

☆ Ambidexterity (Cuellar-Partida, 2020)

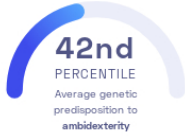
Gabriel Cuellar-Partida, et al.
Nature Human Behavior

Brain

STUDY SUMMARY

Discovery of 7 locations in the genome that are associated with ambidexterity, the ability to use both hands equally well.

YOUR RESULT



STUDY DESCRIPTION

The majority of people have one dominant hand for performing activities such as writing. Normally, the non-dominant hand cannot be used effectively for performing these tasks without significant training. However, roughly 1% of individuals are ambidextrous, meaning they can make use of both hands effectively. This genome-wide association study aimed to identify genetic variants associated with ambidexterity. After examining over 1.76 million individuals of European ancestry, the study found 7 regions in the genome that are associated with ambidexterity (4 regions are included in this report). Furthermore, the study found that the sets of genes linked to left-handedness and ambidexterity are largely separate.



Ambidextrous people can use both hands equally well for tasks such as writing.

DID YOU KNOW?

A small number of people cannot use either hand particularly well. Those people are termed ambisinistral, and are said to use both hands only as well as the average person uses their non-dominant hand.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to ambidexterity we summed up the effects of genetic variants that were linked to ambidexterity 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 ambidexterity. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to ambidexterity. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to ambidexterity. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for ambidexterity to be 0.05**. 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 ambidexterity is in the **42nd percentile**. This means that it is higher than the polygenic scores 42% of people. We consider this to be an **average genetic predisposition to ambidexterity**. 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 [ⓘ]
rs2040498_A ^{NEW}	A / T	0.06 (↑)	65%	5.42×10^{-10}
rs10113066_T ^{NEW}	G / T	0.05 (↑)	61%	3.74×10^{-9}
rs2030237_A ^{NEW}	G / G	0.04 (-)	68%	5.29×10^{-9}
rs36062478_T ^{NEW}	T / C	-0.06 (↓)	87%	1.87×10^{-8}