

Bunions

POWERED BY 23ANDME RESEARCH



play+447e13165a, based on your genetics and other factors, you are **less likely than average** to have had a bunion.

The average 23andMe research participant has a 17% chance of reporting that they have had a bunion. Based on your genetics and other factors, specifically age and sex, you have a **4.7% chance** of having had a bunion.

What is a bunion?

A bunion is a bony bump on the joint at the base of the big toe. For some people bunions aren't bothersome, but for others bunions may cause pain on the surface of the bunion or within connected parts of the foot.

There's trouble afoot

Bunions are often formed when the big toe becomes angled toward the other toes. This causes the joint at the base of the big toe to stick out, creating the characteristic bump. Bunions can form when bones and tendons within the foot move incorrectly when supporting weight and eventually become misaligned. It isn't known exactly why some people develop bunions and others don't, but it's likely influenced by multiple factors. Studies suggest that restrictive footwear and genetics may be partially to blame.



The next step

If you have concerns about bunions, talk to a healthcare professional about what next steps are right for you. Many cases are asymptomatic and don't require treatment. But for those with painful bunions, common treatments include physical therapy or wearing accommodating footwear. Some people may benefit from surgery.*

Common treatments for bunions



Physical therapy



Accommodating footwear

How we got your result ^

For this analysis, more than 440,000 23andMe research participants of European descent contributed their genetic data and survey responses on bunions. From these data, we identified 315 genetic markers associated with bunions. We used these genetic markers together with non-genetic factors, specifically age and sex, to create a statistical model that predicts the chances that you have had a bunion. The model was further recalibrated to be more accurate when applied to people of African American, East Asian, or Hispanic/Latino descent using data from more than 530,000 23andMe research participants. The statistical model for people of European descent has an AUC value of 0.71. ⓘ

We used the statistical model to predict each person's chances of having had a bunion. The possible results predicted by the model fall between 3% and 46%. The age, sex, and ancestry we used for your result are based on the information you provided in your account settings. For people of mixed ancestry or ancestries for which we do not yet have enough research participants, we determined this result based on data from people of European descent since that is the group for which we have the largest sample size. 17% of 23andMe research participants reported that they have had a bunion.

Read more:

Ferrari J. (2009). "Bunions." *BMJ Clin Evid.* 2009:1112.*

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

Mayo Clinic. "Bunions." Retrieved April 22, 2019, from <https://www.mayoclinic.org/diseases-conditions/bunions/symptoms-causes/syc-20354799>.*

Mortka K et al. (2015). "Hallux valgus—a case for a physiotherapist or only for a surgeon? Literature review." *J Phys Ther Sci.* 27(10):3303-7.*

Robinson AH et al. (2005). "Modern concepts in the treatment of hallux valgus." *J Bone Joint Surg Br.* 87(8):1038-45.*

Change log:

- May 2019. Bunions report created.

**Keep in mind that these results, powered by 23andMe research, are preliminary and meant for informational purposes only. This report does not provide medical advice. Consult with a healthcare professional before making any major lifestyle changes.*

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