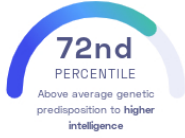


STUDY SUMMARY

Newly identified genetic variants in genes that regulate cell development and cell death are associated with higher intelligence.

YOUR RESULT



STUDY DESCRIPTION

Intelligence is associated with positive socio-economic and health-related outcomes. The more intelligent a person is, the more likely they are to lead long, healthy lives and less likely to experience negative life events like bankruptcy. To better understand the genetic influence of intelligence, this study analyzed data from multiple previous genome-wide association studies. In total 78,308 individuals of European descent were examined for effects of genetics on intelligence. Most of the newly discovered variants were in genes that are predominantly active in the brain and are involved in regulating cell development. These variants help explain ~5% of the heritability of intelligence. The most significant variant was in the FOXO3 gene, which plays a role in neuronal cell death in response to stress and has previously been associated with longevity.

DID YOU KNOW?

You can boost your cognitive abilities through various activities including visiting new places, reading, solving problems, learning to play an instrument, and exercising.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to higher intelligence we summed up the effects of genetic variants that were linked to higher intelligence 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 higher intelligence. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to higher intelligence. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher intelligence. By adding up the effect sizes of the highlighted variants we calculated your polygenic score for higher intelligence to be **16.97**. 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 higher intelligence is in the **72nd percentile**. This means that it is higher than the polygenic scores 72% of people. We consider this to be an **above average genetic predisposition to higher intelligence**. 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 [ⓘ]
rs2490272_T	C / T	7.44 (↑)	63%	9.96×10^{-14}
rs9320913_A	C / A	6.61 (↑)	48%	3.79×10^{-11}
rs10238197_T	T / T	6.46 (↑)	63%	1.03×10^{-10}
rs2251499_T	T / T	6.31 (↑)	26%	2.74×10^{-10}
rs36093924_T	T / C	-6.31 (↓)	46%	2.87×10^{-10}
rs7646501_A	A / G	6.02 (↑)	74%	1.79×10^{-9}
rs4728302_T	C / C	-5.97 (-)	60%	2.42×10^{-9}
rs10191758_A	A / G	-5.93 (↓)	61%	3.06×10^{-9}
rs12744310_T	C / C	-5.88 (-)	22%	4.20×10^{-9}
rs113315451_A	ATTAT / A	5.71 (↑)	43%	1.15×10^{-8}
rs12928404_T	T / C	5.71 (↑)	59%	1.15×10^{-8}
rs41352752_T	T / T	-5.68 (↓)	97%	1.35×10^{-8}
rs13010010_T	C / C	5.65 (-)	38%	1.56×10^{-8}
rs16954078_A	T / A	-5.55 (↓)	21%	2.84×10^{-8}
rs11138902_A	G / G	5.49 (-)	54%	4.12×10^{-8}
rs6746731_T	T / G	-5.46 (↓)	43%	4.88×10^{-8}
rs6779302_T	T / G	-5.45 (↓)	37%	4.99×10^{-8}