

☆ Left-handedness (Wiberg, 2019)

Akira Wiberg, et al.

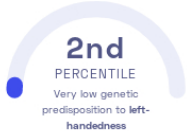
Brain

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STUDY SUMMARY

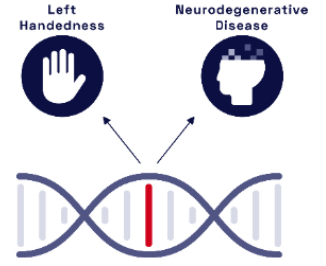
Identification of 4 novel genetic variants correlated with handedness.

YOUR RESULT



STUDY DESCRIPTION

Are you a righty or a lefty? Nearly 90% of individuals are right-handed. While handedness appears to be hereditary, the genetics that determines handedness is poorly understood. This genome-wide association study of nearly 400,000 individuals of European ancestry identified 4 novel genetic variants correlated to handedness. These variants help explain ~1% of the heritability of handedness. Of these, 3 are in or near genes that play a role in the development and organization of the brain, specifically the areas that process language. The discovered variants are also associated with multiple psychiatric and neurodegenerative conditions, including Parkinson's disease and [schizophrenia](#).



DID YOU KNOW?

The skew of handedness is unique to humans! While some animals seem to prefer using one hand (or leg or paw) over the other, the ratio is nearly always 50-50.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to left-handedness we summed up the effects of genetic variants that were linked to left-handedness in the [study that this report is based on](#). These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to left-handedness. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to left-handedness. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to left-handedness. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for left-handedness to be 0.00**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for left-handedness is in the **2nd percentile**. This means that it is higher than the polygenic scores 2% of people. We consider this to be a **very low genetic predisposition to left-handedness**. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our [Nebula Library tutorial](#).

VARIANT [Ⓞ]	YOUR GENOTYPE [Ⓞ]	EFFECT SIZE [Ⓞ]	VARIANT FREQUENCY [Ⓞ]	SIGNIFICANCE [Ⓞ]
rs199512_C NEW	T / T	0.06 (-)	79%	4.10 x 10 ⁻⁹
rs45608532_A NEW	G / G	0.09 (-)	8%	1.40 x 10 ⁻⁸
rs3094128_C NEW	T / T	-0.05 (-)	21%	2.90 x 10 ⁻⁸
rs13017199_G NEW	C / C	0.04 (-)	37%	3.30 x 10 ⁻⁸