

# Type 1 Diabetes

## Disease Report

REPORT CATEGORIES —



INFLAMMATION &  
AUTOIMMUNITY



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

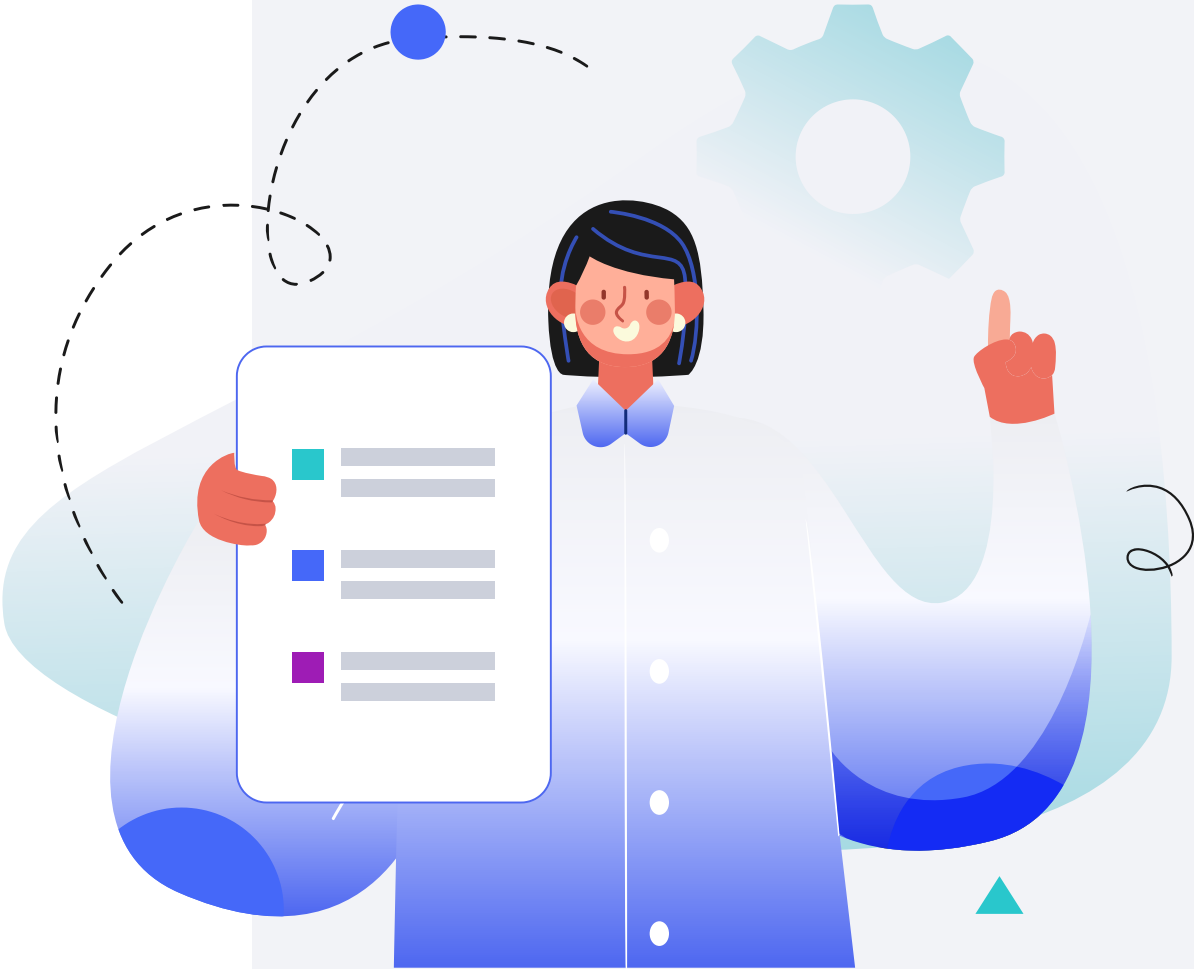
Male

HEIGHT

5ft 5" 165cm

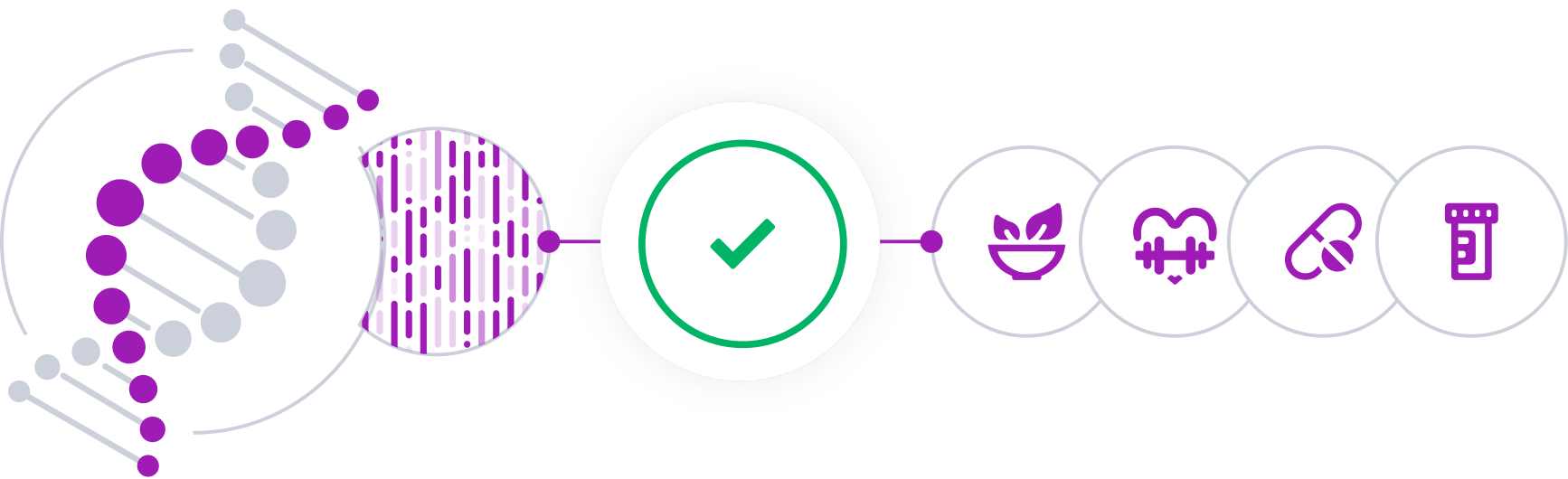
WEIGHT

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.

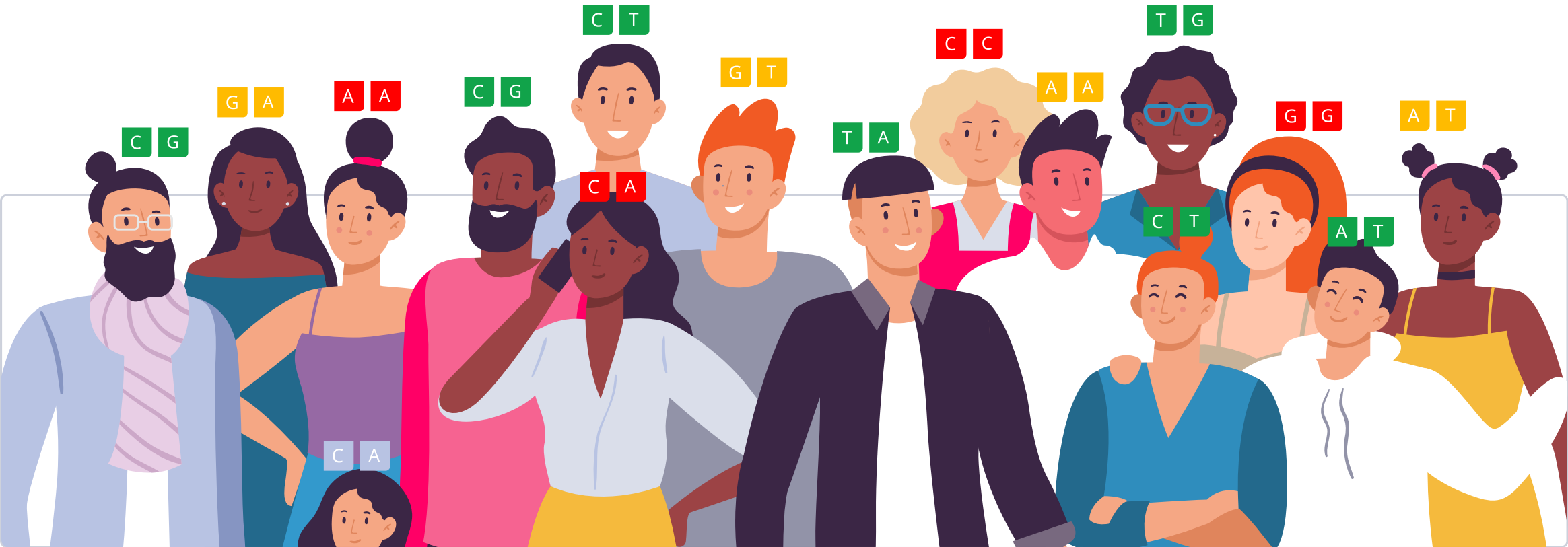


Similarly, our Trait Reports look at how your DNA influences your traits.



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.

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

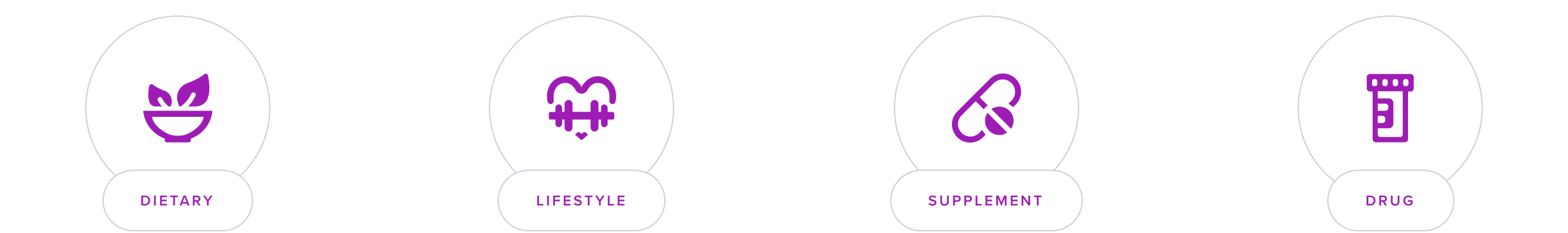
You have 2 risk alleles

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

Type 1 diabetes is a chronic condition in which the pancreas produces little or no insulin. It's often diagnosed in children and young adults, though it can appear at any age. Unlike type 2 diabetes, type 1 diabetes isn't related to lifestyle or diet [R].

**When blood sugar is high, the pancreas releases [insulin](#).** Insulin is responsible for lowering [blood sugar](#). It signals your liver and muscles to store sugar as *glycogen*. When glucose levels are low, such as when you haven't eaten in a while, the liver breaks down the stored glycogen into glucose. This keeps glucose levels within a typical range [R, R].

In type 1 diabetes, there's no insulin to let glucose into the cells. Because of this, sugar builds up in the bloodstream. This can cause life-threatening complications.

Symptoms of type 1 diabetes include [R]:

- Increased thirst and frequent urination
- Extreme hunger
- Unintended weight loss
- Fatigue and weakness
- Blurred vision
- Mood changes
- Bedwetting in children who previously didn't wet the bed during the night

Left untreated, time, type 1 diabetes can cause complications in major organs of the body such as the heart, blood vessels, nerves, eyes and kidneys. These include [R]:

- Heart and blood vessel disease
- Nerve damage
- Kidney damage
- Eye damage
- Foot ulcers
- Skin and mouth infections
- Adverse pregnancy outcomes

Having a normal blood sugar level can lower the risk of many of these complications.



# Longevity Screener

Longevity Screener analyzes your DNA and biometric data to holistically determine your risk of developing serious medical conditions.

Your lifetime risk is **Normal**

Your 10-year risk is **Normal**

## Summary or results

Your results are indicating a Normal risk of developing Type 1 Diabetes in your lifetime and within the next decade.

Monitor your risk by regularly checking your related labs and implementing the recommendations provided.

## What to do if you get a High risk

### Analyze your labs

Analyze your lab results to establish a baseline and track any changes or improvements in your health markers over time.

### Find out your out-of-optimal labs

We will pinpoint any values that fall outside the optimal range, allowing you to focus on what matters most.

### Optimize labs

Aim to bring all your lab results to optimal levels through lifestyle changes, treatments, and ongoing monitoring for the best health outcomes.

## Disclaimer

The Longevity Screener feature is designed to provide insights based on genetic predispositions and basic health data to help you understand factors that may influence your longevity. This tool is for informational purposes only and does not constitute medical advice, diagnosis, or treatment. Always consult with a qualified healthcare provider before making any decisions related to your health, lifestyle, or medical treatments. The information provided by the Longevity Screener is based on current scientific research and should be used as a supplementary tool in conjunction with professional medical advice.



# Risk Factors and Management

Risk factors for type 1 diabetes include [\[R\]](#):

- Family history: Having a parent or sibling with type 1 diabetes.
- Age: Type 1 diabetes can occur at any age but is more commonly diagnosed from infancy to the late 30s.
- Geography: The incidence of type 1 diabetes tends to increase as you travel away from the equator.
- **Genetics**

Up to **88%** of the differences in people’s risk of type 1 diabetes may be genetic. Multiple genes contribute to its risk, particularly those affecting immune system function [\[R\]](#), [\[R\]](#).

Currently, there is no known way to prevent type 1 diabetes. The condition requires careful management and a multidisciplinary healthcare approach that includes [\[R\]](#):

- Lifelong insulin therapy: Insulin injections or an insulin pump to regulate blood sugar levels.
- Blood sugar monitoring: Regular monitoring is essential for managing insulin dosing.
- Healthy eating: Paying attention to food choices, particularly carbohydrates.
- Regular exercise: Exercise is a crucial part of diabetes management.
- Routine health checks: Regular check-ups are vital to monitor for complications.



TYPICAL LIKELIHOOD

Typical likelihood of type 1 diabetes based on 1,047,920 genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

| GENE     | SNP         | GENOTYPE |
|----------|-------------|----------|
| /        | rs9272346   | AG       |
| RASGRP1  | rs72727394  | TT       |
| CTSH     | rs34593439  | GG       |
| SH2B3    | rs653178    | CT       |
| ALDH2    | rs17696736  | GA       |
| IL19     | rs3024505   | AG       |
| ERBB3    | rs11171739  | CT       |
| RTL1     | rs56994090  | CT       |
| DEXI     | rs12708716  | GA       |
| IL7R     | rs11954020  | GG       |
| MAPT     | rs1052553   | AA       |
| CLEC2D   | rs3764021   | CT       |
| TYK2     | rs34536443  | GG       |
| IL2RA    | rs61839660  | CC       |
| INS-IGF2 | rs689       | TT       |
| IL2RA    | rs41295121  | CC       |
| RNLS     | rs12416116  | CC       |
| BCL2L11  | rs4849135   | GG       |
| DEXI     | rs12927355  | TC       |
| IFIH1    | rs35667974  | TT       |
| IFIH1    | rs72871627  | AA       |
| CTLA4    | rs3087243   | GG       |
| CCR1     | rs113010081 | TT       |
| BCAR1    | rs8056814   | AG       |

| GENE     | SNP        | GENOTYPE |
|----------|------------|----------|
| /        | rs75793288 | GG       |
| GSDMB    | rs12453507 | GC       |
| PTPN2    | rs12971201 | GA       |
| IL2RA    | rs10795791 | GA       |
| ICOSLG   | rs6518350  | AG       |
| CLECL1   | rs917911   | CA       |
| TM9SF2   | rs9585056  | TC       |
| CAMSAP2  | rs6691977  | CT       |
| AFF3     | rs13415583 | TG       |
| FAP      | rs2111485  | GA       |
| PTPN22   | rs6679677  | CC       |
| PTPN22   | rs2476601  | GG       |
| /        | rs1456988  | TT       |
| KIAA1109 | rs6534347  | GG       |
| CLN3     | rs151234   | GG       |
| RMI2     | rs193778   | AA       |
| PTPN2    | rs1893217  | AA       |
| CD226    | rs1615504  | CC       |
| /        | rs705705   | GG       |
| TLL1     | rs2611215  | GG       |
| SMARCE1  | rs757411   | CC       |
| BACH2    | rs72928038 | GG       |

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.

| DOSAGE |                             | DOSAGE     |   |                                  |        |
|--------|-----------------------------|------------|---|----------------------------------|--------|
| 1      | Aerobic Exercise (Cardio)   | 1 hour     | 2 | Low-Carbohydrate Diet            |        |
| 3      | Walking                     | 30 minutes | 4 | Strength Training                | 1 hour |
| 5      | Eat Fiber-Rich Foods        |            | 6 | Mediterranean Diet               |        |
| 7      | Dietary Vitamin E           |            | 8 | Exercise At Least One Hour a Day | 1 hour |
| 9      | Dietary Omega-3 Fatty Acids |            |   |                                  |        |

1



Aerobic Exercise (Cardio)

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

## Description

Engaging in regular aerobic exercise, such as running, swimming, or cycling, offers numerous health benefits, including improved cardiovascular fitness, weight management, and mood enhancement. It supports overall physical and mental well-being while reducing the risk of chronic diseases.

Cardio, short for cardiovascular exercise, is any type of physical activity that temporarily increases your heart rate. Examples include **running, cycling, swimming, and brisk walking**.

Regular cardio exercise has many benefits for your overall health. It can help lower your risk of heart disease and diabetes, support weight loss, and improve your mood and energy levels. To get the most out of cardio, try to do it for at **least 30 minutes, 3-5 times a week**.

**Interval training** is a type of cardio that combines periods of high-intensity training with brief rest periods.

## How it helps

Aerobic exercise helps by improving insulin sensitivity, allowing the body to use insulin more effectively, which is crucial for managing blood sugar levels.

2



Low-Carbohydrate Diet

IMPACT

0 / 5

EVIDENCE

0 / 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 low-carbohydrate diet can help maintain better blood sugar control and reduce insulin needs.



3



Walking

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Incorporate at least 30 minutes of brisk walking into your daily routine, aiming for a minimum of five days a week. This can be done in one continuous session or broken into shorter periods, such as three 10-minute walks throughout the day.

TYPICAL STARTING DOSE

30 minutes

## Description

Walking is a low-impact form of exercise that can contribute to cardiovascular fitness, weight management, and improved overall health. It is used to support physical activity goals, enhance mood, and promote better cardiovascular health.

## How it helps

Walking helps regulate blood glucose levels by increasing insulin sensitivity and promoting glucose uptake in the muscles.

4



Strength Training

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

## Description

Strength training, also called resistance or *anaerobic* training, contracts the muscles against an external resistance for short periods of time. This helps gain muscle strength, tone, and mass. This can include activities like weight lifting, pushups, and crunches.

Strength training, also known as resistance training, is a type of physical exercise that uses resistance to build strength, anaerobic endurance, and size [\[R\]](#). Some of the most common strength training methods include [\[R\]](#):

- Weight lifting
- Bodyweight exercises like push-ups, pull-ups, squats, and lunges.
- Resistance bands
- Plyometrics or explosive force exercises

The benefits of strength training are numerous, and include [\[R\]](#):

- Increased muscle strength
- Improved bone health
- Reduced risk of injury
- Improved balance and coordination
- Enhanced mood
- Boost metabolism

Consult with a doctor before starting any new exercise program, especially if you have any health conditions.

## How it helps

Strength Training helps improve the body's ability to use insulin and manage blood sugar levels by increasing muscle mass and promoting glucose uptake.

5



Eat Fiber-Rich Foods

IMPACT

0 / 5

EVIDENCE

0 / 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

Fiber can slow the absorption of sugar and improve blood sugar levels.

6



Mediterranean Diet

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of dairy products. Opt for water and red wine in moderation as your beverages.

## Description

The [Mediterranean diet](#) is based on the traditional cuisine from the Mediterranean regions. It moderates the intake of red meat and dairy, while being rich in fruits and vegetables, whole grains, and healthy fats ([olive oil](#)).

The [Mediterranean diet](#) focuses on traditional cuisine from the Mediterranean regions. It’s rich in [\[R\]](#):

- [Olive oil](#)
- Fruits and vegetables
- Whole grains
- Nuts and seeds
- Fish

This type of diet may **reduce inflammation and protect the brain and heart** [\[R, R, R, R\]](#).

Limited intake of animal products, saturated fat, and refined sugar likely contribute to the health benefits of the Mediterranean diet [\[R\]](#).

## How it helps

The Mediterranean diet emphasizes whole foods and healthy fats, which can improve blood sugar levels and overall health.



7



Dietary Vitamin E

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Incorporate foods high in Vitamin E into your daily diet. This includes almonds, hazelnuts, sunflower seeds, and green leafy vegetables such as spinach and broccoli. Aim for a daily intake of 15mg of Vitamin E from your diet, which is roughly a handful of almonds (about 23 almonds) or 2 tablespoons of sunflower seeds.

## Description

Dietary vitamin E is a fat-soluble antioxidant vitamin found in nuts, seeds, and vegetable oils. It helps protect cells from oxidative damage and supports immune function.

[Vitamin E](#) is an antioxidant important for the immune system and for heart health [\[R\]](#).

Plant-based foods have the most vitamin E. These include [\[R\]](#):

- Wheat germ
- Sunflower seeds
- Almonds
- Plant oils

Adults need about **15 mg** of vitamin E per day [\[R\]](#).

## How it helps

Genetically higher vitamin E appears to be inversely associated with type 1 diabetes and insulin resistance [\[R\]](#).



8



Exercise At Least One Hour a Day

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Dedicate a minimum of 60 minutes to moderate-intensity activities such as brisk walking, swimming, or cycling. Do this most days of the week, aiming for at least 5 days to optimize benefits.

TYPICAL STARTING DOSE

1 hour

## Description

[Exercise](#) can do wonders for your health. It can help you lose weight, improve your heart health, boost your mood, and more [\[R\]](#).

There are many ways you can be active. You can walk, run, swim, dance, or play team sports. **Everything counts, and it's never too late to start!**

Try to get at least **60 minutes of moderate physical activity on most days**, including walking. **Getting a mix of cardio (min 150 min/day) and strength training (min 2 times a week) may be optimal.**

## How it helps

Regular daily exercise helps to control blood glucose levels and can improve overall well-being and cardiovascular health.

9



Dietary Omega-3 Fatty Acids

IMPACT

0 / 5

EVIDENCE

0 / 5

## How to implement

Incorporate foods high in omega-3 fatty acids into your diet daily. This includes eating fish such as salmon, mackerel, and sardines at least twice a week. Alternatively, include a tablespoon of flaxseed oil or chia seeds in your daily diet.

## Description

[Omega-3 fatty acids](#) are some of the healthiest fats we can eat. They help lower inflammation and protect the heart, brain, and eyes. Our bodies produce less omega-3s than we need for optimal health, so it's important to get enough through food or supplements [\[R\]](#), [\[R\]](#), [\[R\]](#).

There are three major types of omega-3s: ALA, EPA, and DHA. **EPA and DHA are vital for mental and heart health** [\[R\]](#), [\[R\]](#), [\[R\]](#).

**Fatty fish are rich in EPA and DHA.** They include [\[R\]](#):

- Salmon
- Tuna
- Herring
- Sardines

For optimal health, try to get at least **two servings of fatty fish per week**. Fish oil supplements are available for those who don't eat fish regularly [\[R\]](#).

## How it helps

Omega-3 fatty acids may reduce inflammation and improve blood sugar control.

# 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.

|                                                                                     |                              |             |                                                                                             |             |
|-------------------------------------------------------------------------------------|------------------------------|-------------|---------------------------------------------------------------------------------------------|-------------|
|  | Glucose, Urine               |             | <div><div>Negative</div><div>Positive</div></div>                                           | 9 Nov 2025  |
|  | HbA1c                        | 30 mmol/mol | <div><div>26</div><div>36</div><div>48</div></div>                                          | 29 Dec 2025 |
|  | Glucose, Fasting             | 97 mg/dL    | <div><div>55</div><div>65</div><div>80</div><div>95</div><div>100</div><div>126</div></div> | 9 Nov 2025  |
|  | Vitamin D, 25-Hydroxy, Total | 58.59 ng/mL | <div><div>10</div><div>20</div><div>30</div><div>75</div><div>150</div></div>               | 9 Nov 2025  |
|  | Insulin, Fasting             | 9.08 uU/mL  | <div><div>1</div><div>6</div><div>19.6</div><div>25</div></div>                             | 9 Nov 2025  |