

Peanut Allergy

DNA Health Report

REPORT CATEGORIES —



ALLERGIES



FOOD SENSITIVITIES

Sample Client

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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.

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

Peanut allergy is an immune response to proteins found in peanuts. When someone is allergic to peanuts, their immune system mistakenly identifies the peanut proteins as harmful invaders. This can cause a range of symptoms, from mild to life-threatening, such as [\[R\]](#):

- Hives and itching
- Swelling of the lips, face, tongue, throat, or other body parts
- Difficulty breathing or swallowing
- Runny or stuffy nose
- Abdominal pain, nausea, and vomiting
- Dizziness and fainting
- Anaphylaxis (potentially life-threatening allergic reaction)

About **3 million people** in the US have a peanut or tree nut allergy [\[R\]](#).

Genetics and Management

Key Takeaways:

- Up to **80%** of differences in people's chances of having a peanut allergy may be due to genetics.
- About **3 million** people in the U.S. have a nut allergy.
- Risk factors involve contact with peanuts. Verify food content in restaurants, and read all food packaging labels to minimize risk.
- Allergy immunotherapy may help reduce the severity of reactions in some people.
- Click the **Recommendations** tab for potential dietary and lifestyle changes.

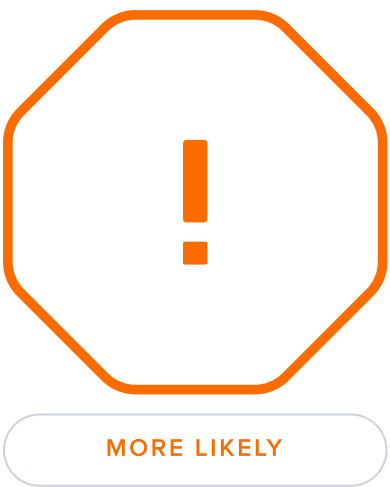
Peanut allergy is an immune response to proteins found in peanuts. Symptoms can range from mild to life-threatening and usually affect the gut, skin, and respiratory system.

Genetics may explain about 80% of differences in people's peanut allergy rates. Involved genes may affect the **immune response** to peanut proteins [R].

There is no cure for peanut allergy, but some children can outgrow it. The best way to prevent a reaction is to avoid peanuts and peanut-containing foods. **Allergy immunotherapy** may help reduce the severity of reactions in some people [R, R].

Introducing food containing peanuts into the diets of babies at risk of peanut allergy when they are **4-11 months old** may reduce the risk of developing this condition by **3 times**. At-risk babies include those with severe eczema or egg allergy. Please keep in mind that young children are at high risk of choking if they eat whole peanuts. Discuss the best approach with your child's doctor [R, R, R, R].

Treatment for allergic reactions may involve medication to manage symptoms and prevent anaphylaxis [R].



MORE LIKELY

More likely to have peanut allergy based on 780 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HLA-DQA2	rs9275596	CT
HLA-DRA	rs7192	GT
HLA-DQA1	rs9273440	TT
HLA-DPA1	rs9277630	AC
SPINK6	rs9325071	AG
RBFOX1	rs59325236	AG
BMPR1B	rs17023017	TG
LRRC32	rs2212434	CT
/	rs150212674	TT
LPIN2	rs28794896	GG
SLC35F2	rs79590713	GG
GNB5	rs80015591	TT
ARHGAP32	rs76670383	CC
STAT6	rs3024971	TT
PTGER4	rs7720838	TT
LPP	rs9865818	GG
LRRC32	rs2155219	GT
TSLP	rs1438673	CT
HLA-DQA1	rs6906021	CT
KIZ	rs17664036	TT
SERPINB10	rs12964116	AA
SERPINB10	rs1243064	TT
LINGO4	rs12123821	CC
HLA-DQA2	rs9271588	CT

GENE	SNP	GENOTYPE
ID4	rs114735690	GG
CCR7	rs112401631	TT
KIAA1109	rs17454584	AA
IL33	rs144829310	GG
IL2RA	rs61839660	CC
IL1RL1	rs950880	CC

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.

1

Check For Peanut Allergy

Check For Peanut Allergy

5 / 5

5 / 5

How to implement

Consult with a healthcare provider to perform a peanut allergy test, which may include a skin prick test, blood test, or an oral food challenge. This is usually done once, unless symptoms suggest otherwise or under medical advice to reevaluate.

Description

Testing for food allergies can provide crucial insights into an individual's immune response to specific foods, helping to identify and avoid potential allergens. This proactive approach can prevent allergic reactions, ranging from mild discomfort to severe anaphylaxis, and ensure safer dietary choices for improved overall health and well-being.

In allergic people, peanut ingestion can cause different symptoms, ranging from unpleasant to life-threatening [R].

People with peanut allergy should make sure to read food labels carefully and take other precautions to avoid ingesting peanuts [R].

How it helps

Experts recommend avoiding peanuts as the cornerstone of peanut allergy management. The following steps may help [R, R]:

- Always reading food labels carefully
- Avoiding food that can't be guaranteed to be peanut-free
- When dining out, discussing food allergies with those who are preparing the food
- Cleaning cookware and utensils thoroughly or having a separate set for those with peanut allergy
- Carrying any prescribed medications with you
- Wearing a medical ID bracelet that identifies peanut allergy
- Making sure the school staff have appropriate training in managing an allergic reaction

Because peanuts are relatively common as food ingredients, avoiding them can be challenging. Be especially careful with the following foods [R]:

- Ground or mixed nuts
- Baked goods, such as cookies and pastries
- Ice cream and frozen desserts
- Energy bars
- Cereals and granola
- Grain breads
- Marzipan
- Nougat
- Salad dressings
- Ethnic foods including African, Chinese, Indonesian, Mexican, Thai, and Vietnamese dishes

Other foods may trigger symptoms due to *cross-contamination*. In cross-contamination, a small amount of the allergen may be unknowingly present in the triggering food. For example, a chocolate bar may contain peanut traces because it's made using equipment that also processes peanuts. Cross-contamination can also occur at restaurants or even at home [R].



PERSONALIZED TO YOUR GENES

Your [HLA-DQB1](#) gene variant has been associated with an increased risk of peanut allergy [\[R, R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
HLA-DQA2	rs9275596	CT	

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.

