SelfDecode™

# LPL (Weight)

## Gene Report

REPORT CATEGORY

WEIGHT & BODY FAT

## Sample Client

Report date: 15 January 2026

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# Table of Contents



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

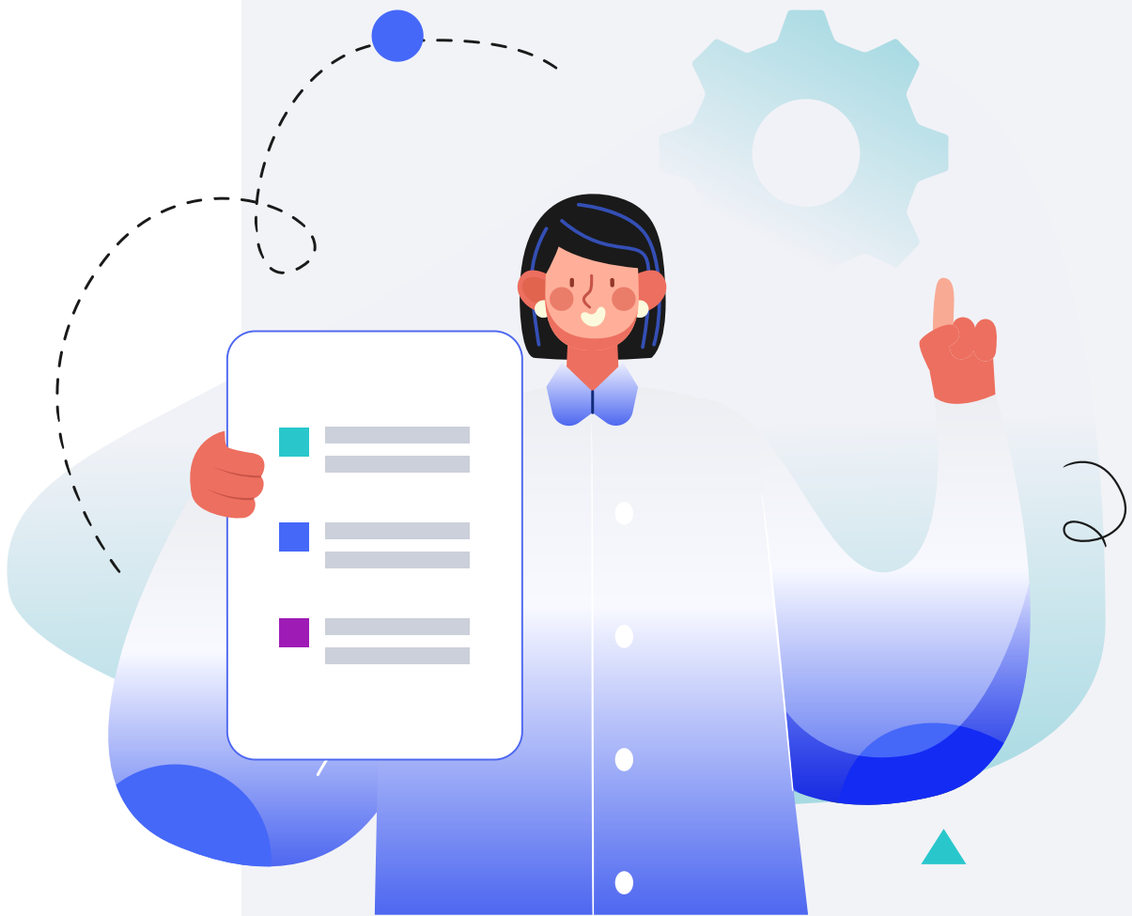
**Male**

HEIGHT

**5ft 5"** 165cm

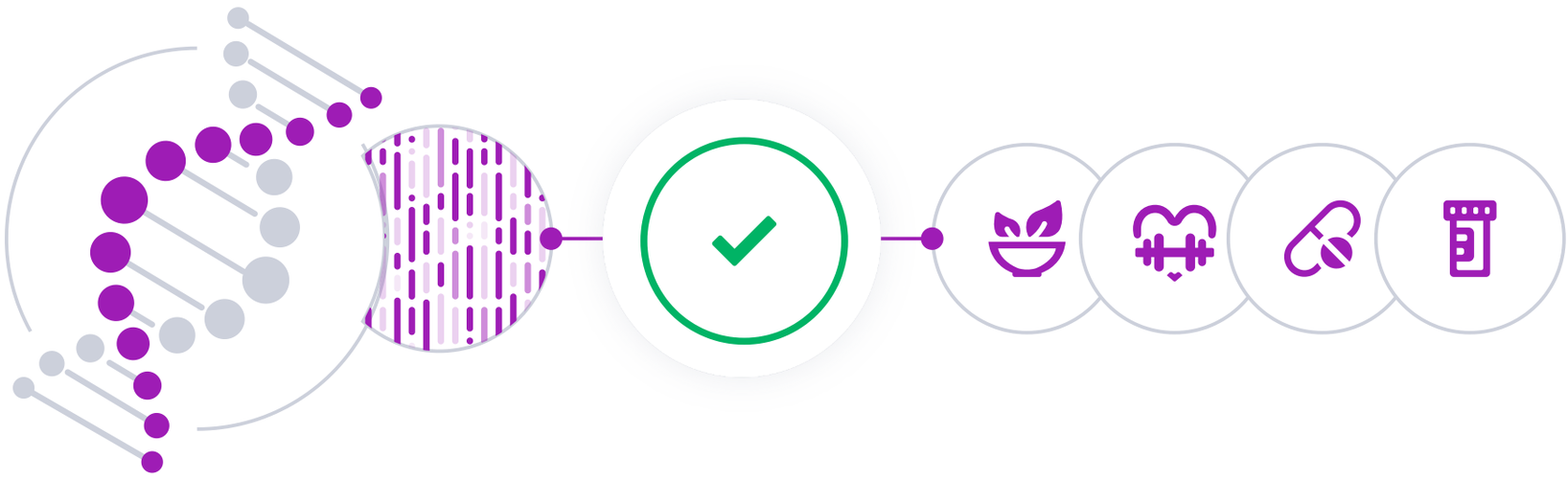
WEIGHT

**137lb** 62kg



# How this works

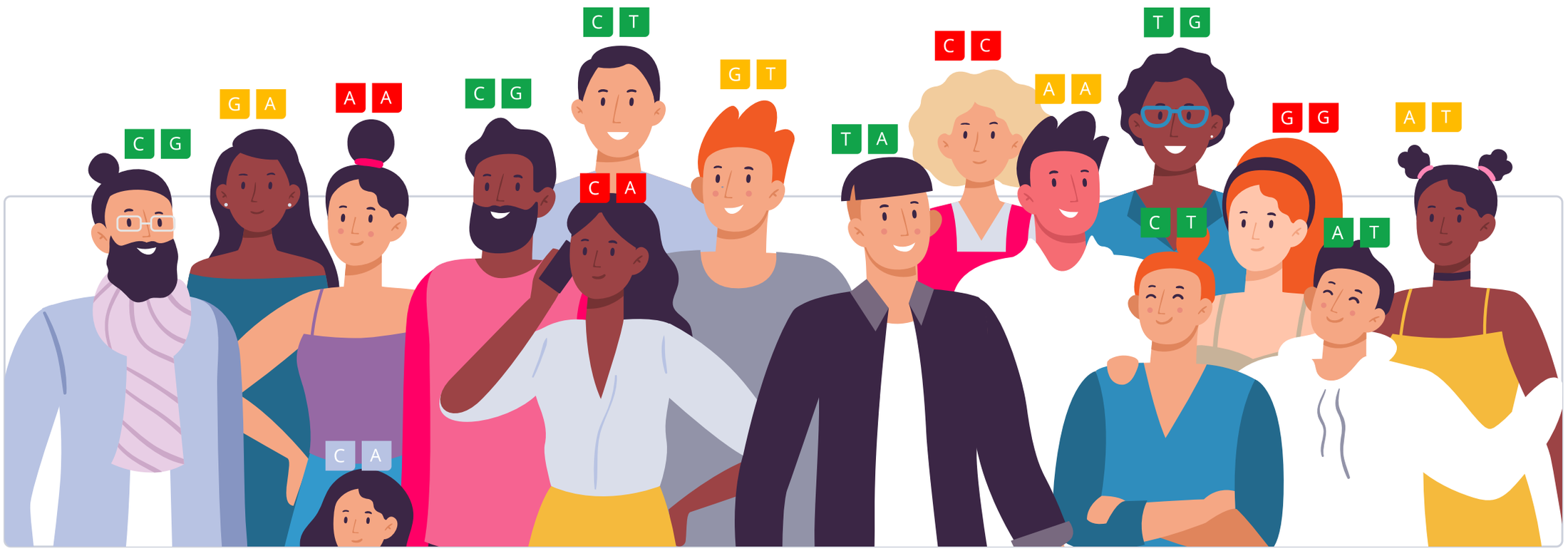
**Our Wellness Reports analyze how your DNA influences your health.**
**We then use this analysis to give you personalized risk estimates and recommendations.**



**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.

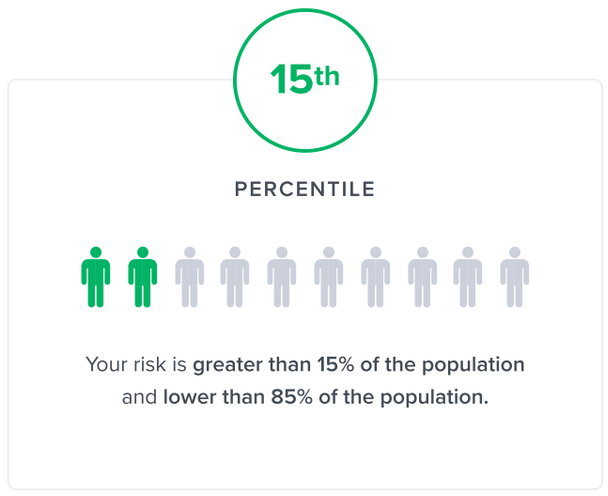
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

Lipases are enzymes that break down dietary fats and oils so that they can be absorbed from the intestine into the bloodstream. When they break down triglycerides, these fat molecules are either used for energy or stored in fatty tissue for later use [R].

Pancreatic lipase is the most important type of lipase and the main form of lipase in the gut, produced and released by the pancreas, the same gland that makes insulin. After a meal, your pancreas releases lipase into your digestive tract, where it breaks down fatty triglycerides into smaller molecules that are easier to absorb (monoglycerides and fatty acids) [R].

In addition to the pancreas, lipases are also produced in the liver (hepatic lipase), blood vessel lining (endothelial lipase), and other tissues such as the muscles, heart, brain, and even fat tissues themselves (lipoprotein lipase, encoded by the *LPL* gene) [R, R, R].

Mutations in the *LPL* gene can cause familial lipoprotein lipase deficiency. Symptoms of this genetic disease include [R]:

- Excess fat
- Abdominal pain
- Pancreatitis
- Diabetes
- Fatty stools
- Enlarged liver

# LPL Genetics

A number of *LPL* variants have been associated with obesity and measures of weight gain. One of these, **rs250**, is an insertion mutation; people with this variant have a slightly longer *LPL* gene than those who don't. The insertion mutation may increase the expression of lipase, thereby increasing fat absorption and the likelihood of obesity [R].

Five more variants of *LPL* have been associated with weight and metabolic health outcomes. Generally speaking, variants that increase lipase allow for increased fat absorption, which potentially increases blood fats and fat tissue [R, R].

One interesting study found that the 'TT' genotype of **rs320** was associated with reduced BMI and waist circumference in women who ate a lot of polyunsaturated fatty acids (PUFAs). The 'G' allele at this SNP is presumed to cause increased lipase activity and increased potential weight gain [R].

The 'G' allele of **rs1800590** has been associated with increased BMI and more abdominal fat. Meanwhile, the 'A' allele of **rs264** has been associated with increased weight regain after a weight loss program [R, R].

Finally, two SNPs have been associated with increased blood fats and metabolic syndrome, though they have not been studied in the context of weight gain specifically. At **rs7841189**, the uncommon 'T' allele appears to be linked to reduced lipase activity (possibly protective against metabolic syndrome); at **rs2083637**, the uncommon 'G' allele may increase lipase activity and promote fat absorption [R, R].

HIGHER ACTIVITY

**Predisposed to higher LPL activity based on 5 genetic variants we looked at**

**Your top variants that most likely impact your genetic predisposition:**

| GENE | SNP | GENOTYPE |
|---|---|---|
| LPL | rs7841189 | CC |
| LPL | rs2083637 | AG |
| LPL | rs320 | TT |
| LPL | rs264 | GG |
| LPL | rs250 | AA |
| LPL | rs1800590 | TT |

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