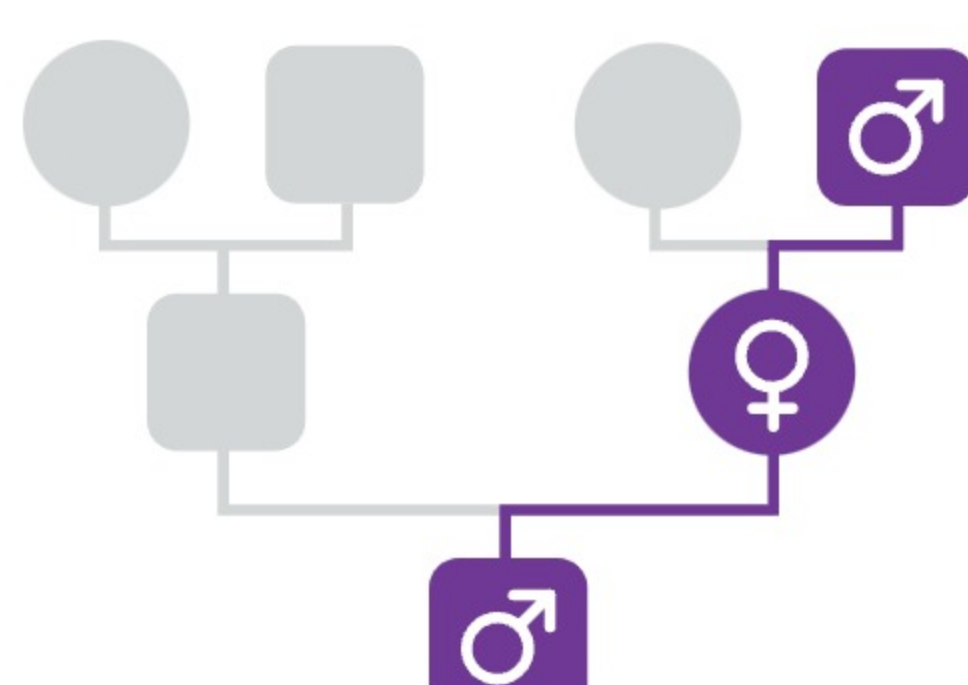


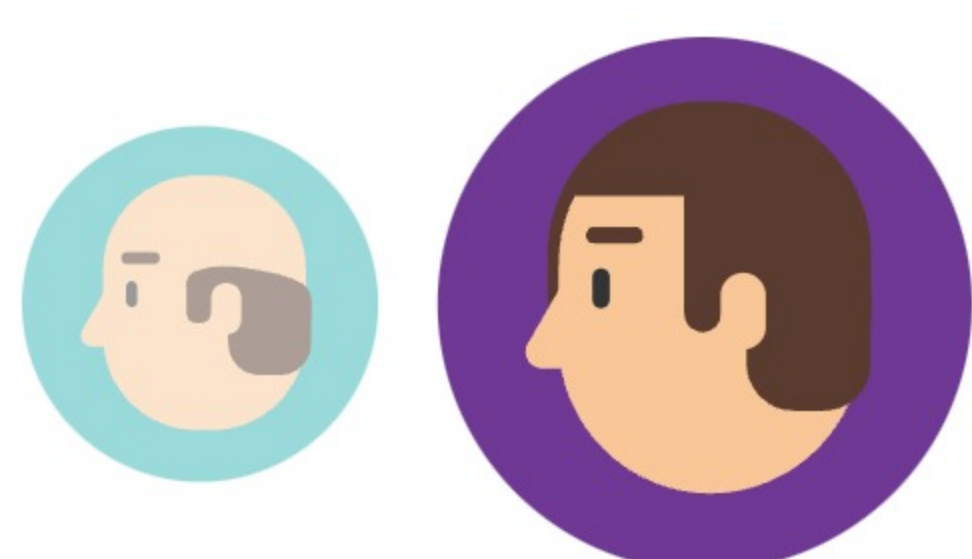
Early Hair Loss

Overview Scientific Details



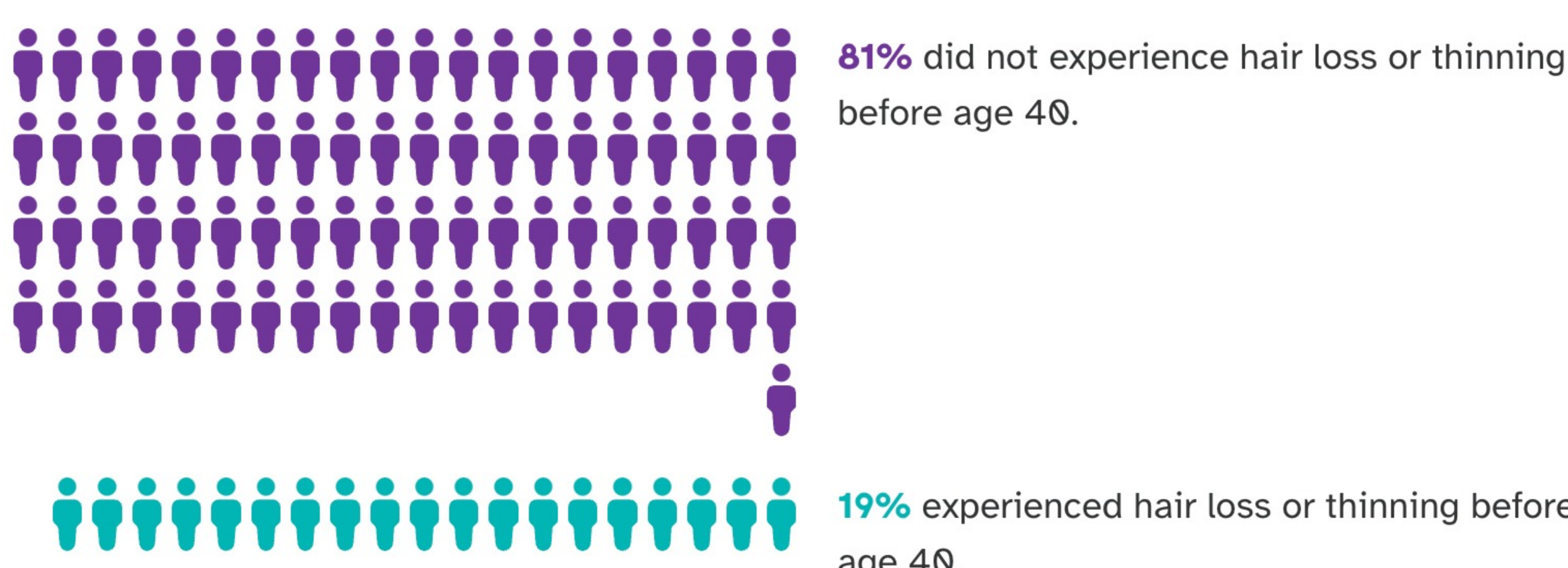
Don't blame your mom

An old myth advises looking at the hairline of your mom's dad to predict the fate of your own. But many different genetic variants from both parents can play a role in hair loss.



Jamie, the combination of your genetics and other factors make you **unlikely to experience** hair loss or thinning before age 40.

Of 23andMe male research participants with results like yours:

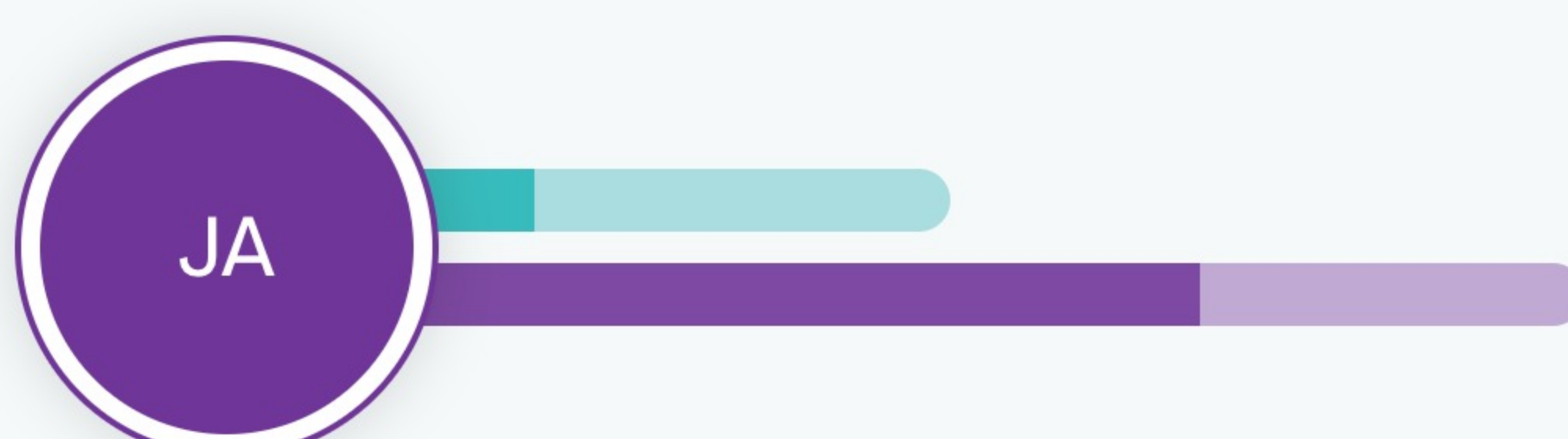


Have you experienced hair loss or thinning?

How did we calculate your result?

We added up the effect of your genetic variants at 19 places in your DNA (genetic markers) plus the effect of other factors, such as your age.

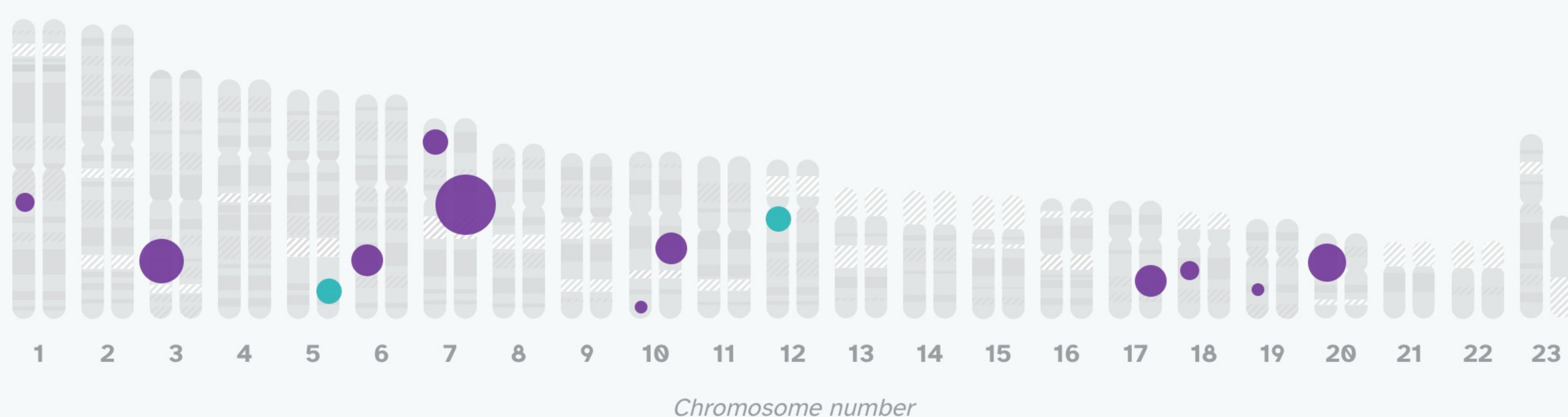
Total effect of your genetics + other factors



YOUR GENETICS	OTHER FACTORS
● more likely	●
● less likely	●

Breakdown of your genetics

The bigger the circle, the stronger the effect your variants have on your overall chances.



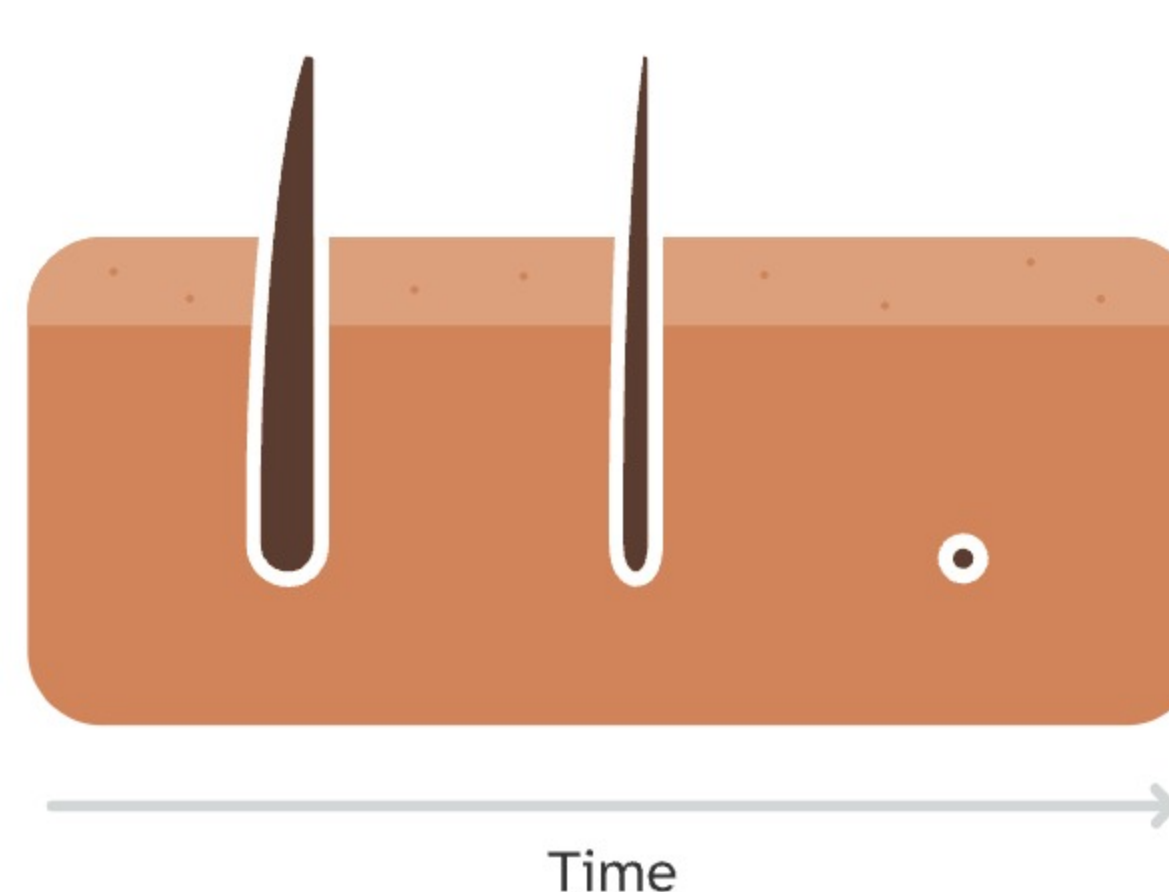
At 2 of the genetic markers we looked at you have variants that make you more likely to experience hair loss before age 40, and at 11 you have variants that make you less likely. At 6 of the markers that we looked at, you have variants with no effect either way (not shown).

See Scientific Details

More about early hair loss

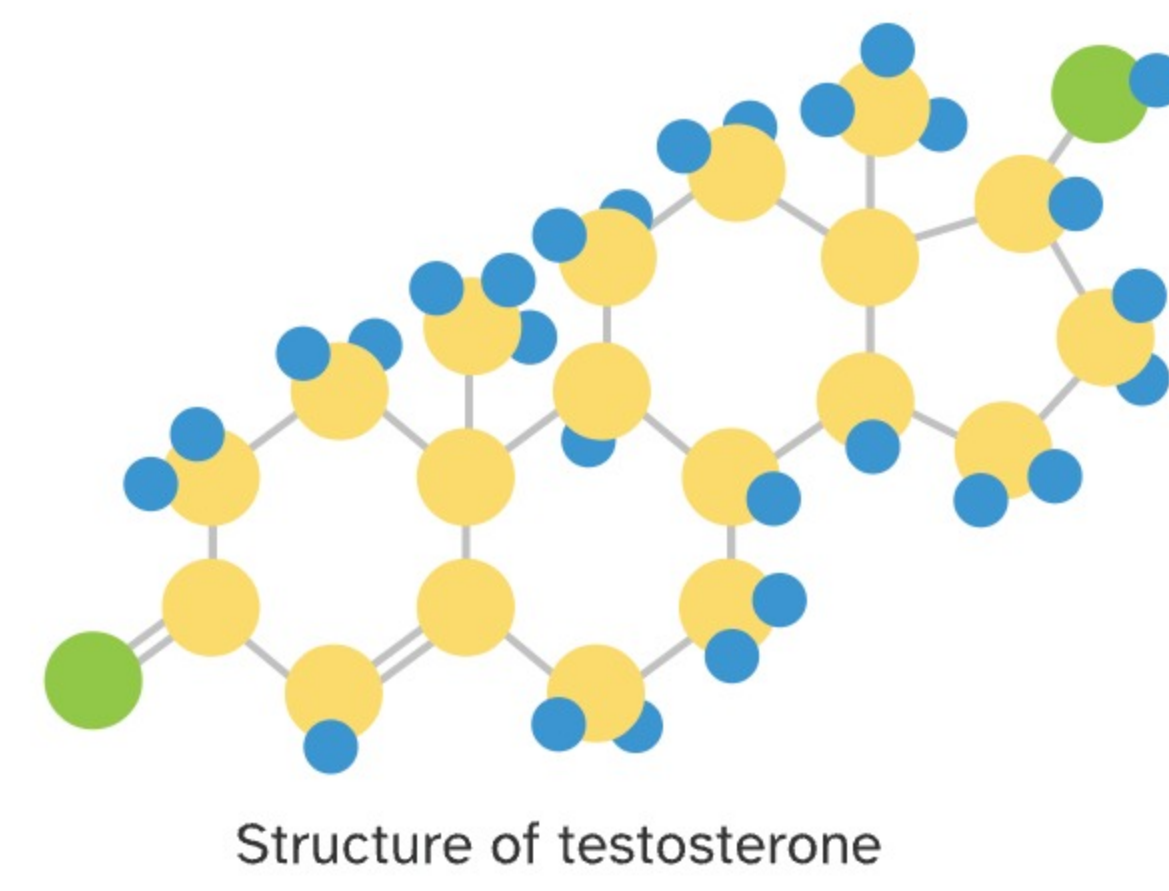
The life cycle of hair follicles

We are born with five million hair follicles covering the entire body, about 100,000-150,000 of them are on the scalp. Follicles cycle through growth phases that correspond to hair length. Eyebrow follicles have growth phases of about one year, while scalp follicles have growth phases lasting up to eight years. As we age, our scalp follicles age, too. They shrink in size, produce thinner hair and ultimately retire. The timing and rate of this shift is largely determined by your genetics.



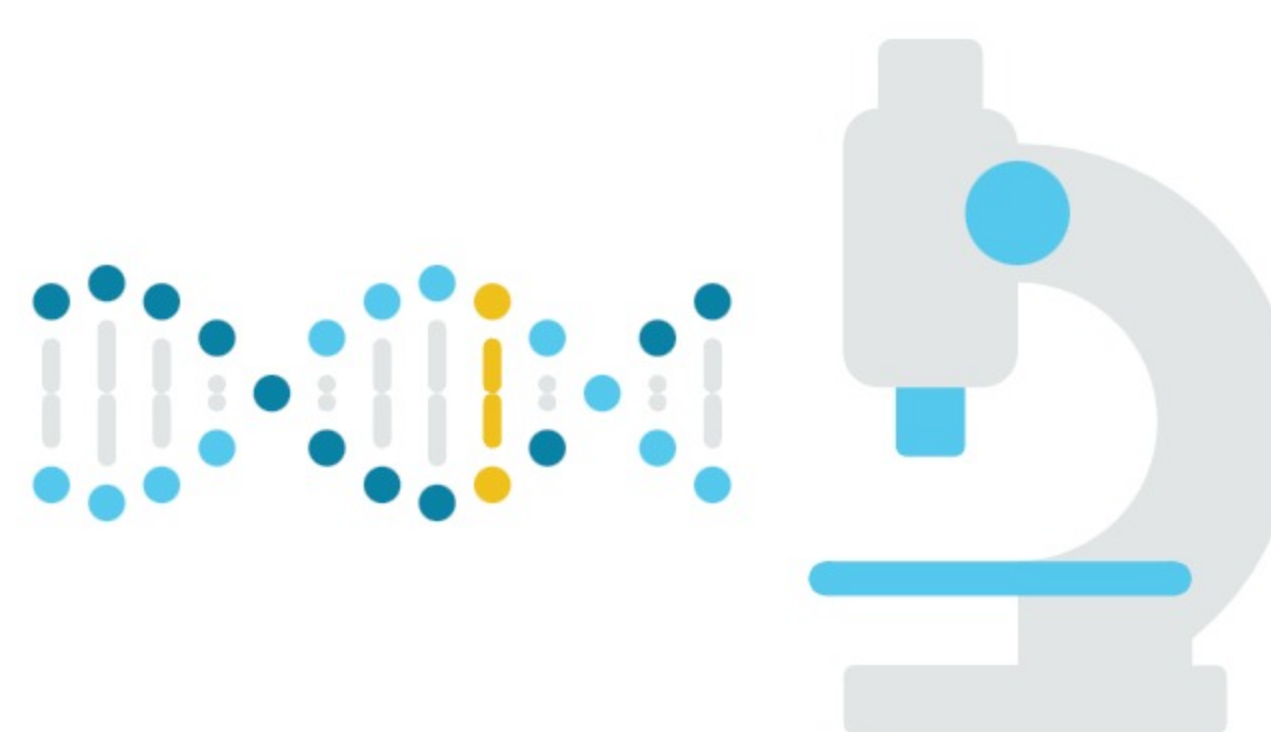
Hormones play a role

The fact that hair loss is more common in males suggests that testosterone is involved. Scalp follicles differ from those on other parts of the body (like eyebrows) in how they respond to testosterone. This means that high, or low, testosterone levels do not cause hair loss directly. Instead, it is determined by how each follicle responds to testosterone and other molecules produced when testosterone is broken down.



The search is not over

Hair loss is an active area of research and new genetic factors are still being discovered. 23andMe is part of the scientific community that is striving to understand hair loss better. Eventually, this research may help uncover new targets for treatment.



Keep exploring your Traits results.



Join the research effort and contribute to new discoveries.



Compare your results to your family and friends.



Join the discussion with other 23andMe customers interested in Traits.

Did you find this interesting?

Yes No



Give the gift of DNA discovery.

Gift a kit

Refer friends, earn rewards.

Get reward

ANCESTRY & TRAITS

- Ancestry & Traits Overview
- All Ancestry Reports
- Ancestry Composition
- DNA Relatives
- Traits
- Order Your DNA Book

HEALTH

- Health Overview
- All Health Reports
- My Health Action Plan
- Health

RESEARCH

- Research Overview
- Surveys and Studies
- Edit Answers
- Publications

FAMILY & FRIENDS

- View all DNA Relatives
- Family Tree
- Your Connections
- GrandTree
- Advanced DNA Comparison

Early Hair Loss

Overview Scientific Details

We use one of two different methods to calculate your trait results.

Statistical Model

Most traits are influenced by many different factors, including genetics, lifestyle, and environment. Usually, a statistical model using many factors provides better predictions than looking at single factors by themselves. To develop our models, we first identify genetic markers associated with a trait using data from tens of thousands of 23andMe customers who have consented to research. Then, we use statistical methods to generate a "score" for that trait using your genotype at the relevant genetic markers as well as your age and sex. We predict your likelihood of having different versions of the trait based on the survey responses of 23andMe customers with similar scores. These predictions apply best to customers who are of the same ethnicity as the people whose data contributed to the model. The accuracy of these predictions varies from trait to trait.

[Read more about our statistical methodology](#)

Curated Model

For some traits, just a few genetic markers can strongly predict whether a person will have a particular version of the trait. For curated models, we first evaluate published scientific studies to identify genetic markers with well-established associations with the trait. Then, we look at genetic and survey data from tens of thousands of 23andMe customers who have consented to research. We estimate your likelihood of having different versions of the trait based on survey responses from customers who are genetically similar to you at those markers. These results apply best to customers who are of the same ethnicity as the people whose data contributed to the predictions.

About your Early Hair Loss result

Your result for this trait was calculated using a **statistical model**.

About the Early Hair Loss model

Created based on customers of ethnicity: **European**

Number of customers used to create: **30,000**

Number of markers: **19**

Area Under Curve (AUC): **0.774**

Non-genetic factors: **Age**

Bin #	No hair loss	Hair loss
1	29.61%	70.39%
2	37.76%	62.24%
3	39.88%	60.12%
4	38.67%	61.33%
5	42.90%	57.10%
6	45.92%	54.08%
7	47.13%	52.87%
8	45.62%	54.38%
9	50.76%	49.24%
10	49.55%	50.45%
11	52.27%	47.73%
12	57.10%	42.90%
13	50.45%	49.55%
14	55.15%	44.85%
15	58.79%	41.21%
16	63.64%	36.36%
17	63.64%	36.36%
18	68.48%	31.52%
19	74.24%	25.76%
JA 20	80.91%	19.09%
Overall European	52.61%	47.39%

References

- [Heilmann-Heimbach S et al. \(2017\). "Meta-analysis identifies novel risk loci and yields systematic insights into the biology of male-pattern baldness." Nat Commun. 8:14694.](#)
- [Paus R and Cotsarelis G. \(1999\). "The biology of hair follicles." N. Engl. J. Med. 341\(7\):491-97.](#)
- [Qi J and Garza LA. \(2014\). "An overview of alopecias." Cold Spring Harb Perspect Med. 4\(3\).](#)
- [Stenn KS and Paus R. \(2001\). "Controls of hair follicle cycling." Physiol. Rev. 81\(1\):449-94.](#)

Change Log

Your report may occasionally be updated based on new information. This Change Log describes updates and revisions to this report.

Date	Change
Dec. 15, 2017	Male Hair Loss report updated with revised content and design. Additionally, as part of regular report review and improvements in data analysis, some male customers may see an updated result.
June 22, 2017	Male Hair Loss report separated from the Hair report.
Oct. 21, 2015	Hair report created.



Give the gift of DNA discovery.

Gift a kit

Refer friends, earn rewards.

Get reward

ANCESTRY & TRAITS

- Ancestry & Traits Overview
- All Ancestry Reports
- Ancestry Composition
- DNA Relatives
- Traits
- Order Your DNA Book

HEALTH

- Health Overview
- All Health Reports
- My Health Action Plan
- Health

RESEARCH

- Research Overview
- Surveys and Studies
- Edit Answers
- Publications

FAMILY & FRIENDS

- View all DNA Relatives
- Family Tree
- Your Connections
- GrandTree
- Advanced DNA Comparison