

GIPR (Blood Sugar)

Gene Report

REPORT CATEGORY —



Sample Client

Report date: 15 January 2026

Table of Contents

03 How this works

- 04 Impact
- 05 Evidence
- 06 Some things to keep in mind

07 Introduction

08 Your genetics

09 Your recommendations

13 Next Steps

- 13 Your Lab Results

Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

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.



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

The [GIPR](#) gene is responsible for encoding a protein with the same name, GIPR (gastric inhibitory polypeptide receptor) [\[R\]](#).

The *GIPR* gene and the protein it helps create play an important role in insulin production in the body [\[R\]](#).

Research has found that certain variants in the *GIPR* gene can alter the body’s ability to secrete insulin. As a result, these variants may be associated with insulin resistance, diabetes, and obesity [\[R\]](#), [\[R\]](#), [\[R\]](#).

The ‘R’ in GIPR stands for receptor, as it acts as a receptor for the GIP protein. The GIP protein belongs to a class of hormones called incretins, which are responsible for regulating blood sugar (glucose) levels [\[R\]](#).

When glucose levels become high, such as after a meal, GIP is secreted from special intestinal cells called K cells. This newly secreted GIP binds to GIPR located in the pancreas, which causes insulin secretion. Insulin allows the body to use or store glucose, which helps lower blood glucose levels [\[R\]](#).

Research suggests that certain variants in the GIPR gene may influence aspects of metabolic health, such as insulin resistance, type 2 diabetes, and body fat [\[R\]](#), [\[R\]](#).

GIPR Variants and Blood Sugar

The main variants in the *GIPR* gene are [rs2287019](#) and [rs10423928](#). They are almost always inherited together, meaning you will most likely have either both or none of them.

The minor alleles, rs2287019–**T** and rs10423928–**A**, are strongly linked to [\[R, R, R, R\]](#):

- **Type 2 diabetes**
- **Insulin resistance**
- **Gestational diabetes**

On the other hand, they have shown associations with reduced body weight [\[R, R\]](#).

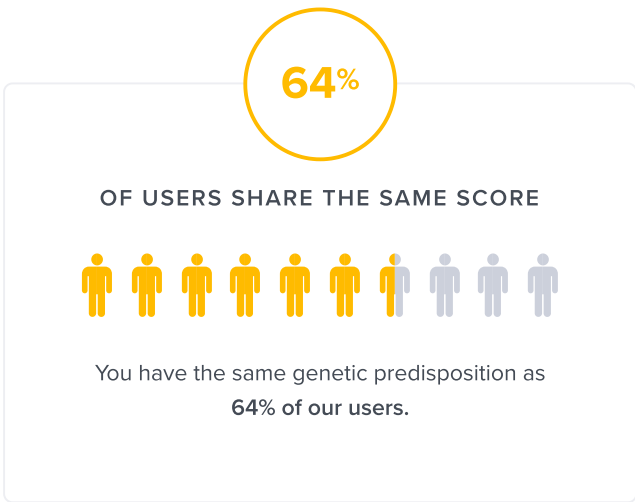
These variants may **reduce insulin secretion** after a meal. This may impair blood sugar control and contribute to diabetes but also promote fat burning [\[R, R\]](#).

Interestingly, in one study, people with these variants did better on a **low-fat, high-carb, high-fiber diet**. Researchers are unsure about the underlying mechanism behind this finding [\[R\]](#).



TYPICAL ACTIVITY

Likely typical GIPR activity based on the genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
GIPR	rs2287019	CC
GIPR	rs10423928	TT

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

Low-Carbohydrate Diet
- 2

Eat Fiber-Rich Foods

1



Low-Carbohydrate Diet

IMPACT

3 / 5

EVIDENCE

5 / 5

How to implement

Limit your daily intake of carbohydrates to less than 26% of your total daily calories. For a standard 2000-calorie diet, this means consuming no more than 130 grams of carbohydrates per day. Focus on including non-starchy vegetables, lean proteins, and healthy fats in your meals while minimizing the intake of sugars, bread, pasta, and other high-carb foods.

Description

Low-carbohydrate diets can promote weight loss, improve blood sugar control, and support heart health. They may also be beneficial for individuals with certain medical conditions, such as epilepsy or metabolic syndrome.

How it helps

A meta-analysis of 18 studies found that carbohydrate intake within the recommended 45–65% of calorie intake doesn’t affect type 2 diabetes risk, but intakes above 70% of calories increase the risk by 18% [\[R\]](#).

In the case of metabolic syndrome, the highest vs the lowest category of carbohydrate intake increases the risk by 25% according to a meta-analysis of 14 studies [\[R\]](#).

Nine meta-analyses concluded that carbohydrate-restricted diets (50-130 g/day for 3-12 months) reduce HbA1c (by 1-6.7 mmol/L or 0.17-0.49%) with a dose-dependent effect in patients with type 2 diabetes. In one of them, it also reduced fasting plasma glucose (by 0.34 mmol/L) [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#), [\[R\]](#).

Three meta-analyses comparing different dietary approaches in people with prediabetes and type 2 diabetes concluded that a low-carb diet was the most effective one for decreasing BMI and raising HDL-c and one of the most effective ones (together with the Mediterranean diet) for lowering HbA1c [\[R\]](#), [\[R\]](#), [\[R\]](#).

Compared to low-fat diets, low-carb diets are more effective at raising HDL-c and reducing HbA1c and weight in type 2 diabetes patients according to 2 meta-analyses [\[R\]](#), [\[R\]](#).

In patients with metabolic syndrome, low-carb diets lower insulin levels according to a meta-analysis of 13 trials [\[R\]](#).

A meta-analysis of 17 trials associated low-carb diets with lower fasting glucose (by 1.05 mg/dL), HbA1c (by 0.21%), and insulin (by 2.25 mclU7mL) [\[R\]](#).

2



Eat Fiber-Rich Foods

IMPACT3 / 5

EVIDENCE4 / 5

How to implement

Incorporate foods high in fiber, such as fruits, vegetables, whole grains, and legumes, into your daily meals. Aim for a total dietary fiber intake of 25 to 30 grams per day, spread out over all meals.

Description

Fiber is a type of carb that your body can’t digest which supports digestion, heart health, and blood sugar control. You can get fiber by eating things like whole grains, fruits, nuts, seeds, and leafy greens.

Fiber is a type of carb that your body can’t digest. It supports digestion, heart health, blood sugar control, and more [\[R, R\]](#).

Adults should get 28 g of fiber every day. Most people in the US don’t get enough fiber [\[R, R\]](#).

You can get more fiber by eating [\[R, R\]](#):

- Whole grains
- Fruits
- Leafy greens
- Nuts and seeds
- Beans
- Broccoli

Fiber supplements, such as [psyllium husk](#), are available for people who don’t get enough fiber from their diets [\[R, R\]](#).

How it helps

Dietary fiber may help reduce blood sugar levels. **People who eat more fiber may be at a lower risk of diabetes** [\[R, R, R\]](#).

This is because **fiber delays the absorption of sugar**, which prevents blood sugar spikes. It may even boost your response to insulin [\[R, R, R, R, R\]](#).

[Mediterranean](#) and vegetarian diets are rich in high-fiber foods that may help control blood sugar [\[R, R, R, R, R\]](#).

High-fiber foods that may benefit blood sugar include:

- [Flaxseed](#) [\[R, R\]](#)
- Chia seed [\[R, R, R\]](#)
- [Fenugreek](#) [\[R, R, R, R\]](#)

For people who don’t get enough fiber from diet, potential supplements include:

- [Resistant starch](#) [\[R, R, R\]](#)
- [Inulin](#) [\[R, R, R\]](#)
- [Psyllium husk](#) [\[R, R, R, R\]](#)

Note that a diet high in sugary foods may cancel out the protective effects of dietary fiber [\[R\]](#).



PERSONALIZED TO YOUR GENES

Eating a low-fat, high-fiber diet may lower blood sugar more in people with your [GIPR](#) gene variant [\[R\]](#).

YOUR GENETIC VARIANTS

GENE	SNP	GENOTYPE	EVIDENCE
GIPR	rs10423928	TT	

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.

	HbA1c	30 mmol/mol		29 Dec 2025
	Glucose, Fasting	97 mg/dL		9 Nov 2025
	Insulin, Fasting	9.08 uU/mL		9 Nov 2025
	HbA1c (%)	4 %		29 Dec 2025