

Milk Allergy

DNA Health Report

REPORT CATEGORIES —



FOOD SENSITIVITIES



ALLERGIES

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

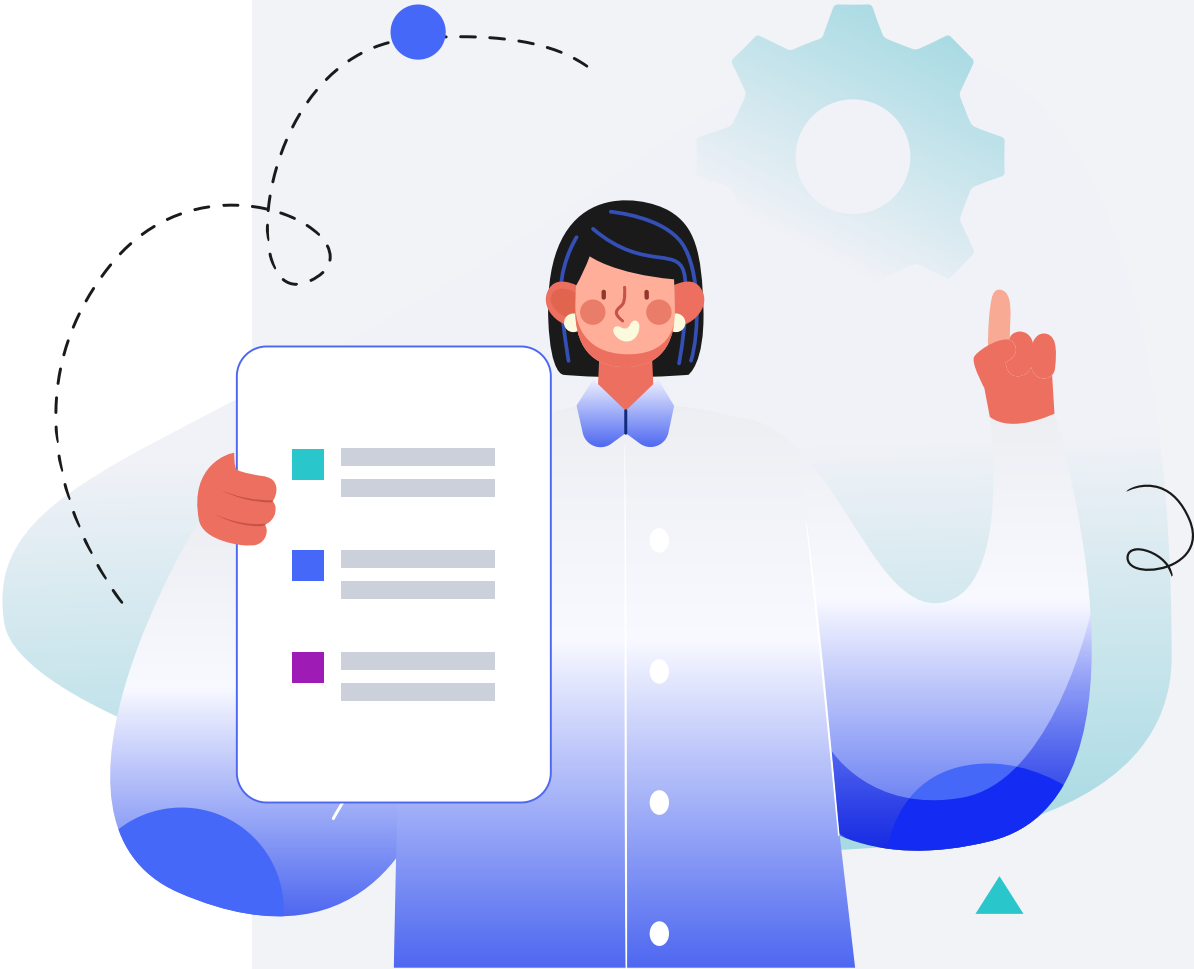
Male

HEIGHT

5ft 5" 165cm

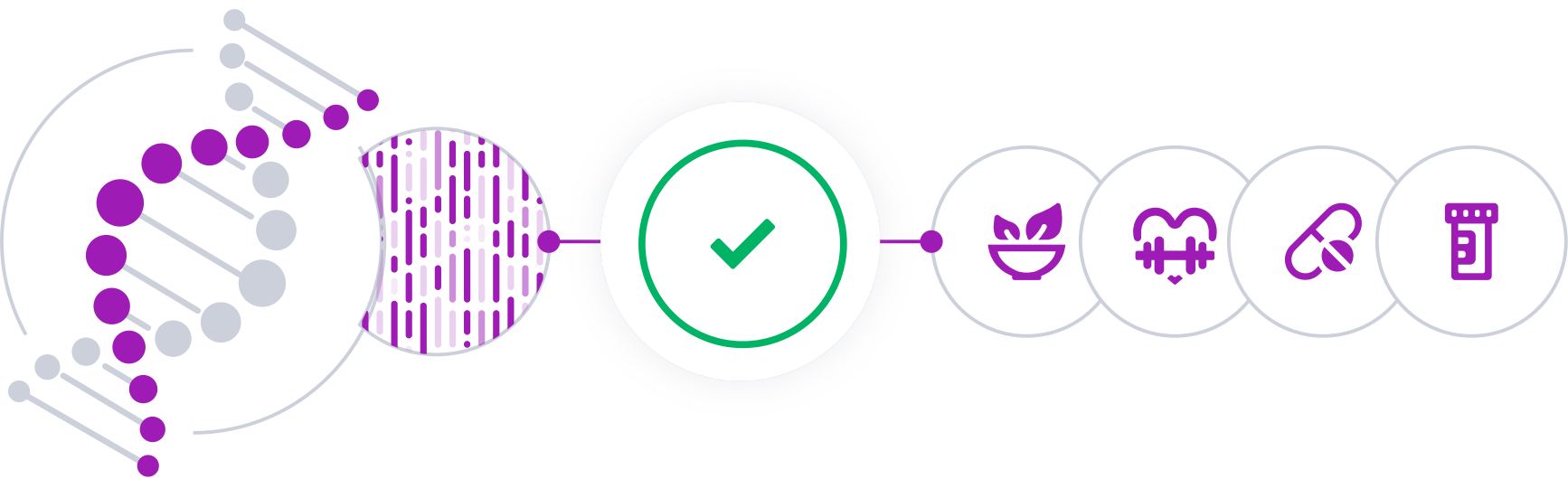
WEIGHT

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.

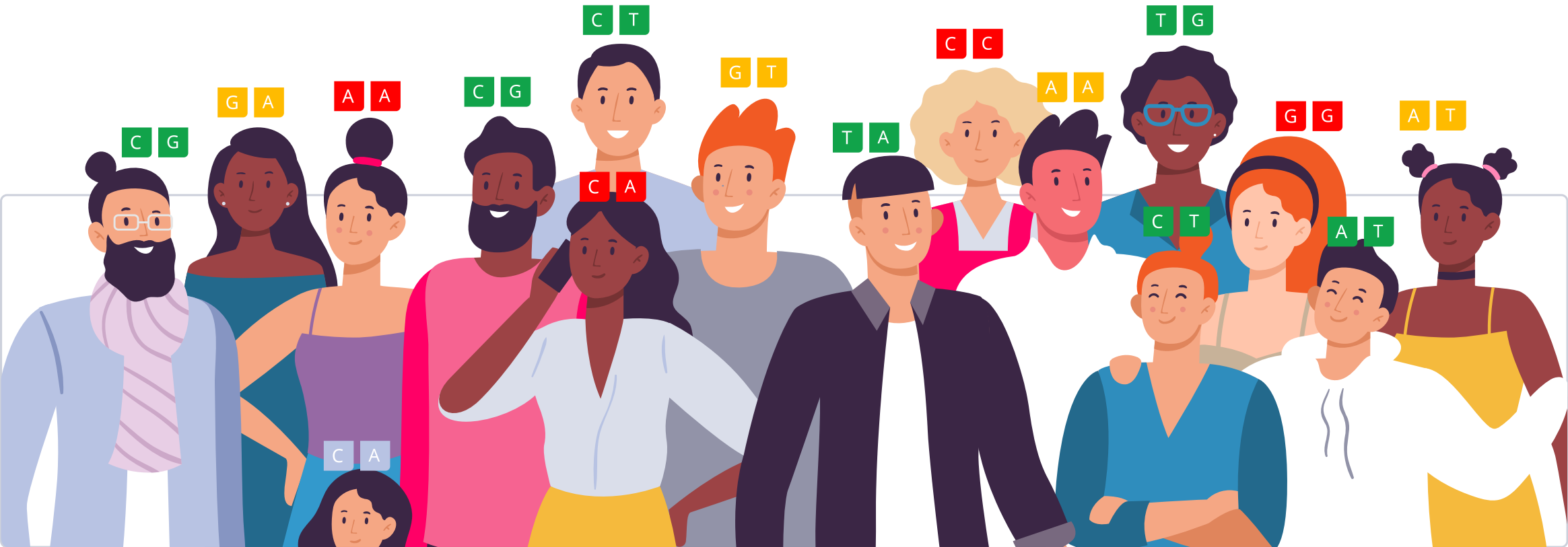


Similarly, our Trait Reports look at how your DNA influences your traits.



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

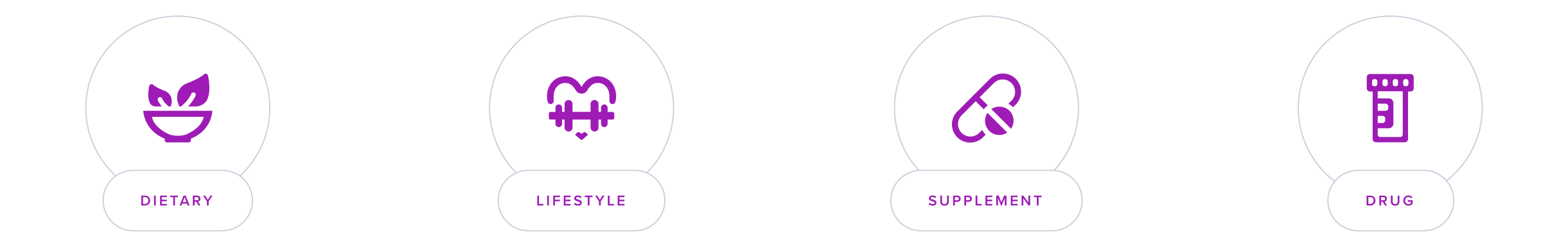
You have 2 risk alleles

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

A milk allergy is an immune reaction to the proteins found in milk. Though often confused for it, a milk allergy is **not the same as lactose intolerance**, which is the inability to digest the sugar lactose [\[R\]](#).

Symptoms of an allergic reaction to milk can range from mild to severe and can include [\[R\]](#):

- Hives
- Itching
- Swelling
- Trouble breathing
- Diarrhea
- Vomiting
- Coughing and wheezing
- Runny nose and watery eyes
- Anaphylaxis

About 2% of children under 4 years of age are allergic to milk. Most children outgrow the allergy, so it’s much less common in adults.

Genetics and Management

Key Takeaways:

- Unlike lactose intolerance, milk allergy is rare, and it usually affects young children.
- About 15% of the differences in people's milk allergy rates may be due to genetics.
- Given the above, you shouldn't be too worried if your genetic risk is higher.

About **15%** of the differences in people's milk allergy rates may be due to genetics [\[R\]](#), [\[R\]](#).

While it is possible to develop a milk allergy later in life, it almost always occurs in early childhood.

There is no cure for a milk allergy. The best way to prevent a reaction is to avoid milk and dairy, as well as products containing them. Some people may tolerate milk better in certain forms, such as when it's heated in baked goods [\[R\]](#).

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



TYPICAL LIKELIHOOD

Typical likelihood of a milk allergy based on 801 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
WIP12	rs7785898	CC
RPS6KA2	rs140491395	AT
PRR20G	rs62263995	AG
LINGO4	rs12123821	CC
FGF20	rs113085402	CC
SDCCAG8	rs77406868	TT
ATP13A3	rs77555516	TT
ELAVL2	rs117857923	GG
ZBP1	rs73302904	TT
SHPK	rs62069957	TT
ID4	rs114735690	GG
GALNT15	rs1454770	CC
EN1	rs78168645	TT
ITGB1	rs4553317	AA
OBI1	rs78704643	AA
PSG11	rs10411127	TT
ZNF589	rs62260855	TT
PKD1	rs41286699	TT
FHIT	rs138773492	GG
SLC9A9	rs114172620	GG
SMARCA2	rs79984518	AA
NRXN3	rs72688934	CC
RDH10	rs72670023	GG
MYOCD	rs72811234	CC

GENE	SNP	GENOTYPE
SYTL2	rs11234460	AA
ZNF160	rs57098159	CC
C16ORF72	rs12103238	AA
MYT1L	rs73908987	GG
/	rs9598764	CC
PIGN	rs12953421	TT
ZNF469	rs74740294	CC
SERGEF	rs72873810	AA
RNF213	rs112612767	TT
MYT1L	rs112252992	AA
C11ORF53	rs77069377	GG
OPRK1	rs60583234	TT
BOD1L1	rs79824993	CC
/	rs2324402	CC
ADAM12	rs868366	GG
IFI16	rs113561489	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	Check For Milk Allergy	2	Limit Dairy Intake
3	Lactobacillus Fermentum10 billion CFU	4	Bifidobacterium Bifidum10 billion CFU
5	Lactobacillus Rhamnosus10 billion CFU	6	Lactobacillus Rhamnosus GG10 billion CFU
7	Elimination Diet		

1



Check For Milk Allergy

IMPACT5 / 5

EVIDENCE5 / 5

How to implement

Schedule an appointment with an allergist to undergo skin prick tests or blood tests specifically for milk allergy. This should typically be a one-time test unless your doctor recommends otherwise based on your health changes or reactions.

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.

How it helps

Checking for a milk allergy helps manage this condition by identifying the trigger. Once confirmed, eliminating cow's milk from your diet prevents allergic reactions, including skin reactions, digestive problems, and severe respiratory issues.

2



Limit Dairy Intake

IMPACT

5 / 5

EVIDENCE

5 / 5

How to implement

Reduce your consumption of dairy products, such as milk, cheese, yogurt, and butter, to no more than one serving per day. A serving is equivalent to 1 cup (240 ml) of milk, 1 cup of yogurt, 1.5 ounces (42 grams) of natural cheese, or 2 ounces (56 grams) of processed cheese.

Description

Limiting dairy intake may benefit individuals who are lactose intolerant or have dairy allergies, as it helps prevent digestive discomfort and symptoms like bloating and diarrhea. Exploring dairy-free alternatives supports overall gastrointestinal comfort.

Dairy products are made from milk. They include [\[R\]](#):

- Cheese
- Yogurt
- Kefir
- Butter
- Cream

Dairy products contain high levels of [calcium](#). Calcium helps build strong bones. However, eating a lot of dairy products is linked to acne and certain health conditions like Parkinson's disease [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

There is no cure for a milk allergy. The best way to prevent a reaction is to avoid milk and dairy, as well as products containing them. Some people may tolerate milk better in certain forms, such as when it’s heated in baked goods [\[R\]](#).

Experts recommend carefully reading food labels, asking about the list of ingredients at restaurants and social events, rejecting food if you can’t be certain it doesn’t contain milk, and informing caregivers of your children or other relatives about their food allergies and management. Babies with cow’s milk allergy mustn’t be given cow’s milk formula. Breastfeeding or alternative formulas must be considered as their source of nutrition [\[R\]](#).

3



Lactobacillus Fermentum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a supplement containing Lactobacillus fermentum, aiming for dosages around 10 billion CFU (colony forming units). Consume it daily, preferably with a meal, to ensure proper absorption. Continue this routine for at least 4 weeks to observe benefits.

TYPICAL STARTING DOSE
10 billion CFU

Description

Lactobacillus fermentum is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

How it helps

In a study of 18 patients with cow's milk allergy, breaking down milk casein with *L. fermentum* IFO3956 reduced the development of IgE antibodies against cow's milk, potentially helping prevent allergic reactions [R].

4



Bifidobacterium Bifidum

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a bifidobacterium bifidum supplement according to the manufacturer's instructions, usually once or twice daily with a glass of water and potentially with meals. Supplement duration varies; some may use it continuously for ongoing gut health support, while others might take it for a specific period, such as 4-8 weeks, especially during or after antibiotic treatment.

TYPICAL STARTING DOSE
10 billion CFU

Description

Bifidobacterium bifidum is a probiotic strain that can help support digestive health and maintain a balanced gut microbiome.

[Bifidobacterium bifidum](#) is a [probiotic](#) bacterium naturally present in the human gastrointestinal tract. This species is the second most abundant one in breast-fed infants, but its levels decrease during adulthood [\[R\]](#).

People take *B. bifidum* to help with [\[R\]](#):

- Digestive issues
- Eczema
- Infections

How it helps

Bifidobacterium Bifidum is a beneficial gut bacteria that aids in digestion and enhances immune function. It may help alleviate milk allergy symptoms by strengthening the body's immune response to milk proteins.

In a placebo-controlled trial of 256 children with cow’s milk allergy, supplementation with *B. bifidum* TMC3115 for 6 months reduced allergic scores and improved anti-inflammatory responses and secondary outcomes [\[R\]](#).

5



Lactobacillus Rhamnosus

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Take a probiotic supplement containing Lactobacillus rhamnosus. Typically, the suggested dose is 10 billion CFUs (colony-forming units) per day. This can be taken as a single daily dose or divided into two doses, morning and evening, with or without food. Continue this regimen for at least 4 weeks to observe benefits.

TYPICAL STARTING DOSE

10 billion CFU

Description

Lactobacillus rhamnosus is a beneficial probiotic strain that can support digestive health and contribute to a balanced gut microbiome. It may help improve gut function, enhance nutrient absorption, and bolster the immune system, promoting overall well-being.

[Lactobacillus rhamnosus](#) is a [probiotic](#) bacterium, part of the normal gut microflora. Various foods may have added *L. rhamnosus*, including yogurt, cheese, and fermented legumes [\[R, R\]](#).

People take *L. rhamnosus* supplements to balance their immune system and help with infections, allergies, and dermatitis [\[R\]](#).

How it helps

In a placebo-controlled trial of 100 infants with cow milk protein allergy, supplementation with *Lactobacillus rhamnosus* GG (10^9 cfu/day) for 4 weeks improved bloody or mucousy stool, diarrhea, restiveness, abdominal distension, and vomiting. Its combination with extensively hydrolyzed casein formula reduced the incidence of allergic manifestations in a placebo-controlled trial of 220 children with this condition. In another placebo-controlled trial of infants with this condition, *L. rhamnosus* GG increased IFN-gamma levels [\[R, R, R\]](#).

6



Lactobacillus Rhamnosus GG

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

TYPICAL STARTING DOSE

10 billion CFU

Description

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

How it helps

In a placebo-controlled trial of 100 infants with cow milk protein allergy, supplementation with *Lactobacillus rhamnosus* GG (10⁹ cfu/day) for 4 weeks improved bloody or mucousy stool, diarrhea, restiveness, abdominal distension, and vomiting. Its combination with extensively hydrolyzed casein formula reduced the incidence of allergic manifestations in a placebo-controlled trial of 220 children with this condition. In another placebo-controlled trial of infants with this condition, *L. rhamnosus* GG increased IFN-gamma levels [\[R\]](#), [\[R\]](#), [\[R\]](#).

7



Elimination Diet

IMPACT

0 / 5

EVIDENCE

0 / 5

How to implement

Begin by removing foods you suspect might be causing adverse reactions for 2-3 weeks. These often include dairy, gluten, soy, nuts, eggs, corn, and processed sugars. After this period, reintroduce each food group one at a time every 3 days, while noting any symptoms that may reappear. This process helps identify food intolerances or sensitivities.

Description

An elimination diet involves removing specific foods or food groups from the diet to identify and address potential food sensitivities or allergies. It can help alleviate symptoms such as digestive issues, skin problems, and allergic reactions by pinpointing trigger foods.

An elimination diet omits foods that can cause your body to have a reaction. Foods are removed for a period of time and then added back in. This helps figure out what foods are causing symptoms or making them worse [\[R\]](#).

Salicylates are compounds naturally found in many foods and drinks. These include wine, tea, beans, and tomatoes [\[R\]](#), [\[R\]](#).

One form (*salicylic acid*) is found in aspirin. People who are sensitive to salicylates may have a reaction to aspirin and other NSAIDs [\[R\]](#), [\[R\]](#).

How it helps

This diet involves removing foods from the diet that you might be allergic to and then methodically reintroducing them to identify which cause symptoms.

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.