

Hair Photobleaching

POWERED BY 23ANDME RESEARCH

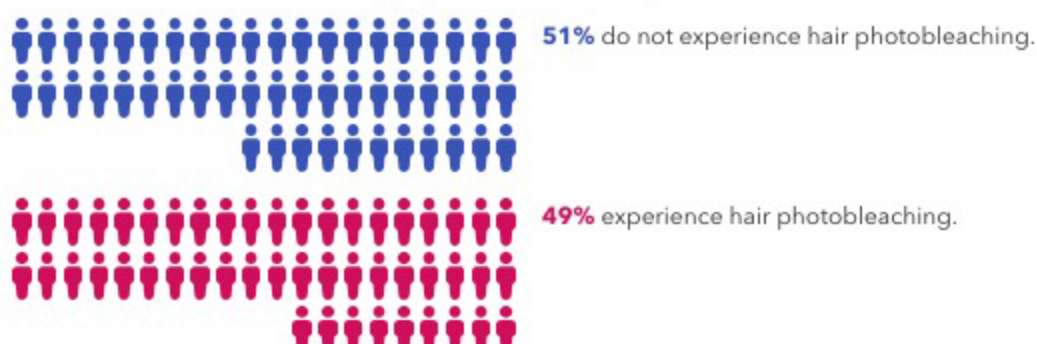


alanac, based on your genetics and other factors, your hair is **less likely** to lighten with sun exposure.

What is hair photobleaching?

Basking in the warmth of a sunny day is one way to lighten your mood and your hair. Photobleaching is what happens when hair color lightens after long exposure to the sun.

Of people with results like yours:



Solar-powered styling

For some people, frequent sun exposure can lighten their hair color. This happens when high-energy ultraviolet rays from the sun break down the hair's pigment molecules, altering its color. While certain hair types are more susceptible to photobleaching than others, it's important to keep in mind that all hair types are sensitive to the damaging effects of ultraviolet light on hair growth and hair strength. As such, reducing the amount of time spent in the sun is important for everyone's overall hair health. And while we may not know exactly why certain hair types are more sensitive to photobleaching, 23andMe scientists identified 48 genetic markers associated with the trait.



Scientific Details

For this analysis, we used survey responses and genetic data from more than **340,000** 23andMe research participants of **European descent**. We identified **48 genetic markers** that were associated with hair photobleaching. We used these markers together with non-genetic factors, specifically **age** and **sex**, to create a statistical model that predicts the likelihood of experiencing hair photobleaching. The full statistical model used to calculate your result (which includes genetics, age, and sex) has an **AUC value of 0.61**. For comparison, models including genetics alone or demographics alone (age and sex) have an AUC value of 0.58.

Read More:

[Dario MF et al. \(2015\). "Effects of solar radiation on hair and photoprotection." J Photochem Photobiol B. 153:240-6.](#)

[Furlotte NA et al. \(2015\). "23andMe White Paper 23-12: Estimating complex phenotype prevalence using predictive models." 23andMe White Paper 23-12.](#)

[Lu Z et al. \(2009\). "Profiling the response of human hair follicles to ultraviolet radiation." J Invest Dermatol. 129\(7\):1790-804.](#)

[Santos Nogueira AC et al. \(2004\). "Hair color changes and protein damage caused by ultraviolet radiation." J Photochem Photobiol B. 74\(2-3\):109-17.](#)

Keep in mind that these results from 23andMe research are preliminary and are meant for informational purposes only.

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