

Dutasteride Response (Hair Loss)

Biohacker Report

REPORT CATEGORY —



SKIN & BEAUTY

Sample Client

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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

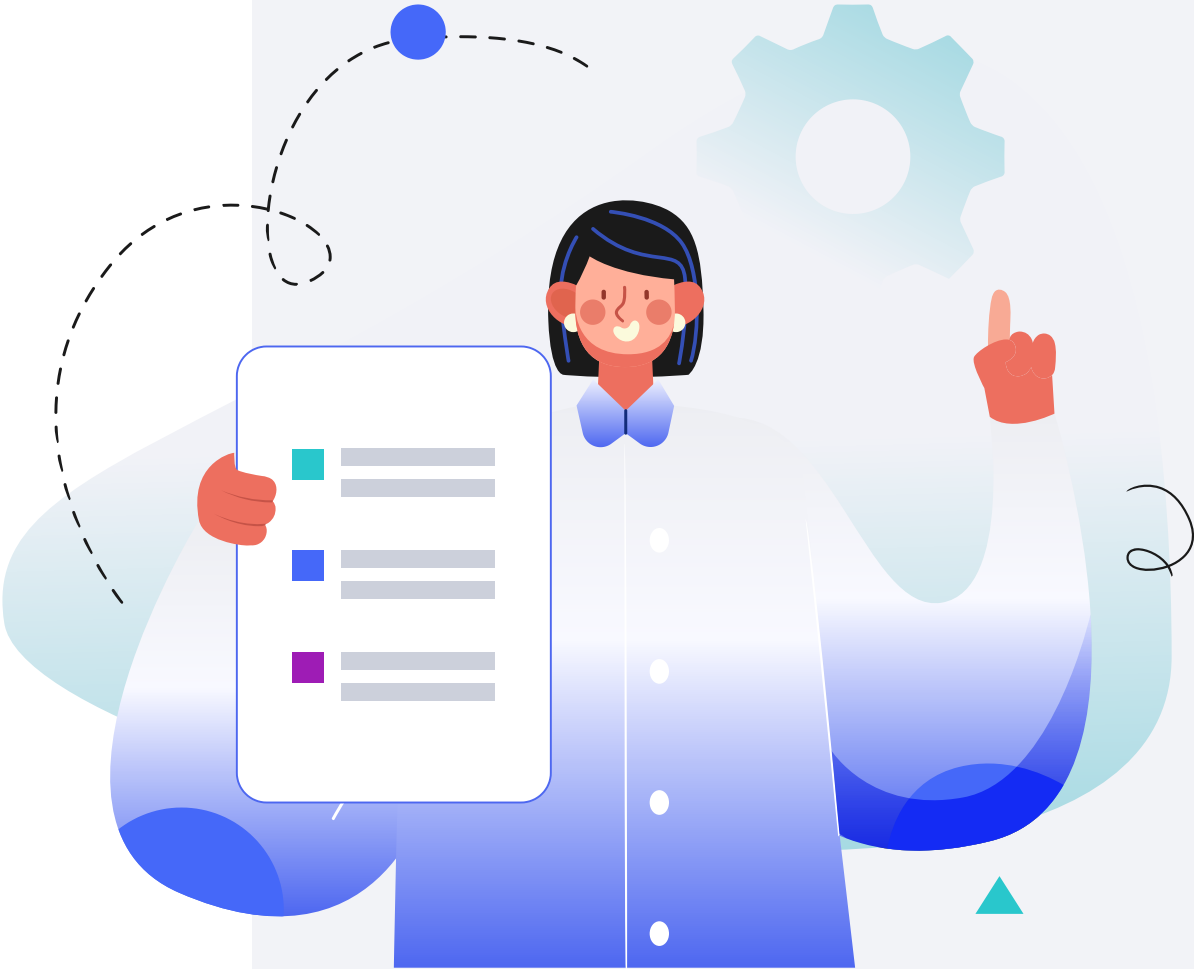
Male

HEIGHT

5ft 5" 165cm

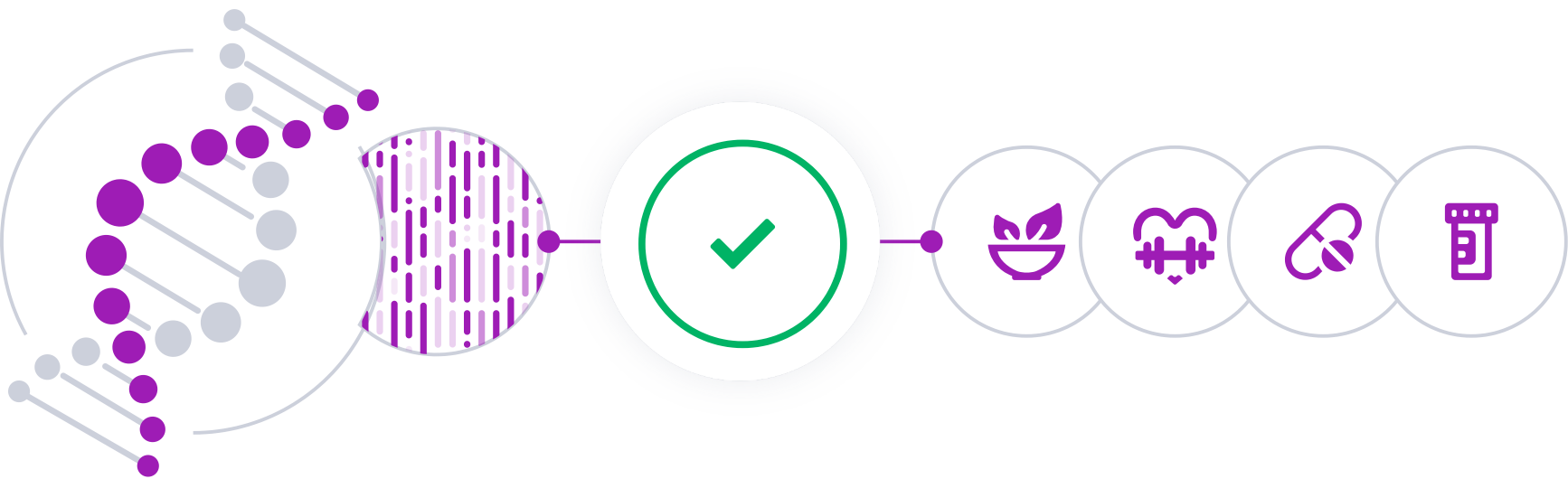
WEIGHT

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.

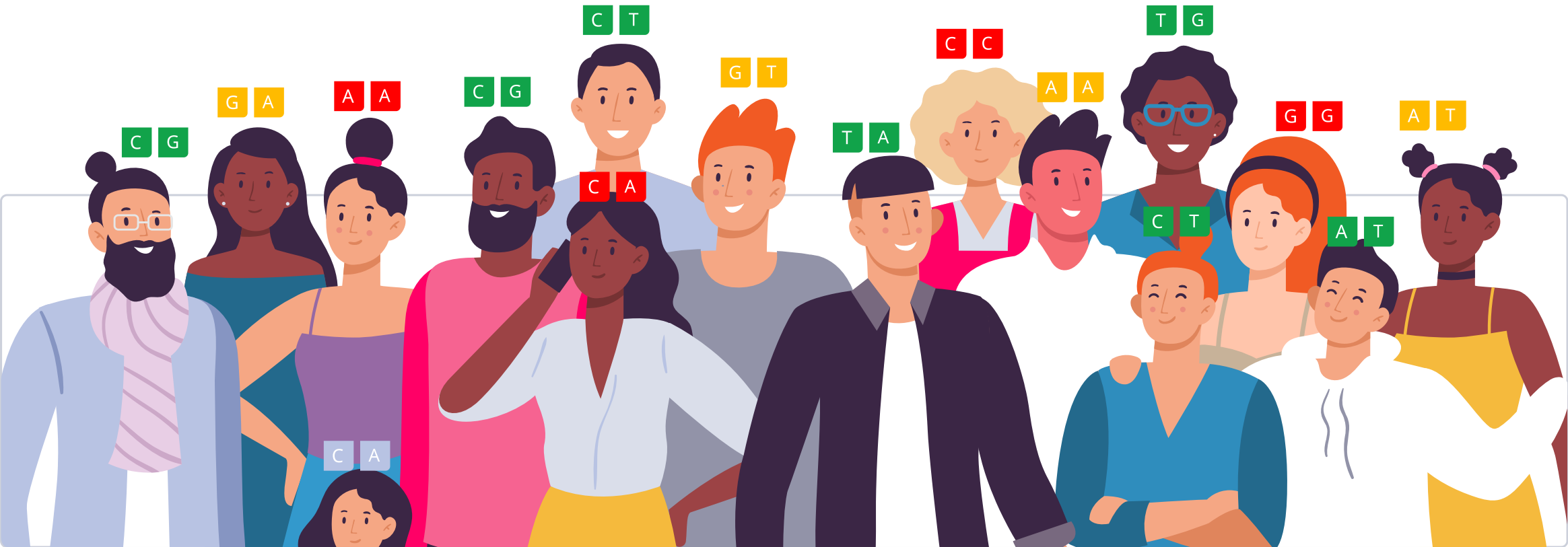


Similarly, our Trait Reports look at how your DNA influences your traits.



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

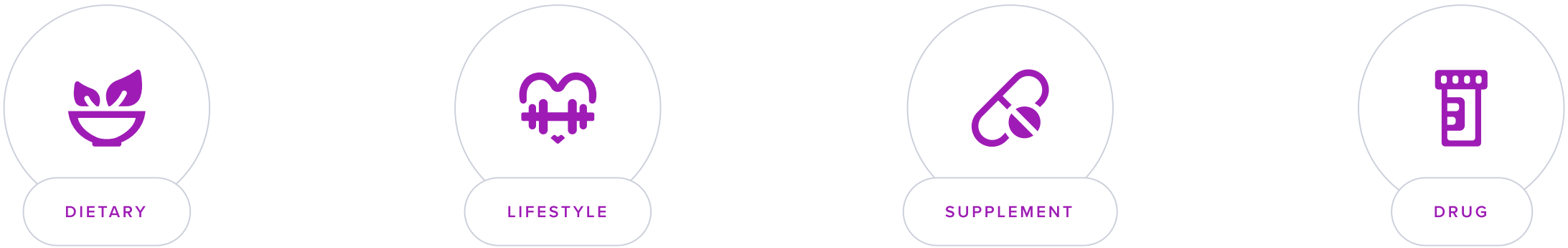
You have 2 risk alleles

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

Dutasteride has emerged as an effective treatment option for male pattern hair loss (androgenetic alopecia, AGA). Unlike finasteride, which only inhibits type II **5α-reductase**, dutasteride blocks **both type I and II enzymes**, providing more complete suppression of dihydrotestosterone (DHT) production [R].

However, treatment response varies significantly between individuals - some experience substantial hair regrowth while others show minimal improvement. Clinical studies indicate that about 30% of patients treated with dutasteride for 6 months show "no global change" in their condition [R].

This variability hints at underlying genetic factors that may influence treatment outcomes. Understanding these genetic determinants could help predict which patients are most likely to benefit from dutasteride therapy.

Genetics of Dutasteride Response

A 2019 study identified several genetic variants associated with dutasteride response [R].

The most significant finding was a SNP [rs72623193](#) in the *DHRS9* gene, which showed a negative correlation with treatment response. *DHRS9* is particularly interesting as it functions in both androgen metabolism and retinoid signaling pathways.

Other notable genetic associations include:

- ***SRD5A1***(rs3822430): The type I 5α-reductase gene, which enables DHT production
- *ESR1*(rs3020314): The estrogen receptor gene
- *CYP19A1*(rs700519): Involved in estrogen synthesis

The findings suggest that treatment response isn't solely determined by androgen-related genes. The involvement of retinoid pathway genes (*DHRS9*, *RXRG*) and estrogen-related genes (*ESR1*, *CYP19A1*) points to a complex interplay between different hormonal systems in determining treatment outcomes.

Interestingly, variants in *SRD5A2* (type II 5α-reductase) weren't significantly associated with response, despite being dutasteride's primary target, along with *SRD5A1*.

These insights might help predict people’s dutasteride response, allowing more personalized approaches to AGA.



TYPICAL RESPONSE

Predisposed to a typical dutasteride response based on 5 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IGFBP3	rs10255707	CC
CYP19A1	rs700519	GG
ESR1	rs3020314	CC
SRD5A1	rs3822430	GA
DHRS9	rs72623193	TT
HSD17B12	rs10838177	AA

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

Topical Dutasteride

1



Topical Dutasteride

IMPACT2 / 5

EVIDENCE2 / 5

How to implement

Ensure your scalp is clean and dry. Use the dropper to apply the solution (typically 0.05%), creating partings every few centimeters for thorough coverage. Massage gently for 1-2 minutes to ensure even distribution. Avoid getting your scalp wet for at least 6 hours after application. Monitor for any adverse reactions and document progress with photos.

Description

Topical dutasteride is a potent dual 5 α -reductase inhibitor that blocks both type 1 and 2 enzymes, providing more complete DHT suppression than finasteride. This makes it particularly effective for resistant cases of hair loss. While newer in its topical form, research suggests it can be more effective than finasteride in promoting hair growth.

How it helps

Like finasteride, dutasteride can be used topically. There's less research on topical dutasteride compared to topical finasteride, but early studies are promising. It's typically used in concentrations around 0.05%. The molecule is larger than finasteride, which might affect skin penetration [\[R\]](#).

Some studies suggest it may be effective when combined with minoxidil, though more research is needed to establish optimal formulations and long-term safety profiles [\[R\]](#).

Please note: Dutasteride is a prescription drug. You shouldn't use it before consulting your doctor.