SelfDecode™

MADD (Blood Sugar & Insulin)

Gene Report

REPORT CATEGORY —

BLOOD SUGAR CONTROL

Sample Client

Report date: 15 January 2026

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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

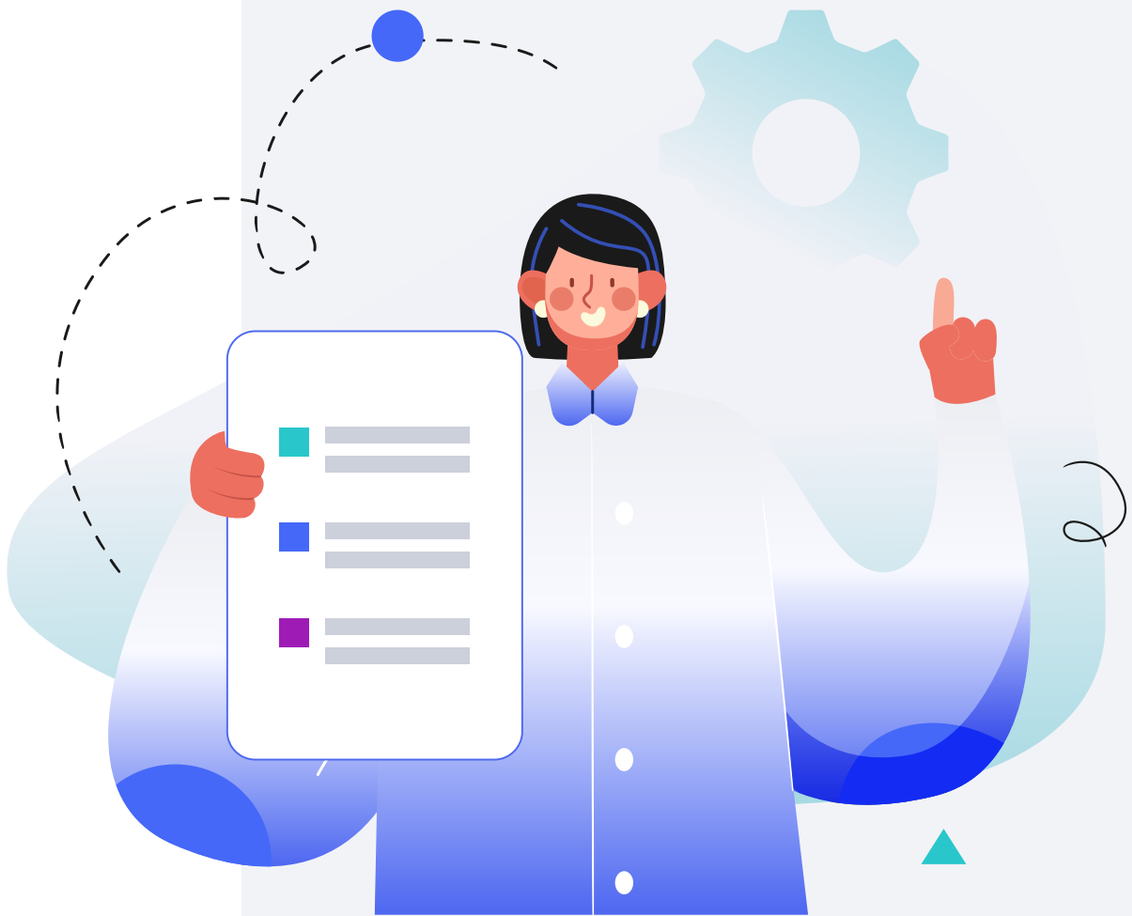
Male

HEIGHT

5ft 5" 165cm

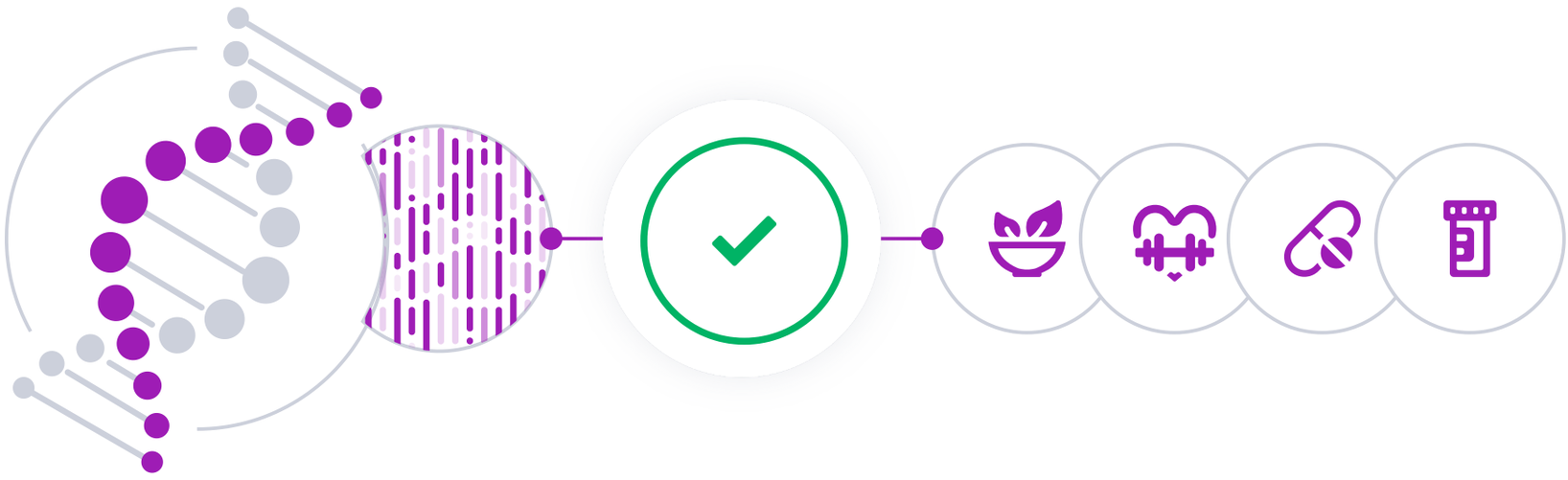
WEIGHT

137lb 62kg



How this works

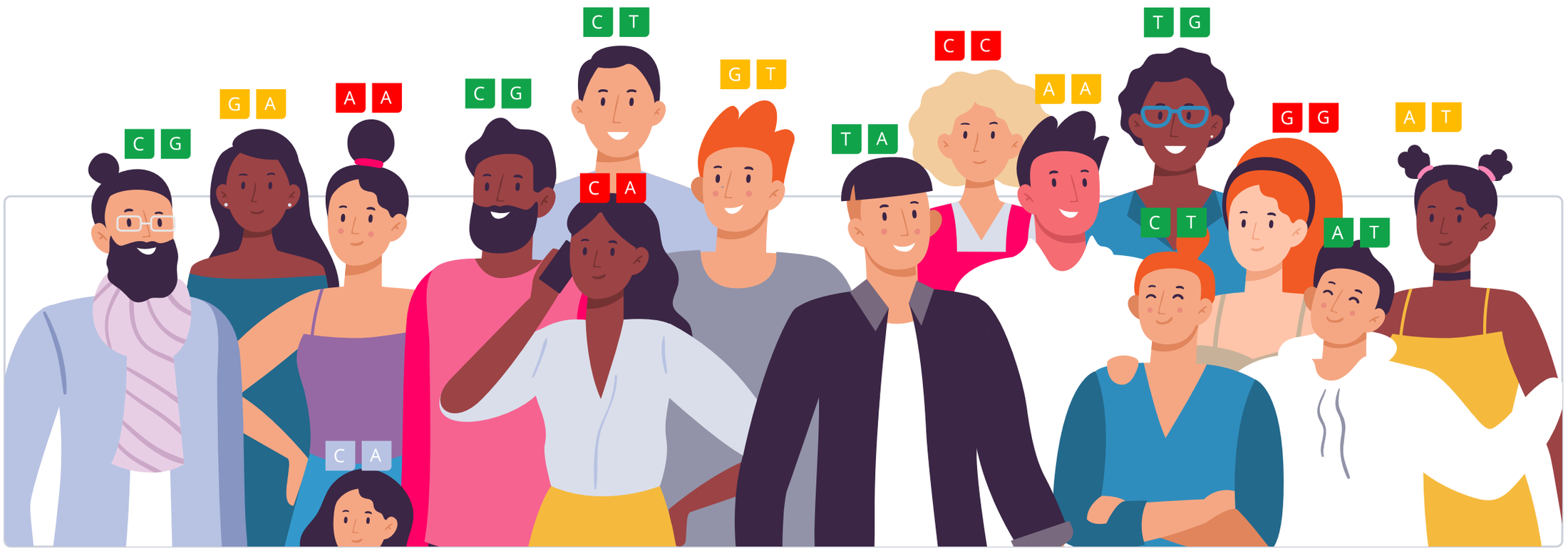
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

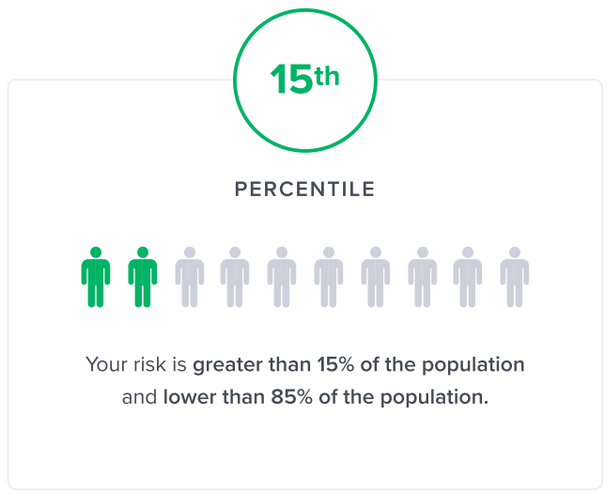
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

When we give a risk score, the risk icon tells you if you are at a higher or lower risk compared to other people:

In total, we analyze up to 83 million genetic variants.



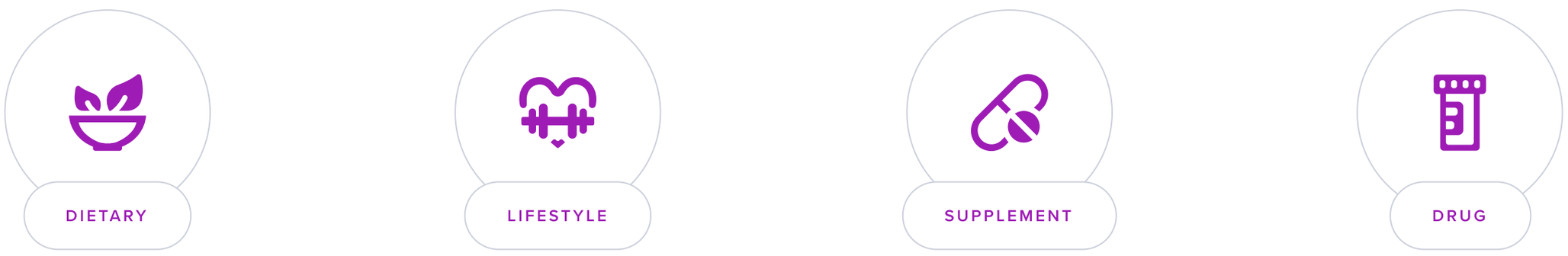
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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, afew 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

In the intricate world of genetics, the MADD gene (MAP Kinase Activating Death Domain) has emerged as a fascinating player in metabolic and neurological processes. One of its notable variants, rs7944584, has garnered attention for its associations with various health outcomes, particularly those related to type 2 diabetes (T2D) and fasting glucose levels.

The MADD protein is involved in cell death control. It also plays a role in insulin secretion from pancreatic beta cells. The variant may impair this process, reducing insulin release and raising blood glucose levels.

MADD is also involved in neuronal function, and its dysregulation could affect the brain's role in glucose homeostasis, though this mechanism is less understood.

Genetics

The main MADD variant is rs7944584. Its **“A” allele** is linked to **higher** blood sugar levels and diabetes risk [R].

The MADD gene plays a critical role in the regulation of insulin secretion and proinsulin processing in pancreatic beta cells. Proinsulin, the precursor to insulin, must be cleaved into mature insulin and C-peptide to enable proper glucose regulation.

The A allele of rs7944584 may **reduce MADD expression or function**, impairing the efficient conversion of proinsulin to insulin. This could result in **elevated proinsulin** relative to insulin, a hallmark of beta-cell dysfunction often seen in type 2 diabetes (T2D) [R, R].

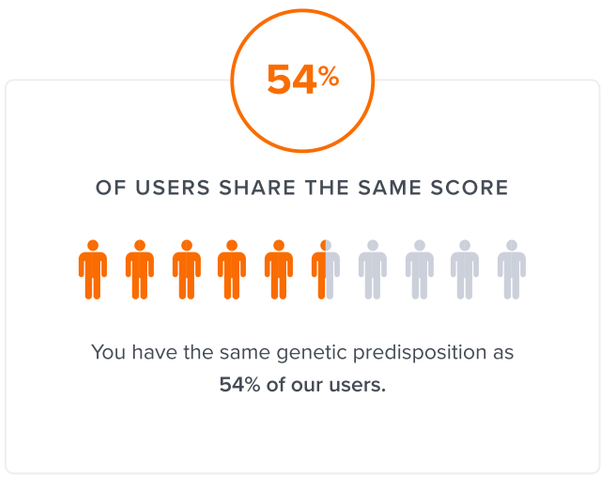
On the other hand, this variant is linked to lower blood pressure and better mood [R].

The mechanism behind these contradictory findings isn’t yet clear. The MADD gene has tissue-specific roles. In pancreatic beta cells, this variant may impair insulin production. However, the same variant might have detrimental effects in vascular or neural tissues, such as increasing blood pressure or altering mood regulation.

This highlights the concept of **pleiotropy**, where a single gene influences multiple, seemingly unrelated traits.

LOWER ACTIVITY

Predisposed to lower MADD activity based on the genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MADD	rs7944584	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.