

Tyramine Intolerance

Biohacker Report

REPORT CATEGORY —



FOOD SENSITIVITIES

Sample Client

Report date: 15 January 2026

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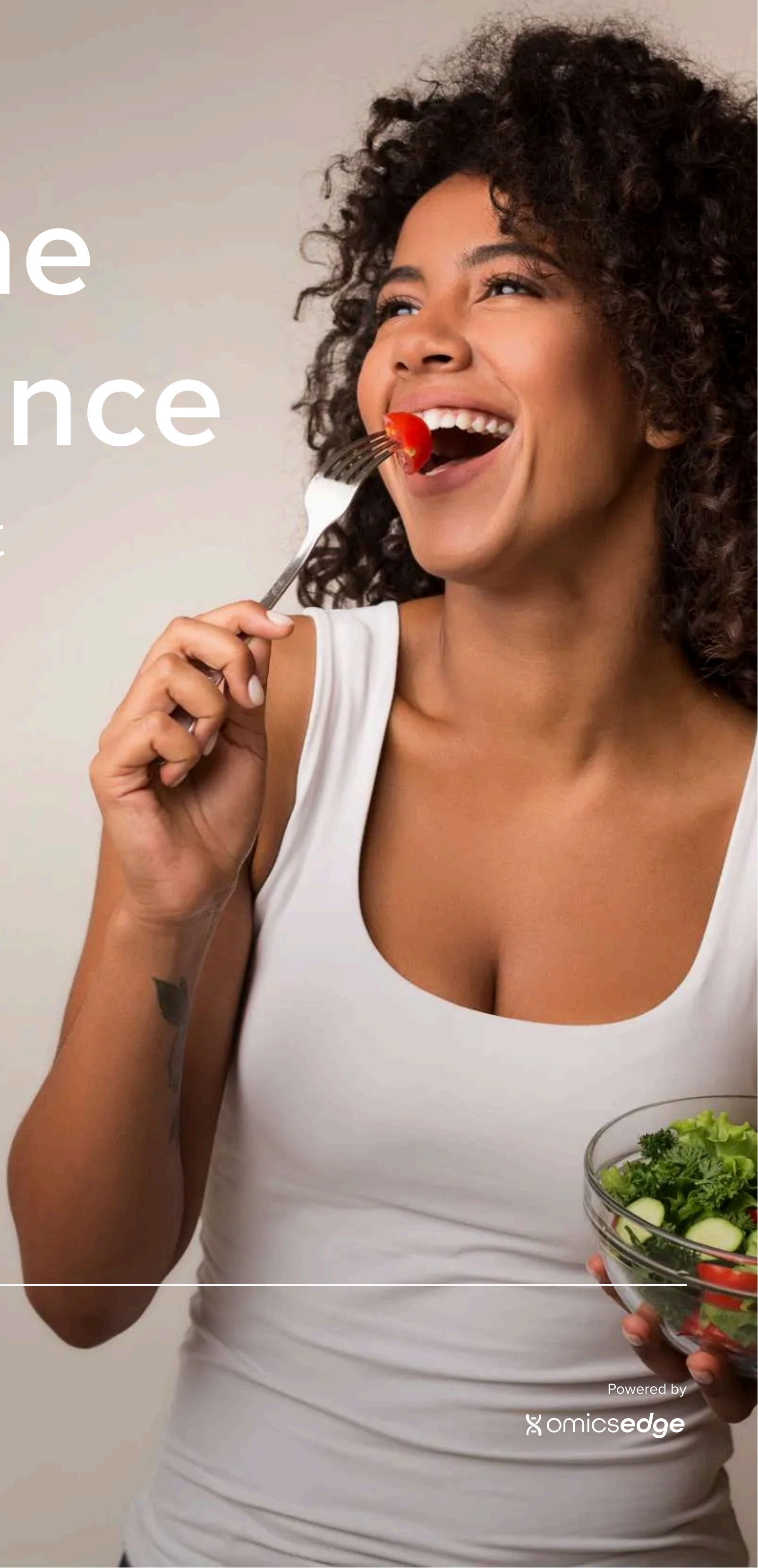


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DISCLAIMER

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

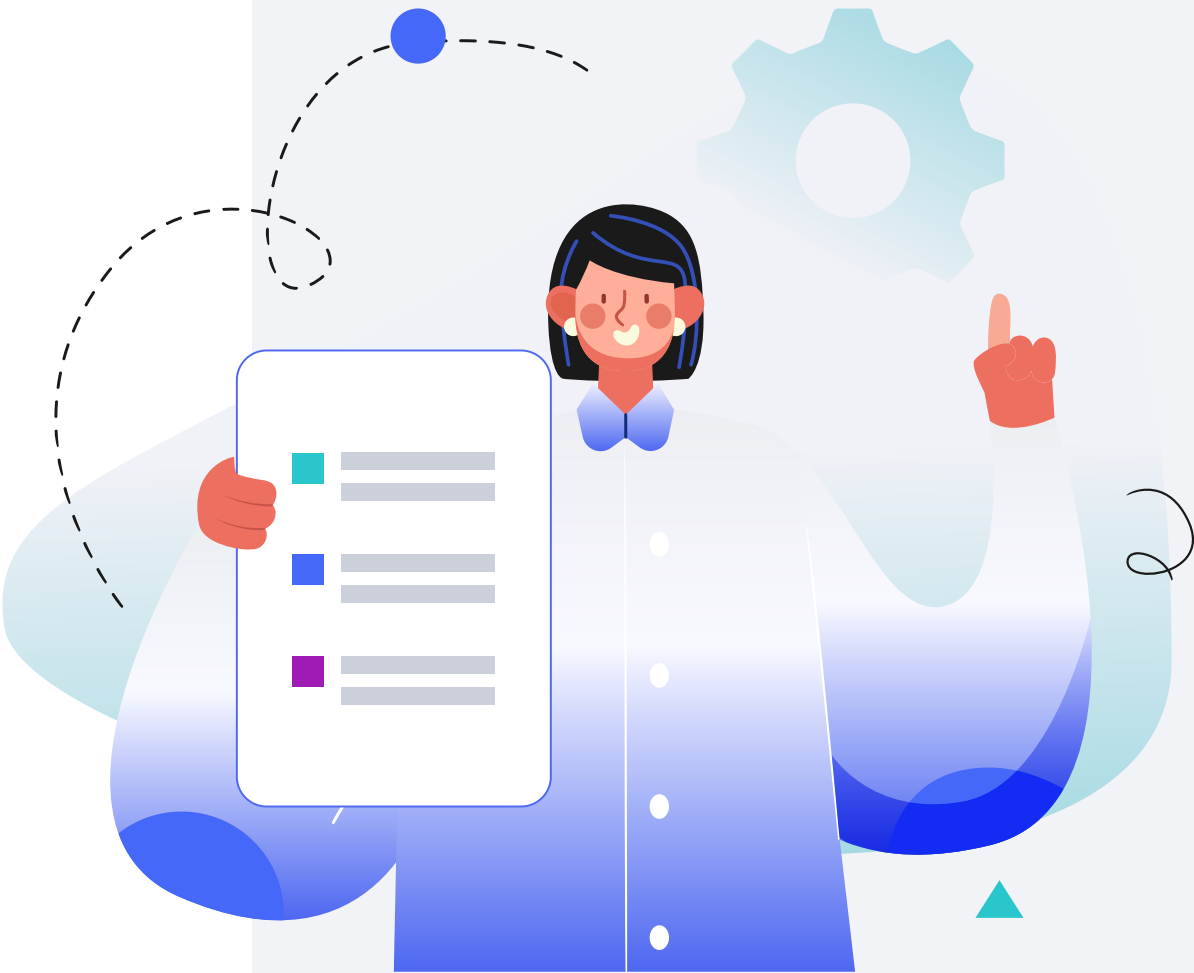
Male

HEIGHT

5ft 5" 165cm

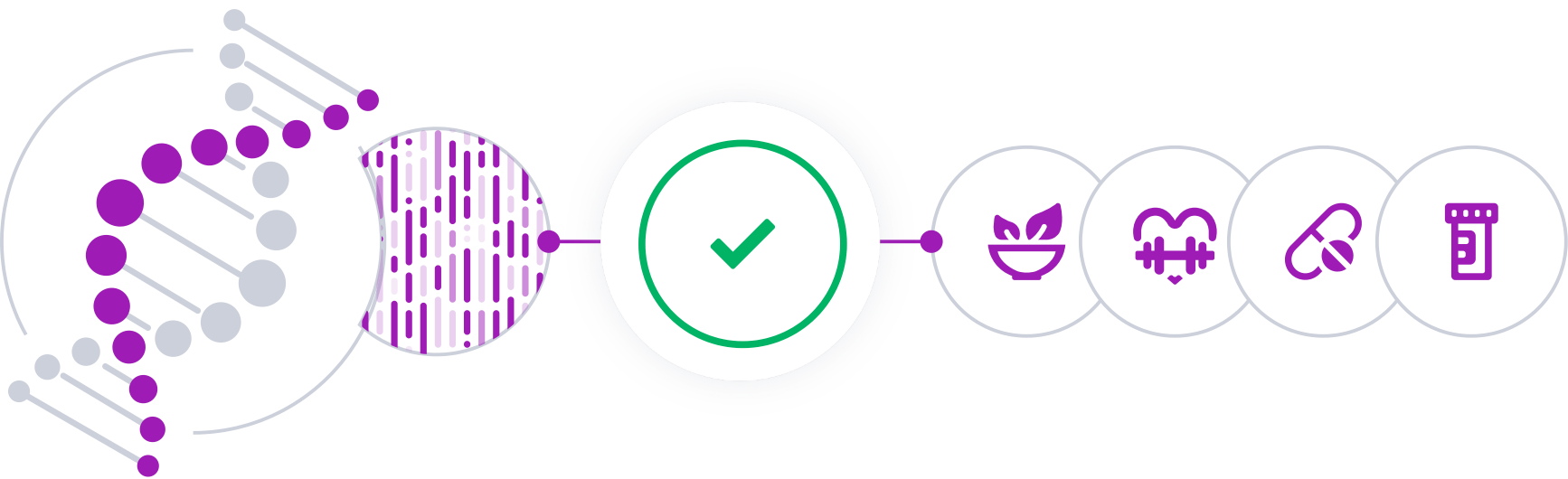
WEIGHT

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.

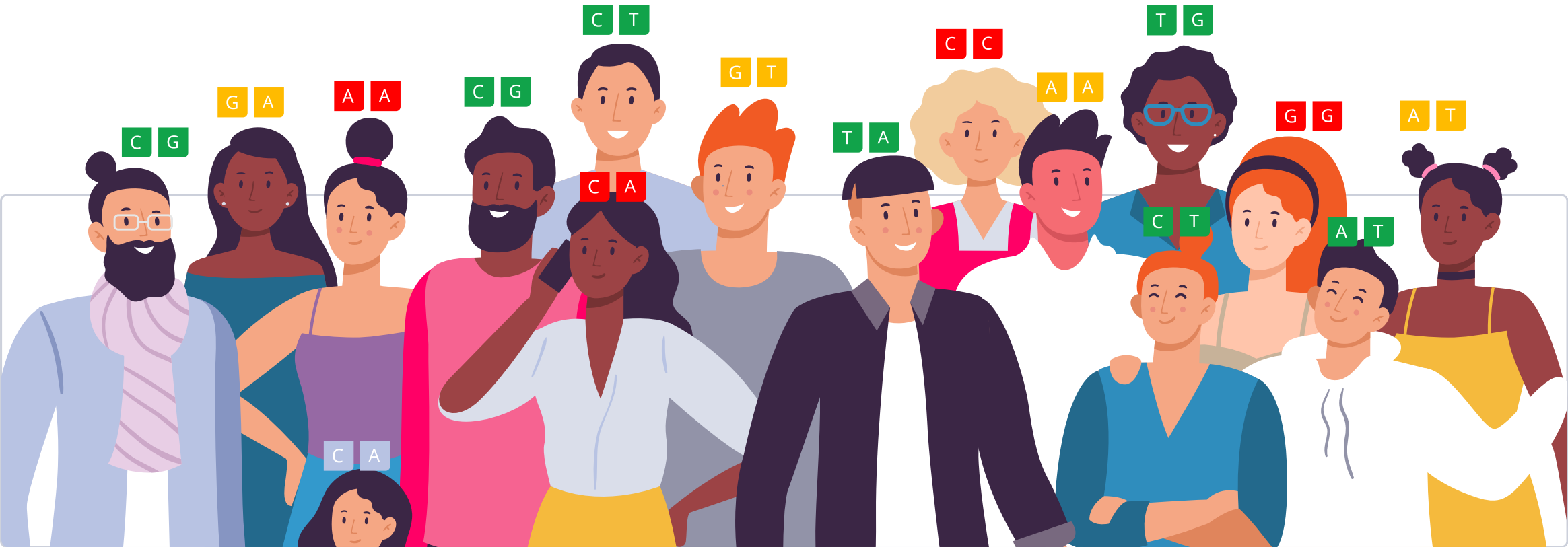


Similarly, our Trait Reports look at how your DNA influences your traits.



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

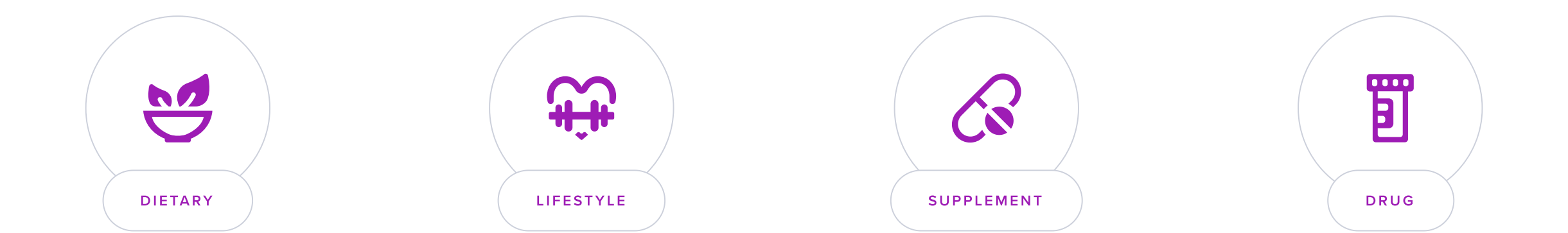
You have 2 risk alleles

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

Tyramine is a naturally occurring compound derived from the amino acid [tyrosine](#) and found in various foods, especially if aged, fermented, or preserved. Foods high in tyramine include [\[R\]](#):

- Aged, smoked, or fermented meats (salami, pepperoni, cured sausages, bacon, etc)
- Aged cheeses
- Fermented vegetables and dried fruits (sauerkraut, kimchi, tofu, soy sauce)
- Some beers and wines (especially unpasteurized beer such as homemade or tap)
- Sourdough bread and some homemade yeast bread
- Marmite

Lower amounts can be found in foods such as olives, chocolate, avocados, bananas, pineapple, eggplant, figs, yogurt, sour cream, peanuts, Brazil nuts, or broad beans, among others.

Tyramine intolerance typically occurs when there is a disruption in the body's ability to metabolize tyramine effectively.

Individuals with certain gastrointestinal or liver disorders, as well as those taking certain medications such as MAO-A inhibitors, may accumulate excessive levels of tyramine. **Excess tyramine can throw your body into a hypertensive crisis**, raising systolic blood pressure by 30 mmHg or more. This is called the ‘*tyramine pressor response*’. Other symptoms of tyramine intolerance may include [\[R\]](#):

- Migraines or headaches [\[R\]](#), [\[R\]](#)
- Palpitations, arrhythmia, or tachycardia [\[R\]](#)
- Nausea and digestive issues [\[R\]](#)
- Dizziness and confusion [\[R\]](#)

Genetics of Tyramine Intolerance

Tyramine is broken down in the gut and liver by the following enzymes [\[R\]](#):

- Monoamine oxidase ([MAO-A](#))
- Flavin-containing monooxygenase 3 ([FMO3](#))
- CYP450 enzymes such as [CYP2D6](#)

While no variants have specifically been associated with tyramine intolerance, the following alleles encode forms of the enzymes involved in the breakdown of this amino acid with reduced activity. Carriers of several low-activity variants may be at increased risk of tyramine intolerance:

- ‘T’ of [rs6323](#) (*MAOA*) [\[R\]](#)
- ‘C’ of [rs1137070](#) (*MAOA*) [\[R\]](#)
- ‘A’ of [rs1736557](#) (*FMO3*) [\[R\]](#)
- ‘G’ of [rs2266780](#) (*FMO3*) [\[R\]](#)
- ‘A’ of [rs2266782](#) (*FMO3*) [\[R\]](#)
- ‘T’ of [rs909530](#) (*FMO3*) [\[R\]](#)
- ‘C’ of [rs909531](#) (*FMO3*) [\[R\]](#)
- ‘A’ of [rs1736557](#) (*FMO3*) [\[R\]](#)
- ‘T’ of [rs61753344](#) (*FMO3*) [\[R\]](#)
- ‘T’ of [rs3892097](#) (*CYP2D6*) [\[R\]](#)
- ‘A’ of [rs1065852](#) (*CYP2D6*) [\[R\]](#)
- ‘A’ of [rs16947](#) (*CYP2D6*) [\[R\]](#)
- ‘G’ of [rs5030867](#) (*CYP2D6*) [\[R\]](#)
- ‘A’ of [rs28371706](#) (*CYP2D6*) [\[R\]](#)



TYPICAL LIKELIHOOD

Typical likelihood of tyramine intolerance based on 12 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CYP2D6	rs16947	GA
FMO3	rs909530	TC
FMO3	rs1736557	GA
CYP2D6	rs5030867	TT
CYP2D6	rs3892097	CC
CYP2D6	rs28371706	GG
CYP2D6	rs1065852	GG
MAOA	rs6323	G
MAOA	rs1137070	T
FMO3	rs909531	TT
FMO3	rs61753344	GG
FMO3	rs2266782	GG
FMO3	rs2266780	AA

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

Limit Tyramine Intake
- 2

Address Food Sensitivities
- 3

Avoid Triggers
- 4

Avoid Food Triggers

1



Limit Tyramine Intake

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Focus on eating fresh foods and avoiding aged, fermented, or processed items. Skip aged cheeses, cured meats, fermented soy products, and alcoholic beverages (especially wine and beer). Choose fresh meats, poultry, and fish over processed versions. Avoid overripe fruits and vegetables. Store foods properly and eat leftovers within 1-2 days. Read labels carefully, as tyramine can hide in flavor enhancers, yeast extracts, and protein supplements. When dining out, ask about food preparation methods and choose simple, freshly prepared dishes over aged or fermented options.

Description

Tyramine is a natural compound found in certain foods that can trigger headaches, high blood pressure, or other reactions in sensitive individuals. They include people taking certain medications (like MAOIs) or having less active MAO enzymes due to genetics and other factors. Limiting tyramine intake helps prevent these uncomfortable and potentially serious symptoms by avoiding foods where tyramine concentrates as they age or ferment.

How it helps

Limiting tyramine intake helps prevent the release of norepinephrine, which can lead to hypertensive crises in those with tyramine intolerance. By avoiding tyramine-rich foods, individuals can significantly reduce their risk of adverse reactions and maintain better cardiovascular stability.

2



Address Food Sensitivities

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Begin by eliminating common allergens and irritants from your diet, such as dairy, gluten, soy, and nuts, for a period of 4 weeks. After this elimination phase, gradually reintroduce each food group one at a time over a period of 2-3 days each, monitoring for any adverse reactions to pinpoint specific sensitivities.

Description

Food sensitivities refer to adverse reactions to specific foods or food components that can cause symptoms like digestive issues, skin problems, or headaches, without involving the immune system as in allergies.

A *food intolerance* is a non-allergic reaction that makes it hard to digest certain foods. For example, those with lactose intolerance can't digest dairy [\[R\]](#).

A *food sensitivity* is similar to a food intolerance. However, the cause may be more difficult to pinpoint [\[R\]](#), [\[R\]](#).

People with food sensitivities may have symptoms ranging from gut problems to migraines [\[R\]](#), [\[R\]](#), [\[R\]](#).

How it helps

Addressing food sensitivities aids in managing tyramine intolerance by helping individuals identify and avoid tyramine-rich foods, thereby minimizing symptoms like headaches and digestive disturbances. This customized dietary approach fosters overall well-being and symptom control.

3



Avoid Triggers

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Identify substances or environmental factors that exacerbate your condition, such as specific foods, stress, or allergens, and actively avoid them. This may involve reading food labels, asking about ingredients when eating out, and making changes to your home or work environment to reduce exposure to identified triggers.

Description

A "trigger" is something that prompts or worsens the symptoms of a health condition. They can be something you eat or come into contact with. Triggers can lead to a wide range of symptoms, such as gut and skin problems and migraines.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

A **food trigger** can be something you eat.

A **physical trigger** can cause a change to your body through physical contact. It can include swimming in cold water or something you touch or inhale [\[R, R, R\]](#).

Triggers can lead to a wide range of symptoms in people who are sensitive to them. These may include [\[R, R, R, R, R, R, R, R\]](#):

- Gut problems
- Skin problems
- Migraines

How it helps

Avoiding triggers in tyramine intolerance helps prevent the release of catecholamines, which can exacerbate symptoms like migraines and gastrointestinal disturbances. This proactive approach reduces the likelihood of symptom flare-ups, enhancing overall quality of life.

4



Avoid Food Triggers

IMPACT

1 / 5

EVIDENCE

1 / 5

How to implement

Identify foods that trigger negative reactions in your body, such as digestive issues, allergies, or headaches, and eliminate them from your diet entirely. This may require keeping a food diary for a few weeks to observe patterns and might involve cutting out common triggers like dairy, gluten, soy, or certain additives. Continuously monitor and adjust your diet to avoid these triggers as long as the symptoms persist.

Description

Food triggers are specific substances or ingredients in one's diet that can exacerbate or induce adverse reactions, such as allergies, sensitivities, or digestive issues, often leading to symptoms like inflammation, bloating, or discomfort.

A "trigger" is something that prompts or worsens the symptoms of a health condition.

Food triggers can lead to a wide range of symptoms in people who are sensitive to them. These may include [R](#), [R](#), [R](#), [R](#):

- Gut problems
- Skin problems
- Migraines

How it helps

Avoiding food triggers is crucial for managing tyramine intolerance as it helps prevent the onset of symptoms associated with tyramine exposure. By identifying and limiting tyramine-rich foods, individuals can effectively reduce discomfort and promote overall digestive health.