SelfDecode™

Beta-Alanine

Biohacker Report

REPORT CATEGORY

NUTRITION

Sample Client

Report date: 15 January 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

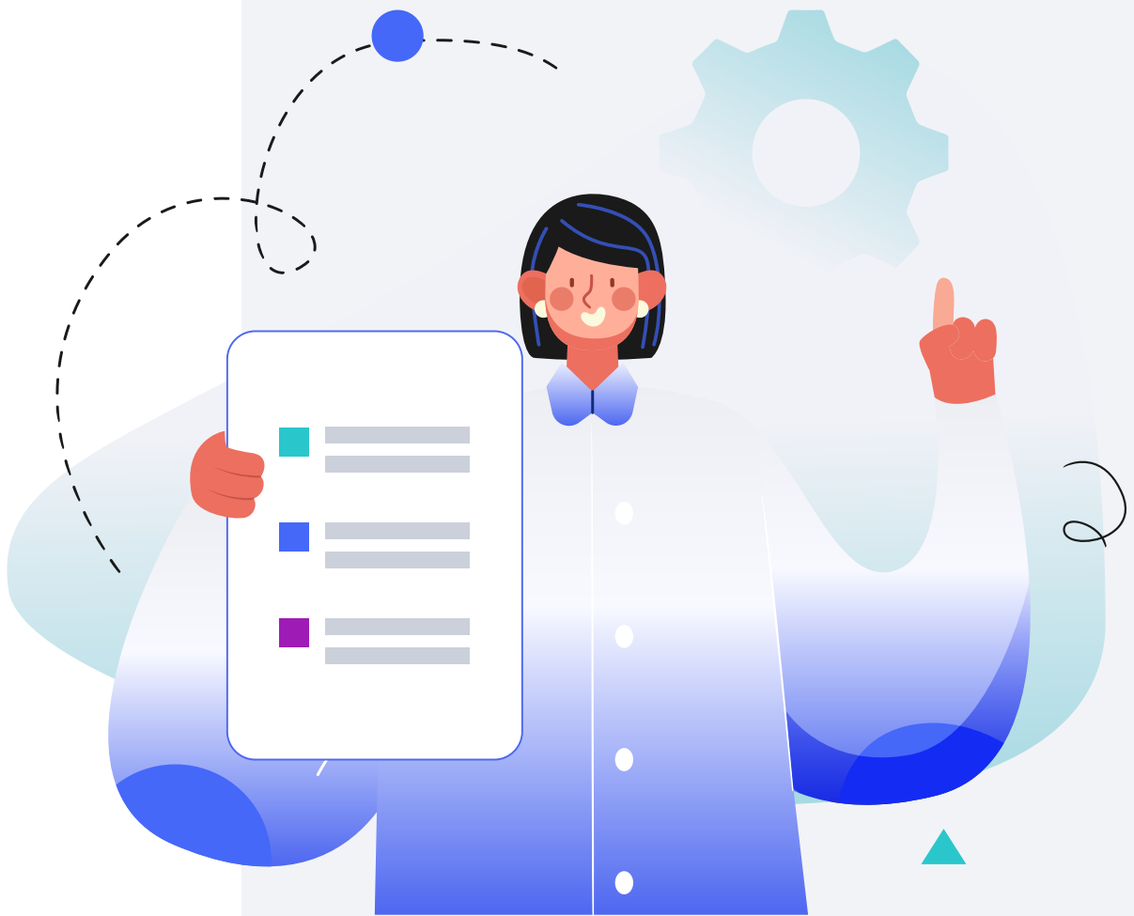
Male

HEIGHT

5ft 5" 165cm

WEIGHT

137lb 62kg

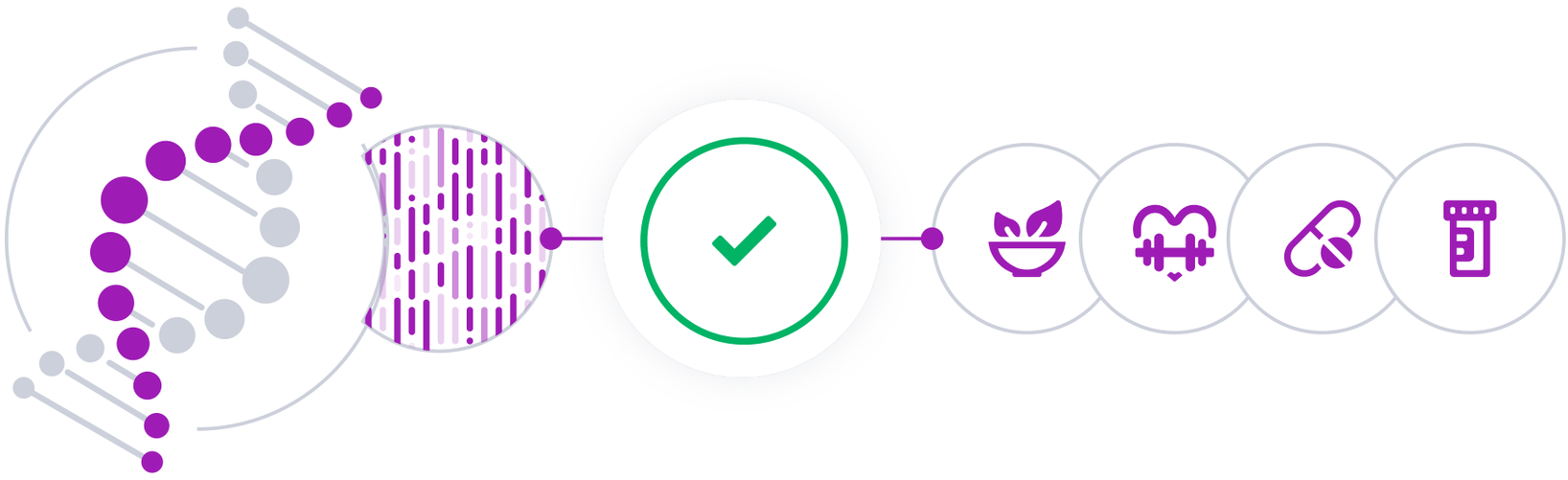


DISCLAIMER

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

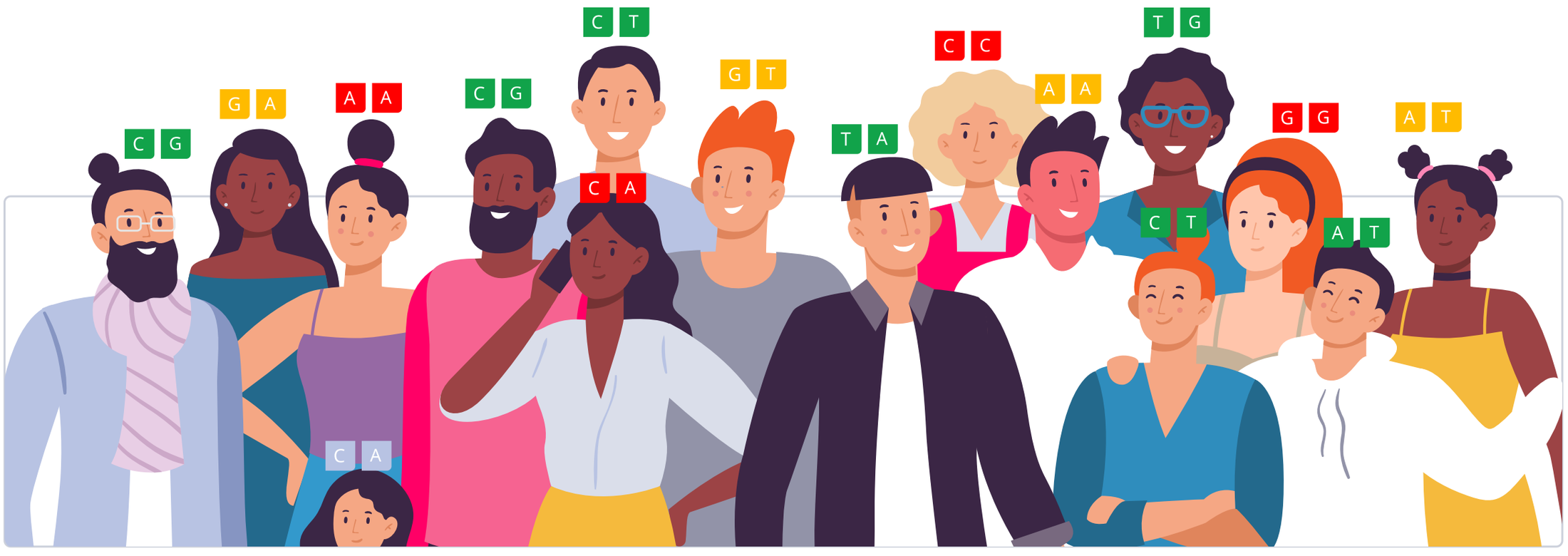
Our Wellness Reports analyze how your DNA influences your health.
We then use this analysis to give you personalized risk estimates and recommendations.



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.

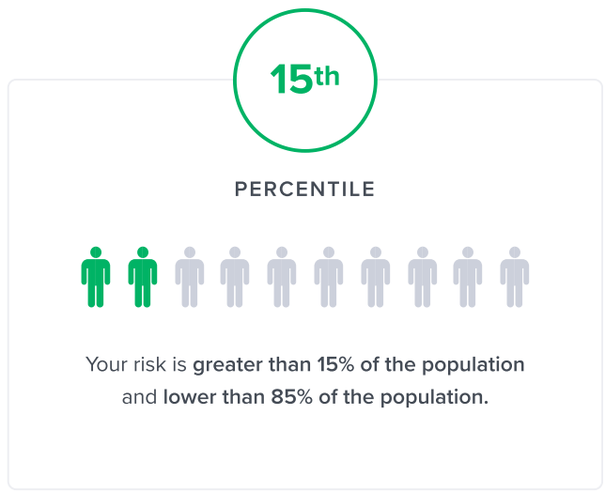
Genetic variants are parts of DNA that differ from person to person. Some can make you more vulnerable to certain health issues, while others may influence traits such as eye color.



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.

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

Beta-alanine is a non-essential amino acid that the body combines with histidine to make **carnosine.** By doing this, it helps maintain energy levels and brain health [R, R].

Beta alanine is primarily found in **meat, poultry, and fish**. People also take it as a supplement, usually to enhance **exercise performance** [R].

Low beta-alanine levels may contribute to chronic fatigue syndrome. On the other hand, consistently high levels of beta-alanine may reduce taurine levels [R, R, R].

Factors Affecting Beta-Alanine Levels

High levels of beta-alanine may be due to [R]:

- A rare genetic condition (hyper-beta-alaninemia)
- Excessive beta-alanine supplementation

Low levels of beta-alanine may be due to [R]:

- Health conditions such as kidney disease
- Older age
- Vegetarian diets
- Genetics

Please note: this report doesn't account for rare genetic disorders. Genetic variants analyzed in this report have a much smaller impact on beta-alanine status.

TYPICAL NEED

Likely typical beta-alanine needs based on 4,694 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
GADL1	rs6800284	CT
GADL1	rs6780429	AC
FSTL5	rs10012576	AA
CDH4	rs2427065	GG
CDH4	rs2427055	CC
CLDN24	rs77066025	TC
ZNF83	rs148305112	AG
CPNE8	rs12371693	GA
CPLANE1	rs115589520	AG
IPO7	rs147639758	GG
OTUD3	rs2233687	CC
LPCAT1	rs56982424	TT
ERCC4	rs139001552	TT
TIAM2	rs116222269	AA
CDH6	rs7722953	GG
PRKCA	rs75901234	AA
SLC37A2	rs144699668	CC
ATCAY	rs12609717	GG
TPD52	rs12679683	CC
UPK3B	rs144244532	AA
RPLP1	rs28662087	TT
MYOM2	rs116872407	CC
PPP2R5A	rs141898885	GG
OR6N1	rs148124567	CC
SETD7	rs147364528	CC
MTRNR2L5	rs201909068	AA
PIP4K2A	rs77677595	AA
MARK1	rs2184936	CC
NRXN1	rs80222136	CC
HSF2	rs62430075	CC
RAP2B	rs16823123	AA
SRRM4	rs79438673	CC

GENE	SNP	GENOTYPE
/	rs115721783	TT
PRR20A	rs17553571	CC
CCDC85C	rs8004539	CC
CHRNA2	rs34447567	TT
TMEFF2	rs74671736	TT
CCDC85A	rs10200246	AA
DOCK8	rs76737642	CC
SLC8A1	rs74851806	GG
EDEM1	rs146954437	CC
RNASE3	rs181563477	AA
CHST9	rs62082886	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.

		DOSAGE
1	Beta-Alanine	2 g
2	Dietary Protein	
3	Creatine	4 g

1

Beta-Alanine

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Take 2-3 grams of beta-alanine supplement daily, ideally in divided doses throughout the day to minimize potential skin tingling sensations. This supplementation can be continued for at least 4 weeks to observe benefits in exercise performance and muscle endurance.

TYPICAL STARTING DOSE

2 g

Description

Beta-alanine is an amino acid that can enhance muscle endurance by increasing the body's buffering capacity against lactic acid accumulation during intense exercise. Supplementing with beta-alanine may help improve athletic performance and delay muscle fatigue.

How it helps

Taking Beta-Alanine as a supplement can help improve your physical performance because it increases carnosine levels in your muscles, which reduces muscle fatigue. However, Beta-Alanine doesn't treat a medical condition named 'Beta-Alanine' because there is no such condition.

2

Dietary Protein

IMPACT 1 / 5

EVIDENCE 1 / 5

How to implement

Include a variety of protein sources such as meat, fish, eggs, dairy, beans, and nuts in your diet every day, aiming for at least 0.8 grams of protein per kilogram of body weight. For more active individuals or those looking to build muscle, increase intake to 1.2 to 2.0 grams per kilogram of body weight daily, spread out over all meals to maximize absorption.

Description

Protein is essential for building and repairing tissues, supporting muscle growth, and maintaining overall bodily functions. Adequate protein intake is crucial for overall health and well-being.

Foods that are high in protein include:

- Eggs
- Nuts
- Beef
- Chicken
- Fish
- Yogurt
- Tofu
- Pork
- Cottage cheese

How it helps

Adequate intake of dietary protein is essential for the synthesis of beta-alanine. It is a component of the dipeptide carnosine, found in protein-rich foods such as meat, poultry, and fish which contribute to carnosine levels in the muscles.

3

Creatine

IMPACT 0 / 5

EVIDENCE 0 / 5

How to implement

Take 4 grams of creatine supplement daily, ideally mixed with water or juice. This dosage can be maintained consistently without needing specific periods of cycling on or off.

TYPICAL STARTING DOSE

4 g

Description

Creatine is a popular dietary supplement among athletes and bodybuilders, known to enhance muscle performance during short bursts of high-intensity activities. It may help improve exercise performance and support muscle growth when used as directed.

Creatine is a compound naturally produced by the body. It's stored in the muscles and brain [R].

During exercise, creatine is released to boost performance and help build muscles. For this reason, it's a popular supplement among athletes [R, R].

Sources of creatine include [R]:

- Red meat
- Seafood
- Supplements

How it helps

Creatine can provide a beneficial effect on muscular endurance and performance. It serves as an energy source for short bursts of powerful movement, which can enhance workouts and support muscle gain.

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.