SelfDecode™

AMY1A (Starch Digestion)

Gene Report

REPORT CATEGORIES

NUTRITION

WEIGHT & BODY FAT

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

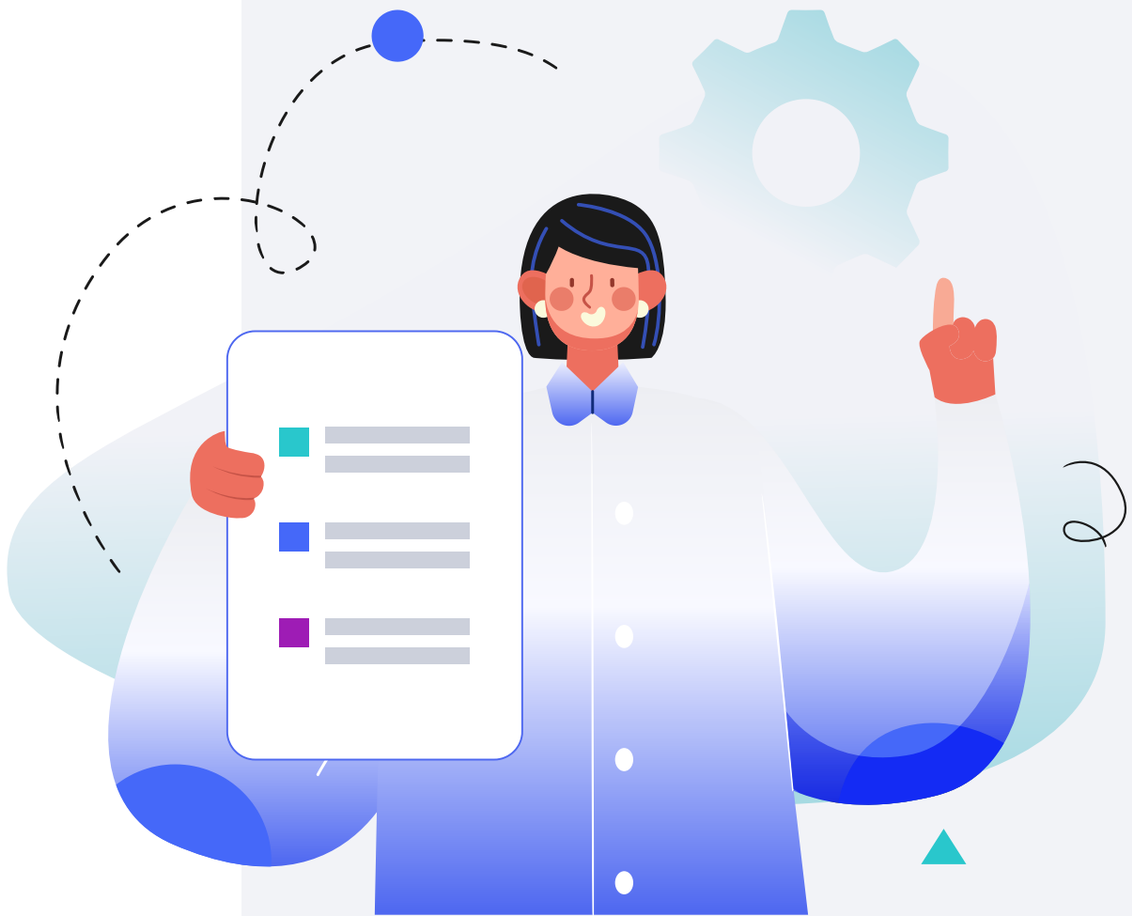
Male

HEIGHT

5ft 5" 165cm

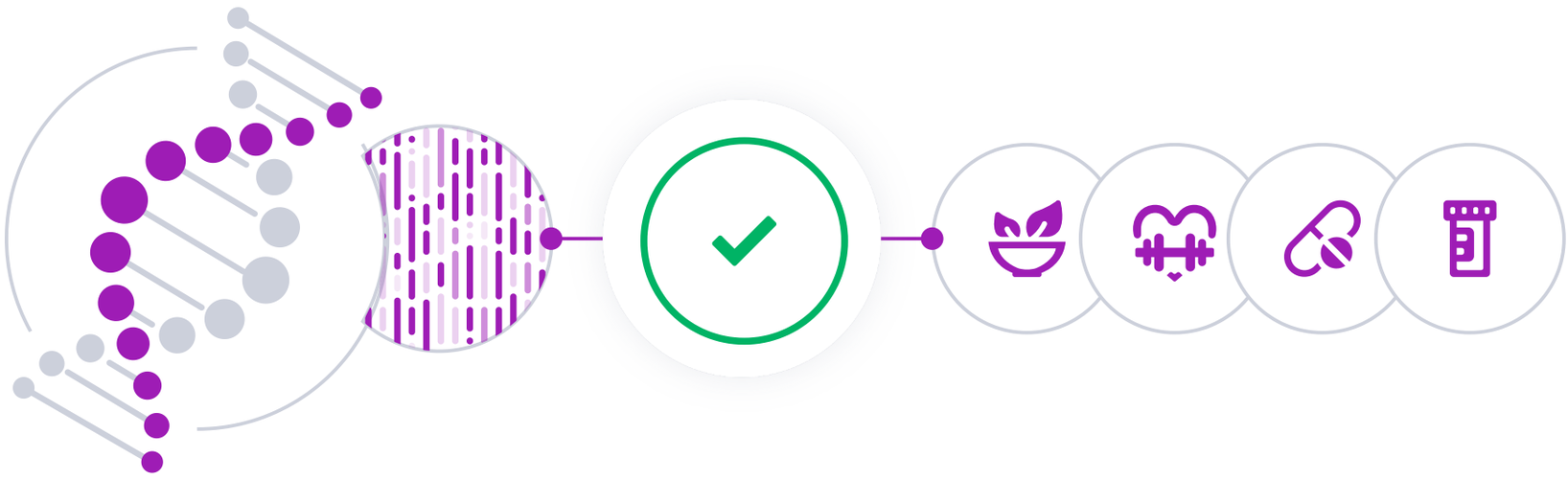
WEIGHT

137lb 62kg



How this works

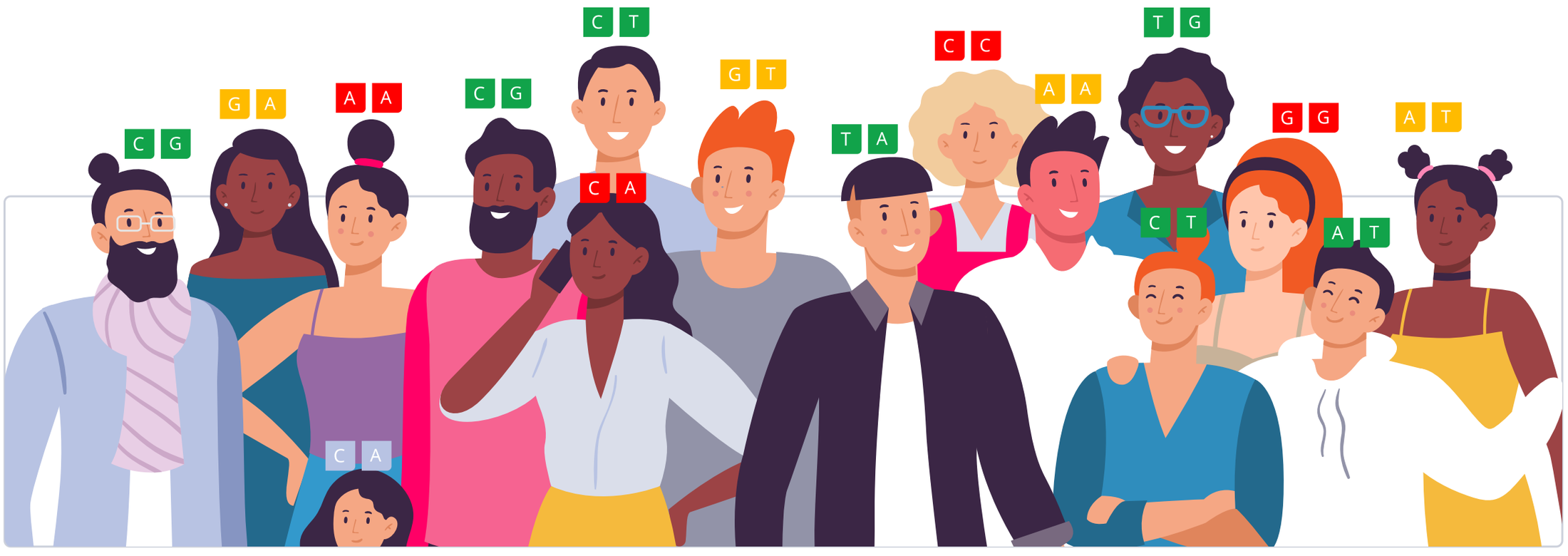
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

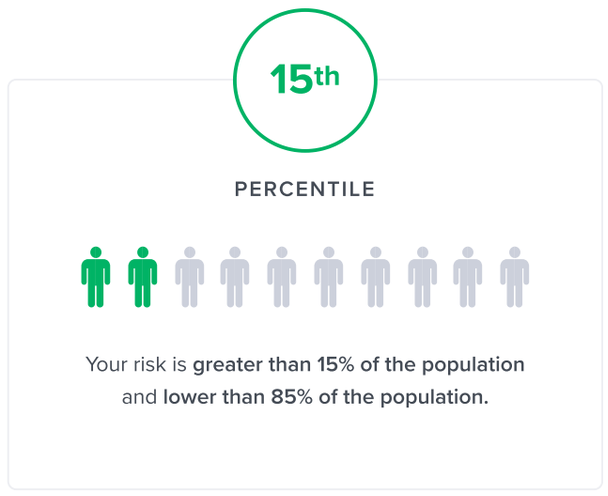
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.



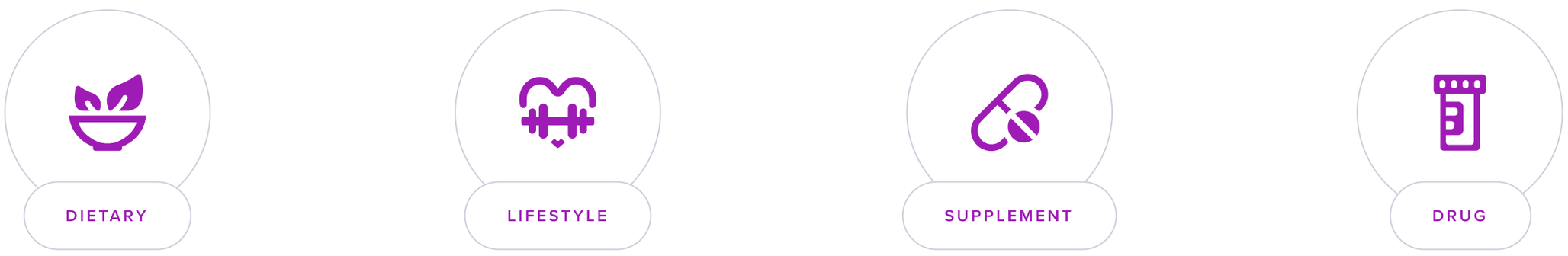
Genotype color info: AA You don't have any risk alleles | AA You have 1 risk allele | AA You have 2 risk alleles

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

Humans have two primary amylase genes: *AMY1A* and *AMY2A*. *AMY1A* encodes salivary amylase, while *AMY2A* encodes pancreatic amylase. In this report, we will be focusing on salivary amylase (AMY1A) [R, R].

Amylase is an enzyme that breaks down starch (carbs) into simple sugars. Digestion of carbs is extremely important, since carbs are ultimately broken down into glucose, the main energy source that fuels our bodies.

Salivary amylase is produced by salivary glands, and it starts digesting food as you chew it [R, R, R].

Individuals carry multiple copies of the *AMY1A* gene. How many copies each individual possesses is known as their *AMY1A* gene copy number. *AMY1A* gene copy number varies considerably, from 2-17 (or even 2-20) copies [R].

Carrying more copies of the *AMY1A* gene is associated with increased amylase enzyme levels, whilst carrying less gene copies is associated with lower levels [R, R].

Individuals from cultures that eat more starch carry more *AMY1A* gene copies. In contrast, people from cultures that typically eat less starch, such as those of Northern Siberia, carry relatively fewer copies of the *AMY1A* gene. This suggests that *AMY1A* copy number may be an **evolutionary adaptation to diet** [R, R]-

AMY1A Genetics

Individuals carrying more *AMY1A* gene copies tend to have increased amylase enzyme activity, and an improved ability to **break down starch and complex carbs** into simple sugars [R].

Some studies linked lower numbers of *AMY1A* copies to obesity and diabetes, while other studies found opposite results [R, R, R, R, R].

Variants (SNPs) of the *AMY1A* gene are thought to be associated with an individual's *AMY1A* gene copy number [R].

There are several *AMY1A* gene variant alleles that have been associated with significantly lower gene copy numbers. Each variant carried is thought to cause a difference of up to 2 gene copies [R, R].

One such variant is rs11185098. When put on a diet, people with the **higher-amylase 'A' variant** tended to **lose more weight**. The study included over 800 obese participants monitored for 2 years. However, other studies have had mixed results [R, R].

The link between AMY1A activity and obesity may depend on diet type. Some studies found that **lower-amylase variants may offer protection against obesity on a high-carb diet**, likely because a portion of those carbs goes undigested. A study observed this effect **only in women** [R].

Simply put, if you have higher AMY1A activity, you may metabolize starches more efficiently. This is good for your metabolic health, but if you eat a lot of starches, it may contribute to weight gain.

Note that some of these variants also affect the activity of the *AMY2A* gene, which helps make **pancreatic** amylase.

HIGHER ACTIVITY

Predisposed to higher AMY1A activity based on 9 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
AMY2B	rs4244372	AT
AMY1C	rs1566154	AA
AMY2B	rs11185098	GA
AMY2A	rs1330403	GA
AMY2A	rs11577390	CT
AMY1B	rs6696797	AA
AMY1B	rs2132957	AA
AMY2B	rs1999478	CC
AMY1C	rs1930212	AA

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