SelfDecode™

SLC6A3 (Mental Health)

Gene Report

REPORT CATEGORY

MENTAL HEALTH

Sample Client

Report date: 15 January 2026

Powered by omicsedge

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

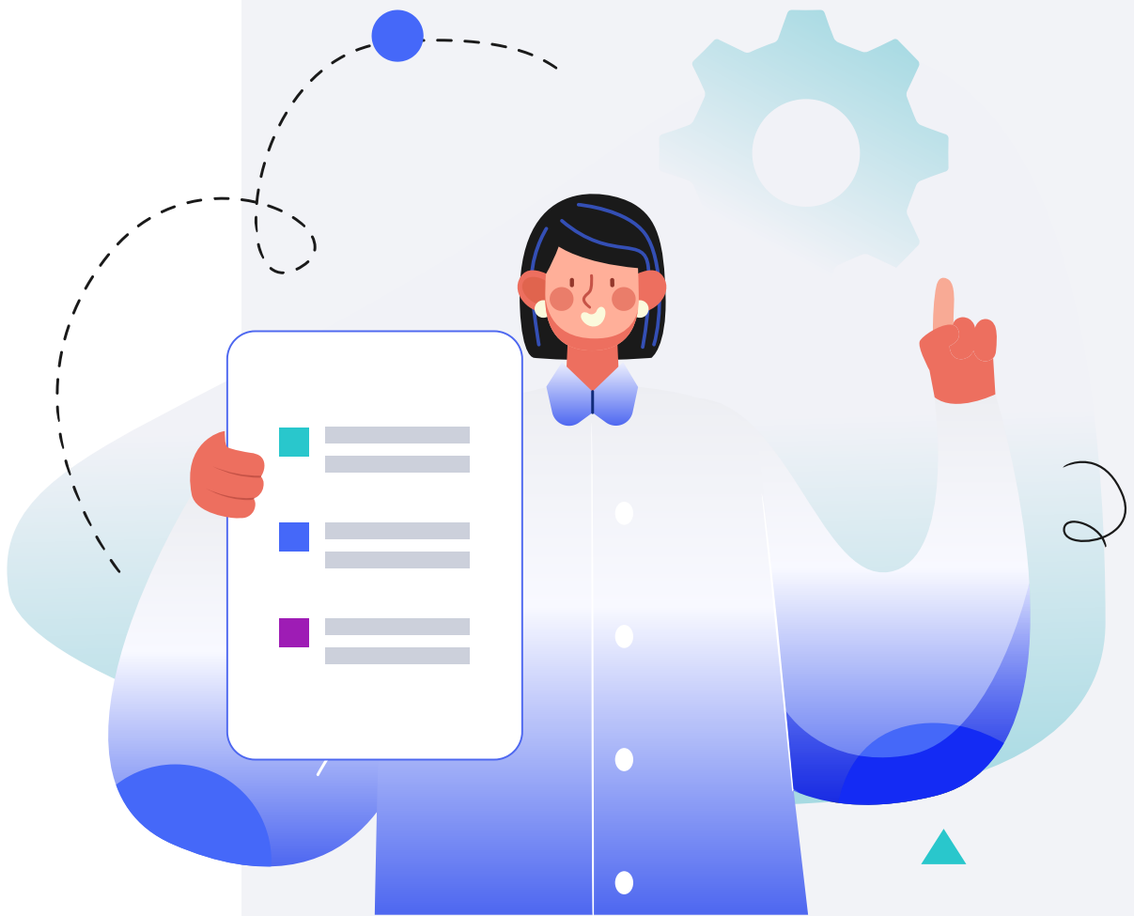
Male

HEIGHT

5ft 5" 165cm

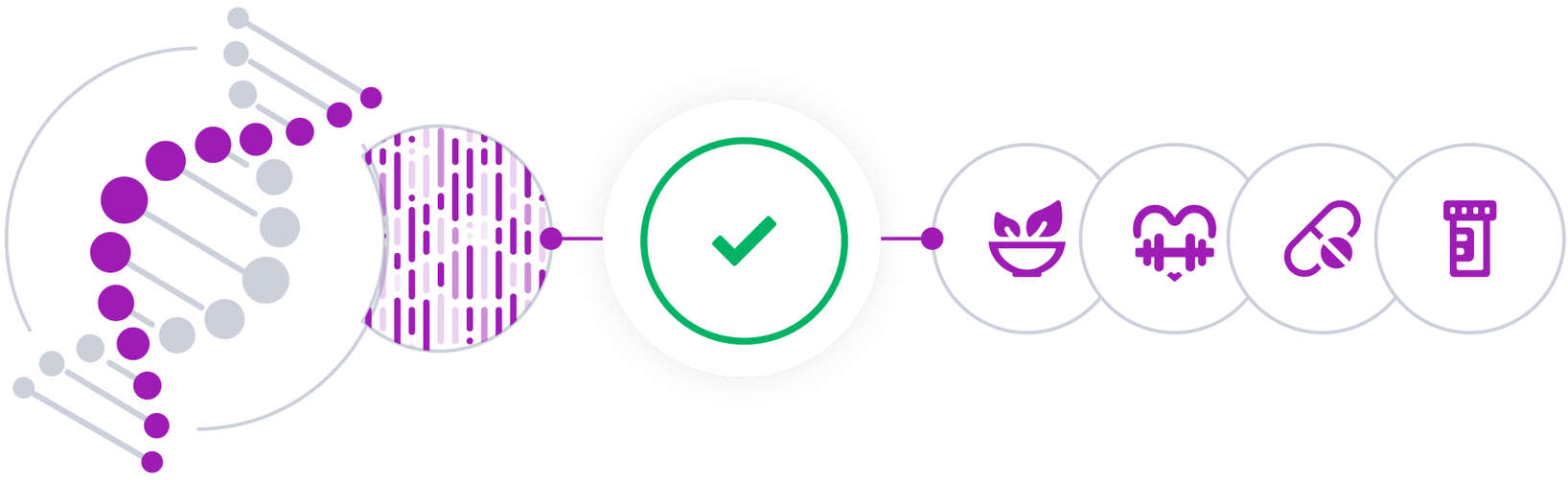
WEIGHT

137lb 62kg



How this works

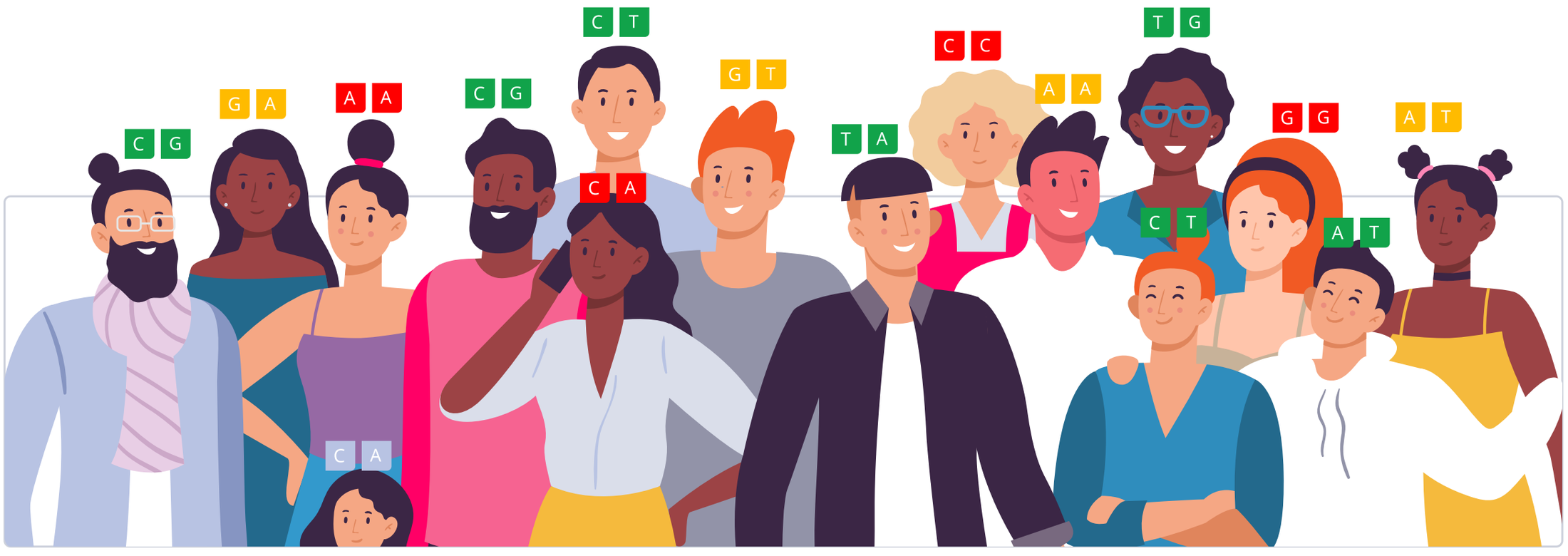
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

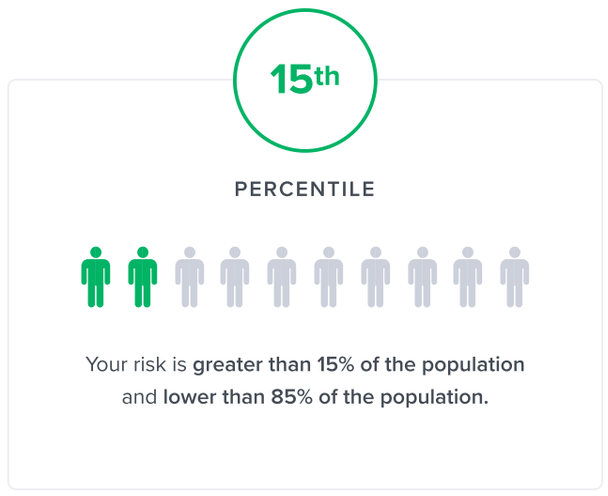
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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

The *SLC6A3* gene encodes the dopamine transporter DAT1. This protein is found on the membrane of brain cells, where it transports the neurotransmitter dopamine into the cell [R].

Dopamine is involved in several key functions [R, R]:

- **Reward and motivation:** dopamine is best known for its role in the brain's reward system. It regulates feelings of pleasure and reward, which are critical for motivation. Dopamine release during rewarding activities encourages us to engage in those activities repeatedly.
- **Mood regulation:** dopamine levels influence various aspects of mood and are associated with emotions of elation and happiness.
- **Cognitive function:** adequate dopamine levels are essential for memory, attention, and problem-solving functions.
- **Motor control:** through its action in the basal ganglia, dopamine is essential for coordinating smooth and balanced muscle movement. Deficiencies in dopamine in these areas are linked to motor control disorders such as Parkinson's disease.

To transmit signals, dopamine is released into the space between neurons (the synaptic cleft), where it binds to receptors on the surface of neighboring neurons. The DAT1 transporter brings dopamine from the synaptic cleft back into neurons for reuse. Its activity determines how much dopamine is present in the synaptic cleft and for how long. This makes the DAT1 transporter a major controller of dopamine signaling in the brain [R].

Dysfunctions of the dopamine system have been linked to ADHD. In line with this, the dopamine transporter is the target of commonly prescribed medications for ADHD. These medications can physically block the transporter so that less dopamine is transported into cells and more dopamine is available in the brain [R, R].

SLC6A3 Genetics

Several *SLC6A3* variants have been associated with an increased risk of ADHD, as well as increased impulsivity and inattention in individuals with ADHD. These include [R, R, R, R]:

- 'T' of **rs6347**
- 'G' of **rs11564750**
- 'C' of **rs27072**
- 'T' of **rs2550948**
- 'C' of **rs27048**

While the mechanism behind this association is not clear, these variants may increase the density of the dopamine transporter in certain regions of the brain. This would decrease the amount of dopamine available in these brain regions, giving rise to ADHD and its associated symptoms [R, R].

TYPICAL ACTIVITY

Predisposed to a typical SLC6A3 activity based on 5 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CLPTM1L	rs11564750	GG
LPCAT1	rs27072	CC
SLC6A3	rs6347	TT
SLC6A3	rs2550948	CT
SLC6A3	rs27048	TT

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