

# Hair Texture

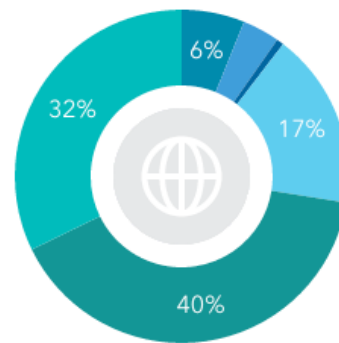
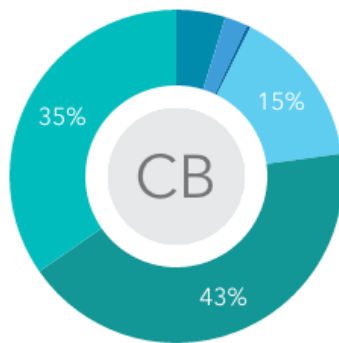
Many factors affect your hair's appearance and texture, but genetics plays a large role.

Hair Curliness

What You Can Do

Cordell, you are likely to have straight or wavy hair.

93% of customers who are genetically similar to you have straight or wavy hair.



Your genetic likelihood		
●	Big curls	5%
●	Small curls	2%
●	Very tight curls	< 1%
●	Wavy	15%
●	Slightly wavy	43%
●	Straight	35%
<b>93%</b>	<b>Straight or wavy</b>	

European ancestry customers		
6%	Big curls	●
4%	Small curls	●
< 1%	Very tight curls	●
17%	Wavy	●
40%	Slightly wavy	●
32%	Straight	●
<b>89%</b>	<b>Straight or wavy</b>	

This result is best applied to customers of European descent. We analyzed over 80,000 customers who consented to research in order to identify genetic markers that affect hair curliness. Our prediction is based on your results at 75 genetic markers.

# About Hair Curliness

Human hair can take on a wide range of naturally occurring shapes. Whether yours is straight, wavy, or curly, there's a story behind every strand.



## Biology

Curly hair follicles are literally at the root of curly hair. The spiraling shape of curly hair results from a curved bulb at the base as well as asymmetry in the composition of keratin molecules in each strand. Straight hair, on the other hand, stems from straight and symmetrical bulbs.

Curly hair follicles



## Evolution

Our early human ancestors had curly hair. As they migrated out of Africa, European and Asian populations independently evolved straighter hair. Scientists speculate this may have helped them adapt to a different climate.



## Other factors

Other factors can contribute to hair curliness.



Genetics



Cosmetics



Ethnicity



## Do more with your Traits results.



Help us develop more trait reports by contributing to research.

Contribute



Compare your results to your family and friends.

Compare



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

Discuss

 Patent Pending

Your Hair

## Scientific Details

[Methodology](#)

[About Your Results](#)

[References](#)

We use 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 Hair Curliness result

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

## About the Hair Curliness model

Created based on customers of ethnicity: European  
Number of customers used to create: 80,000  
Number of markers: 75  
Area Under Curve (AUC): 0.6  
Non-genetic factors: Age, Sex

Bin #	Big curls	Small curls	Very tight curls	Wavy	Slightly wavy	Straight
1	1.34%	0.58%	0.10%	4.95%	31.34%	61.70%
2	1.63%	0.86%	0.14%	7.40%	36.26%	53.70%
3	2.33%	0.98%	0.34%	9.03%	38.59%	48.73%
4	2.62%	1.54%	0.14%	10.23%	40.23%	45.24%
5	2.98%	1.42%	0.22%	11.10%	41.16%	43.13%
6	3.53%	1.83%	0.29%	12.78%	41.40%	40.18%
7	3.91%	1.87%	0.36%	13.18%	41.91%	38.76%
8	5.04%	2.09%	0.29%	14.36%	42.69%	35.53%
9	4.76%	2.23%	0.34%	15.49%	42.52%	34.66%
10	5.07%	2.91%	0.38%	16.84%	44.05%	30.75%
11	5.60%	2.57%	0.43%	16.67%	44.05%	30.67%
12	6.34%	3.03%	0.60%	18.40%	43.74%	27.89%
13	6.27%	3.29%	0.70%	18.71%	42.95%	28.08%
14	6.92%	3.65%	0.72%	19.94%	44.66%	24.12%
15	7.45%	4.23%	0.89%	21.57%	43.65%	22.22%
16	8.72%	5.31%	1.30%	21.55%	43.29%	19.84%
17	9.56%	4.90%	1.06%	23.76%	41.65%	19.07%
18	10.55%	5.62%	1.35%	25.03%	40.64%	16.81%
19	12.66%	6.89%	1.63%	25.75%	39.42%	13.64%
20	15.37%	10.35%	2.31%	29.21%	33.70%	9.06%
<b>Overall European</b>	6.13%	3.31%	0.68%	16.80%	40.89%	32.19%

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