logs, fallen leaves, compost piles, grasses) and inside (in moist places like bathroom, kitchen, basement). There are many types of mold, some are visible by eye, others are not. Molds make spores that float in the air like pollen. But unlike plants that produce pollen, mold do not die with the first frost. They simply slow down or stop growing during this time, and they start growing in the spring. Some people are allergic to molds: when they inhale the spores they develop typical allergy symptoms. Genetic variations associated with allergies to two types of mold fungus (Cladosporium and Alternaria) have been identified.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Allergy to Mold out of 3 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Take basic steps to reduce the mold in your house.
- ♥ It is important to keep your house dry: molds thrive in moist conditions.
- ♥ Do not use carpets in bathrooms and basement.
- ♥ Fix water leaks.
- ♥ Clean the garbage often and de-clutter (mold can grow in piles of old newspapers and clothing).
- ♥ If you have developed allergy symptoms, talk to your doctor.

### REFERENCES

Read more about Allergy to Mold by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

[Resource 3](#)

## Allergy to Pets

Typical

higher than  
**28%**  
of the population

MY TOP GENETIC VARIANTS

rs11674302 rs2155219 rs4833095

6/6

MY TOTAL

### WHAT IS ALLERGY TO PETS?

Pet allergy is an allergic reaction to proteins found in an animals skin cells, saliva or urine. Signs of pet allergy include those common to hay fever, such as sneezing and runny nose. Some people may also experience signs of asthma, such as wheezing and difficulty breathing. Most often, pet allergy is triggered by exposure to the dead flakes of skin (dander) a pet sheds. Any animal with fur can be a source of pet allergy, but pet allergies are most commonly associated with cats, dogs (as well as horses and rats). For a person with pet allergies, life in a dog-loving country is not easy. In 2012, over a third of the U.S. households had a dog. Dog dander gets everywhere, including places where dogs have never set a paw. According to the National Institutes of Health, detectable levels of pet dander are in every home in the U.S. Genetic variations in some genes have been identified to be associated with allergy to pets.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Allergy to Pets out of 6 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You do not seem to have a genetic risk for pet allergy, but remember genetics is only part of the equation when it comes to allergies.
- ♥ Watch out for symptoms of pet allergy: coughing and wheezing, red, itchy eyes, runny, itchy stuffy nose, sneezing, and skin reactions after being in contact with a pet.

### REFERENCES

Read more about Allergy to Pets by checking out the following articles:

[Resource 1](#) [Resource 2](#)



The most common source of outdoor allergens is pollen; often tree pollen (common during spring), grass pollen (common during summer), and Ragweed pollen (common in summer and fall). Explore your predisposition to and protection from these common outdoor allergies in this section.

---

<b>Outdoor Allergies</b>	<b>15</b>
Birch Pollen Allergy Resistance	16
Grass Allergy Resistance	17
Hay Fever	18
Histamine Intolerance	19
Mugwort Allergy Resistance	20

## Birch Pollen Allergy Resistance

Typical

higher than  
**80%**  
of the population

MY TOP GENETIC VARIANTS

rs11674302 rs12708716

**3/3**  
MY TOTAL

### WHAT IS BIRCH POLLEN ALLERGY RESISTANCE?

Some people have genetic variations that make them more resistant towards birch pollen allergy. In other words, people with this genetic variations have lower incidents of allergies to birch (Betulaceae). Birch pollen is very allergenic pollen and is one of the main triggers of hay fever. In allergic people it can also cause an asthma attack, conjunctivitis, and oral allergy syndrome that causes an itchy mouth after eating raw fruits, vegetables, or nuts. Birch pollen cross-reacts with many fruits, vegetables and nuts, with apples being the most common cross-reaction associated with birch pollen.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Birch Pollen Allergy Resistance out of 3 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ If you have hay fever symptoms, birch pollen may be one of the reasons.
- ♥ Watch out for the symptoms of allergy to birch pollen and try to avoid areas with high birch pollen concentration.
- ♥ Many weather websites provide a pollen index, which you may want to consult as a safety precaution.
- ♥ One of the potential issues with birch pollen allergy is that it cross-reacts with foods causing an oral allergy syndrome in people allergic to it.
- ♥ If you experience itchiness or swelling of the mouth, face, lip after eating raw fruits (apple, apricot, peach, plum, cherry, kiwi), vegetables (carrot, celery, fennel, coriander, parsley), nuts (almonds, hazelnut), take over the counter medicine or talk to your health-care provider.

### REFERENCES

Read more about Birch Pollen Allergy Resistance by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)



## Grass Allergy Resistance

Typical

higher than  
**60%**  
of the population

MY TOP GENETIC VARIANTS

rs631208

**3/3**

MY TOTAL

### WHAT IS GRASS ALLERGY RESISTANCE?

Grass pollen is known to cause a variety of different allergic reactions. Grass pollen is most present in the air during the late spring and early summer months, and can cause allergic rhinitis, allergic conjunctivitis, and asthma. Direct skin contact with grass, from sitting in the grass or mowing the lawn, can cause itching, urticaria (also known as hives), and atopic dermatitis (eczema). Grass allergy can also be associated with fruit pollen syndrome resulting in food allergies to tomatoes, potatoes, and peaches. A recent study identified genetic variations associated with lower incidents of grass allergy. This implies that these genetic variations are protective from grass allergies, and people who have these variations are less likely to develop allergies to poacea. True grasses (poaceae) are a family of plants to which a large part of the population is allergic. These plants are characterized by long and narrow cuts. Cultivated cereals such as wheat, oats, corn, rice are among the many true grasses species.

### YOUR GENETIC VARIANTS

This is 1 genetic variant (SNP) associated with Grass Allergy Resistance out of 3 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ You do not seem to have genetic resistance against grass allergy. This does not mean you are more prone for grass allergy, it just means you are not among those individuals that have a much lower likelihood for contracting grass allergy.
- ♥ If you do experience hay fever, do watch out for allergic reactions to grass as a potential root cause if you experience hay fever.
- ♥ You don't always need a genetic advantage to reduce your likelihood for allergies. Research has shown that high levels of stress can worsen existing allergies, possibly by upsetting the balance of substances in your body that control immune response. Try to meditate often to keep your immune system strong and keep your stress levels from exacerbating potential allergies.

### REFERENCES

Read more about Grass Allergy Resistance by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

## Hay Fever

Typical

higher than  
**62%**  
of the population

### MY TOP GENETIC VARIANTS

rs10107891 rs11203814 rs12708716

**32/32**  
MY TOTAL

### WHAT IS HAY FEVER?

Many substances and pollen cause the allergic symptoms commonly called hay fever. While hay is not the only allergen that causes problems and it does not cause fever, this popular name appeared from early descriptions of sneezing, nasal congestion, and eye irritation while harvesting hay fields. The scientific term for it is allergic rhinitis that originates from rhino (nose). At peak seasons hay fever affects up to 30% of all people worldwide. Symptoms of hay fever often mimic those of chronic colds, and include nasal congestion, a runny nose with clear mucus, sneezing, nose, eye itching, excess tears. Hay fever can make you feel miserable, and generally interfere with your daily life affecting your performance at work or school. Large genome-wide association studies identified multiple genetic markers associated with hay fever.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Hay Fever out of 32 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Your overall genetics-based predisposition risk to hay fever is within typical range.
- ♥ Hay fever is a complex phenomena and many genetic variants contribute to its overall risk.
- ♥ Even if you do not experience hay fever symptoms, you may want to follow common sense steps to minimize the effect of pollen on your well-being.
- ♥ In the high pollen season, these steps include washing bed sheets weekly in hot water, always take a shower and wash hair before bedtime (pollen can collect on skin and hair throughout the day).
- ♥ Avoid cutting grass, and walking in grassy areas in the early morning, evening and at night, when the pollen count is at its highest.

### REFERENCES

Read more about Hay Fever by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)

## Histamine Intolerance

**Slightly Elevated**

higher than  
**58%**  
of the population

MY TOP GENETIC VARIANTS

rs10156191 rs1799836

**7/7**  
MY TOTAL

### WHAT IS HISTAMINE INTOLERANCE?

Histamine intolerance is caused by excess of histamine because of an impaired function of the histamine-degrading enzyme diamine oxidase (DAO) and histamine N-methyl transferase (HNMT) that regulates airway response to histamine. Histamine is produced as part of a local immune response to cause inflammation as a reaction to foreign particles (such as virus) or allergens (from plant pollen, dust mites, certain foods, food additives, alcohol). Histamine is also a neurotransmitter that conveys messages between neurons and it plays important role in regulating the permeability of the blood capillaries, and regulating levels of regulation of gastric acid. Histamine is present on our skin, lung and stomach. As a healthy reaction, histamine levels rise as a response to allergens present in air, environment, foods, drink. Under normal physiological conditions, excess of histamine is quickly degraded. When the degradation process is impaired, it leads to histamine intolerance. Genetic variants in the key degradation enzyme diamine oxidase DAO, and histamine N-methyl transferase (HMT) are associated with histamine intolerance.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Histamine Intolerance out of 7 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- You have a slightly higher genetic predisposition to histamine intolerance. In addition to genetics, histamine intolerance may be caused by hormone changes (menopause), medications, or the presence of high amounts of histamine in a meal.
- Symptoms of histamine intolerance vary from nasal congestion and headaches/dizziness to abdominal cramps, nausea, diarrhea, skin rashes, extreme tiredness. If you are unable to find the root cause of your symptoms, please consult an allergist or a physician.
- Maintain a food diary and write down your symptoms. Foods high in histamines include fermented alcoholic beverages, cured meats and smoked fish, matured cheeses, fermented and soured foods, shellfish, walnuts and cashew nuts, chocolates, most citric fruits, tomatoes, eggplants, snacks and sweets with preservatives and additives.
- Higher dosage of vitamin B6 and vitamin C as well as DAO-infused food supplements are generally recommended for people with histamine intolerance. Please consult your physician before taking any form of medication.

### REFERENCES

Read more about Histamine Intolerance by checking out the following articles:

- [Resource 1](#)
- [Resource 2](#)

## Mugwort Allergy Resistance

Advantaged

higher than  
**95%**  
of the population

MY TOP GENETIC VARIANTS

rs11674302 rs631208

**3/3**  
MY TOTAL

### WHAT IS MUGWORT ALLERGY RESISTANCE?

Mugwort is a perennial plant and a close relative of daisies, sunflowers, dandelions, and ragweed. Mugwort pollen is one of the main sources of hay fever and allergic asthma in North Europe, North America and parts of Asia. Mugwort allergy symptoms are almost identical to seasonal allergies (sneezing, coughing, redness of eyes, itching, skin rashes). Often, allergy to mugwort is preceded by oral allergy syndrome that causes itchiness or swelling of the mouth, face, lip after eating some foods that are cross-reacted with mugwort. In some cases, mugwort can cause severe skin rashes, eczema, asthma. Symptoms worsen during the mugwort pollen season that runs from late summer to fall. Recent studies identified genetic variations associated with significantly decreased risk of allergy to mugwort pollen. People with these genetic variations report significantly fewer cases of allergies mugwort pollen.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Mugwort Allergy Resistance out of 3 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Do you hay fever? According to your genetics, mugwort pollen is less likely to be the culprit. You have genetic variations more frequently found in people with resistance to mugwort pollen allergy
- ♥ Still, as genetics is only part of a complex picture, and mugwort pollen is a most common cause of hay fever, watch out for symptoms
- ♥ Mugwort pollen cross-reacts with foods like honey, sunflower seeds, apple, carrot, celery, garlic, onion, peanut, pistachio, almond causing an oral allergy syndrome in people allergic to it
- ♥ If you notice itchiness or swelling of the mouth, face, lip keep a food diary and monitor your intake of foods that can cross-react with mugwort pollen
- ♥ If your symptoms persist, take over the counter medicine or talk to your health-care provider about testing for mugwort pollen allergy



Chemical sensitivity can be triggered by a number of factors: toxic waste, ventilation systems, industrial emissions, mold, bacteria, pesticides, paints, plastics, dentures, hearing aids--even jewelry! Over several years of evolution, our bodies have developed a sophisticated system of enzyme pathways to eliminate such foreign particles. Genetic variants in genes that code for those key enzymes may interfere with the detoxification process. In this section, explore what your genetic predispositions are for sensitivity to mercury, benzene, and PCBs; in addition, get actionable insights on how to deal with these sensitivities.

---

**Sensitivity to Chemicals**

Sensitivity to Benzene  
Sensitivity to Mercury  
Sensitivity to PCB

**21**

22

23

24

## Sensitivity to Benzene

Typical

higher than  
**60%**  
of the population

### MY TOP GENETIC VARIANTS

rs1051740 rs2965749

**5/5**  
MY TOTAL

### WHAT IS SENSITIVITY TO BENZENE?

Benzene is an industrial chemical and a ubiquitous pollutant of air largely from manufacturing and motor vehicle exhaust. Benzene may irritate the nose and throat, cause coughing, wheezing, headache, dizziness, and skin allergies. It is a documented carcinogen and it may target different organs, including liver, kidney, lung, heart and the brain. Many products such as adhesives, laundry detergents, nail polishes, synthetic fabrics, dyes, still contain some levels of benzene. About 50% of the benzene exposure in the US results from smoking tobacco or from second-hand smoke. The metabolism of benzene has been extensively investigated and the cytochrome P450 enzyme (CYP2E1) plays a major role. Genetic variations in this enzyme as well as in the EPHX1 and NQO1 genes increase susceptibility to benzene toxicity.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Sensitivity to Benzene out of 5 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- Good news! You do not have genetic predisposition associated with increased risk of sensitivity to benzene, or higher risk of benzene accumulation. It is still a good idea to reduce your exposure to benzene by ensuring adequate ventilation in your home, avoiding second hand smoke, using benzene free laundry detergents. If you live in the city, keep plenty of plants in the home: they are known to clean the air from pollutants. [Hear about common houseplants for cleaner indoor air.](#)

### REFERENCES

Read more about Sensitivity to Benzene by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)

## Sensitivity to Mercury

Typical

higher than  
**40%**  
of the population

### MY TOP GENETIC VARIANTS

rs2164624 rs37157 rs41303970

**19/22**  
MY TOTAL

### WHAT IS SENSITIVITY TO MERCURY?

Mercury is a heavy metal found naturally in the environment. It is released into the air, water and soil by factories and coal-burning power plants. In water, mercury changes its form and becomes methylmercury which is absorbed by fish. When this fish comes to your table, you absorb the mercury that may accumulate in your body and become harmful at high levels. Young children and fetuses are particularly sensitive to mercury as their nervous systems is developing. Mercury can be toxic to gastrointestinal, and renal, and nervous systems. Mercury will leave the body over time in the urine, feces (and breast milk) but studies show that levels of mercury in human blood, hair depend on genetic variations.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Sensitivity to Mercury out of 22 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- You do not have an elevated predisposition likelihood for bio accumulation of mercury. Follow general guidelines for eating a healthy balanced diet and eat up to 12 oz (340 g) a week (two average meals) of a variety of fish and shellfish. FDA advises young children, and women who are (or may become) pregnant, and nursing mothers to avoid fish high in mercury. Consult [Smart Seafood Buying Guide](#).

### REFERENCES

Read more about Sensitivity to Mercury by checking out the following articles:

[Resource 1](#) [Resource 2](#) [Resource 3](#)

## Sensitivity to PCB

Elevated

higher than  
**90%**  
of the population

MY TOP GENETIC VARIANTS

rs1432074 rs1504418 rs2296621

**22/31**  
MY TOTAL

### WHAT IS SENSITIVITY TO PCB?

Polychlorinated biphenyls (PCBs) are a group of man-made chemicals. They are oily liquids or solids, clear to yellow in color, with no smell or taste. They have been long recognized as environmental pollutants that accumulate in humans with adverse health effects. PCBs have been linked to various cancers, problems with immune system and thyroid function, as well as low birth weight, slowed growth and development in children. Manufacturing of PCBs was halted in the 70s but PCBs are still being released into the environment via hazardous waste sites, leaks, improper disposal. Since PCBs are found throughout the environment, it is likely that everyone has been exposed to them through food (fish and meats), water, and even old light fixtures. PCBs are easily absorbed by the body, and like other lipophilic compounds they have to be metabolized by the members of the cytochrome P450 system. People with lower activities of some cytochrome P450 enzymes may be under higher risk of PCB build-up due to their slower excretion rates from the body.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Sensitivity to PCB out of 31 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Make seafood choices carefully. Certain common fish high in good nutrients and omega-fats are also high in PCBs, including Atlantic and farmed salmon.

### REFERENCES

Read more about Sensitivity to PCB by checking out the following articles:

[Resource 1](#) [Resource 2](#)





In addition to food, outdoor/indoor, and chemical allergies, your genetic makeup can also influence other sensitivities that impact your life. Explore how your unique genetic makeup impacts your potential predisposition for motion sickness, seasonality, noise sensitivity, and noise-induced hearing loss in this section.

---

<b>Other Sensitivities</b>	<b>25</b>
Misophonia	26
Motion Sickness	27
Noise-induced Hearing Loss	28
Resistance to Stomach Flu	29
Seasonality	30

## Misophonia

Elevated

higher than  
**75%**  
of the population

MY TOP GENETIC VARIANTS

rs2937573

1/1

MY TOTAL

### WHAT IS MISOPHONIA?

Misophonia is a sensitivity to chewing sounds (from the Greek meaning hatred of sound). It is a newly recognized condition that is characterized by feelings of rage triggered by small sounds: people munching, gum chewing, sipping, footsteps, humming, which are called "trigger sounds" misophonia community. The response can be an immediate and intense fight or flight feeling that creates panic and rage, and sufferers can become violent and emotionally explosive. Misophonia usually starts at late childhood. People who self-reported themselves as being sensitive to noise, frequently have a genetic variation in the gene TENM2 that plays a role in brain development.

### YOUR GENETIC VARIANTS

This is 1 genetic variant (SNP) associated with Misophonia out of 1 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Never heard of this condition? You are not alone! Misophonia can be a real problem. If you meet someone with Misophonia, appreciate that it is a real condition. If you think you friend, or yourself, have Misophonia symptoms, understand that this is a real condition and look up [www.misophonia.com](http://www.misophonia.com) to seek support.
- ♥ In a new study, The Brain Basis for Misophonia, brain imaging has demonstrated that people with Misophonia have an abnormality in the emotional control mechanism which causes their brains to go into overdrive on hearing the trigger sounds
- ♥ Some approaches that tend to be used for people with misophonia include Tinnitus retraining therapy (TRT) that teaches sufferers how to improve their ability to tolerate certain noises
- ♥ Another approach is cognitive behavioral therapy that changes the negative thoughts that may contribute to the patient's suffering
- ♥ White noise machines have also been found to ease Misophonia

### REFERENCES

Read more about Misophonia by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

[Resource 3](#)

## Motion Sickness

Elevated

higher than  
**95%**  
of the population

MY TOP GENETIC VARIANTS

rs10484750 rs10970305 rs11129078

**31/34**

MY TOTAL

### WHAT IS MOTION SICKNESS?

Motion sickness (sometimes referred to as travel sickness) is a common condition that occurs in some people who travel by car, train, airplane or boat. Motion sickness is a general term, and the symptoms include nausea, dizziness, and fatigue. Roughly one in three individuals is susceptible to motion sickness, and almost two-thirds report being sick in more severe conditions. About 7% of seagoing passengers report vomiting during the journey. Charles Darwin once wrote to his father: The misery I endured from sea-sickness is far beyond what I ever guessed at. If it was not for sea-sickness, the whole world would be sailors. Children, and older people are more susceptible to motion sickness, and women generally report more cases of motion sickness than men. Motion sickness happens when the body, the inner ear, and the eyes send conflicting signals to the brain. The first study on over 80 thousands individuals yielded genetic variants associated with motion sickness. The study reports that several genetic variants show up to three times stronger effects in women. Some genetic variations increase the likelihood of motion sickness, while other variants are protective. Interestingly, occurrences of motion sickness correlate with migraines, altitude sickness, morning sickness, postoperative nausea and vomiting, and poor sleeping.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Motion Sickness out of 34 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ In addition to genetics, other factors contribute to motion sickness including travel anxiety and general stress, headaches, intoxication, dehydration
- ♥ If you are traveling by car, risk factors include poor ventilation and sitting in the back seat or where you cannot see out the window
- ♥ For women, pregnancy or having a period are risk factors
- ♥ If you suffer from motion sickness, sit in the front in a car, keep your eyes on the horizon, or drive
- ♥ Avoid big fatty meals before your travel; avoid salty foods and alcohol
- ♥ Fresh air helps: open windows in the car or move to the top deck of a ship
- ♥ If you want to take medication to treat your motion sickness, take it before your journey to prevent symptoms developing. Discuss side effects with your pharmacist.

### REFERENCES

Read more about Motion Sickness by checking out the following articles:

[Resource 1](#) [Resource 2](#)

## Noise-induced Hearing Loss

Typical

higher than  
**5%**  
of the population

MY TOP GENETIC VARIANTS

rs2633314 rs4354185

6/7

MY TOTAL

### WHAT IS NOISE-INDUCED HEARING LOSS?

Noise induced hearing loss is a temporary or permanent hearing impairment resulting from prolonged exposure to high levels of noise. Excessive noise exposure is the most common cause of hearing loss. In modern society we are constantly bombarded by noises, on our headphones, TVs, or in the cities. When these sounds are at safe level they do not damage our hearing. But too loud sounds can damage inner ear and cause noise-induced hearing loss (NIHL). Noise is probably the most common occupational hazard facing people today. According to the National Institute on Deafness, people of all ages, including children, teens, young adults, and older people, can develop NIHL. Approximately 15 percent of Americans between the ages of 20 and 69 or 26 million Americans have hearing loss that may have been caused by exposure to noise at work or in leisure activities. As many as 16 percent of teens (ages 12 to 19) have reported some hearing loss that could have been caused by loud noise. While too loud noises are not good for anyone, studies identified genetic variations associated with increased risk of NIHL.

### YOUR GENETIC VARIANTS

These are 2 of the genetic variants (SNPs) associated with Noise-induced Hearing Loss out of 7 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ There is a strong connection between noise and hearing loss. While you do not have genetic predisposition to noise induced hearing loss, loud sounds are damaging to your hearing
- ♥ Noise is measured in decibels (dB): the higher the number, the louder the noise and the more damage it can inflict on your hearing, in particular if it is prolonged. Noise levels above 105dB can damage your hearing if you listen to it for 15-20 minutes each week. A normal conversation is 60-65dB, lawn mower and heavy traffic is 85dB, while MP3 player on loud is 110dB, and rock concert is 120dB
- ♥ To protect your hearing, reduce the volume when listening to music, TV, radio; use earplugs at live music concerts; wear ear protectors when you are using lawn mowers or noisy equipment; do not listen to music too loud and too long when driving
- ♥ Have a hearing detox and introduce quiet periods during the day.

### REFERENCES

Read more about Noise-induced Hearing Loss by checking out the following articles:

[Resource 1](#)

[Resource 2](#)

## Resistance to Stomach Flu

Advantaged

higher than  
**85%**  
of the population

MY TOP GENETIC VARIANTS

rs601338

**1/1**  
MY TOTAL

### WHAT IS RESISTANCE TO STOMACH FLU?

Stomach Flu, or Norovirus, is not really the flu but a viral gastroenteritis, and the major cause of foodborne illness worldwide, responsible for at least 50% of all gastroenteritis outbreaks in the United States. It is caused by a nasty bug and it is very contagious and causes unpleasant symptoms that include abdominal pain, vomiting and diarrhea. It turns out that some people may be safer than most during the flu season. About 30 percent of people of European ancestry and 20 percent of people with African ancestry carry the specific version of the genetic variation on the FUT2 (secretor) gene that prevents the most common strain of Novovirus bug to enter their digestive tract. These lucky people are resistant to most common strain of stomach flu. Whether you have a typical predisposition to being infected by this bug or have genetic-based resistance, it is always a good idea to minimize the risks by following recommended procedures.

### YOUR GENETIC VARIANTS

This is 1 genetic variant (SNP) associated with Resistance to Stomach Flu out of 1 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ While you may have an elevated resistance to novovirus, do follow general precautions in avoiding the potentials of stomach flu.
- ♥ Wash your hands! Using soap works much better than hand sanitizer, since the latter works mostly for bacteria
- ♥ Try to avoid touching external surfaces such as in the subway or shopping carts.
- ♥ When there is an epidemic of stomach flu in your neighborhood, eat at home. A study published in the PLOS ONE found that restaurant dishes and silverware may be an overlooked place where people can catch stomach viruses.

### REFERENCES

Read more about Resistance to Stomach Flu by checking out the following articles:

[Resource 1](#)

[Resource 2](#)



## Seasonality

Typical

higher than  
**58%**  
of the population

### MY TOP GENETIC VARIANTS

rs1801260 rs1808478 rs2278749

**7/11**  
MY TOTAL

### WHAT IS SEASONALITY?

Seasonality or Seasonal Affective Disorder (SAD) is seasonal changes in mood and behavior. SAD begins and ends at about the same times every year. Study of over 4000 individuals (Australians and Amish) identified several genetic variants with small additive effects that are significantly associated with SAD.

### YOUR GENETIC VARIANTS

These are 3 genetic variants (SNPs) associated with Seasonality out of 11 that we are using to determine your predisposition for this trait.

### RECOMMENDATIONS

- ♥ Increase your activity levels during Winter months to mitigate the impact of mood changes.
- ♥ Monitor the changes in your mood when seasons change and make note of any such changes for future reference.
- ♥ Still feeling blue in Winter? It is important to be aware of the possibility of SAD.