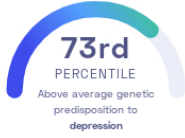04/2018

⭐ Depression (Wray, 2018)

Naomi R. Wray, et al.
Nature Genetics

`Mind`

STUDY SUMMARY

Genetic variants in genes expressed in the brain are associated with major depressive disorder.

YOUR RESULT

73rd PERCENTILE

Above average genetic predisposition to **depression**

STUDY DESCRIPTION

Major depressive disorder (MDD), or depression, is a common mental disorder characterized by intense feelings of sadness for extended periods of time that impacts the mood, behavior, sleep, and appetite of an individual. It may also be accompanied by an increased risk of suicide or suicidal thoughts and a general disinterest for activities that used to cause excitement. Genetics are a known factor in a person's risk of developing depression. This study examined 480,359 individuals of European ancestry to identify genetic variants associated with depression. The majority of the variants identified in this study are in genes that are expressed in brain regions known for their role in depression. This study also found that individuals with lower educational attainment and higher body mass are more likely to develop depression.

DID YOU KNOW?

You may be able to decrease your risk of depression by exercising regularly, developing a strong support system, managing your stress, and avoiding alcohol and drugs.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to depression we summed up the effects of genetic variants that were linked to depression 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 depression. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to depression. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to depression. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for depression to be -0.11.** 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 depression is in the **73rd percentile.** This means that it is higher than the polygenic scores 73% of people. We consider this to be an **above average genetic predisposition to depression.** 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 ⓘ
rs12552_A	A / G	0.04 (↑)	44%	6.10×10^{-19}
rs1432639_A	C / A	0.04 (↑)	63%	4.60×10^{-16}
rs8025231_A	A / A	-0.03 (↓)	57%	2.40×10^{-12}
rs12129573_A	C / C	0.04 (−)	37%	4.00×10^{-12}
rs115507122_C	/	-0.04 (−)	18%	3.30×10^{-11}
rs12958048_A	G / G	0.03 (−)	33%	3.60×10^{-11}
rs61867293_T	T / T	-0.04 (↓)	20%	7.00×10^{-10}
rs915057_A NEW	A / G	-0.03 (↓)	42%	7.60×10^{-10}
rs11135349_A	A / C	-0.03 (↓)	48%	1.10×10^{-9}
rs1806153_T NEW	G / T	0.04 (↑)	22%	1.20×10^{-9}
rs4904738_T NEW	T / C	-0.03 (↓)	57%	2.60×10^{-9}
rs7430656_A	A / A	-0.03 (↓)	58%	2.90×10^{-9}
rs10149470_A	A / A	-0.03 (↓)	49%	3.10×10^{-9}
rs34215985_C NEW	G / G	-0.04 (−)	24%	3.10×10^{-9}
rs11682175_T	C / C	-0.03 (−)	52%	4.70×10^{-9}
rs10959913_T NEW	T / G	0.03 (↑)	76%	5.10×10^{-9}
rs4869056_A NEW	G / A	-0.03 (↓)	63%	6.80×10^{-9}
rs8063603_A NEW	A / A	-0.03 (↓)	65%	6.90×10^{-9}
rs5758265_A	G / A	0.03 (↑)	28%	7.60×10^{-9}
rs7856424_T NEW	C / C	-0.03 (−)	29%	8.50×10^{-9}
rs17727765_T NEW	T / T	-0.05 (↓)	92%	8.50×10^{-9}
rs7198928_T NEW	T / T	0.03 (↑)	62%	1.00×10^{-8}
rs2389016_T	C / C	0.03 (−)	28%	1.00×10^{-8}
rs4261101_A NEW	G / G	-0.03 (−)	37%	1.00×10^{-8}
rs62099069_A NEW	T / T	-0.03 (−)	42%	1.30×10^{-8}
rs12666117_A NEW	A / A	0.03 (↑)	47%	1.40×10^{-8}
rs11663393_A	G / G	0.03 (−)	45%	1.60×10^{-8}
rs1354115_A	A / A	0.03 (↑)	62%	2.40×10^{-8}
rs7200826_T NEW	C / C	0.03 (−)	25%	2.40×10^{-8}
rs1226412_T NEW	T / T	0.03 (↑)	79%	2.40×10^{-8}
rs4143229_A NEW	A / A	-0.05 (↓)	92%	2.50×10^{-8}
rs10950398_A NEW	G / A	0.03 (↑)	41%	2.60×10^{-8}
rs1833288_A NEW	A / A	0.03 (↑)	72%	2.60×10^{-8}
rs7029033_T NEW	T / T	0.05 (↑)	7%	2.70×10^{-8}
rs9402472_A NEW	G / G	0.03 (−)	24%	2.80×10^{-8}
rs4074723_A NEW	A / C	-0.03 (↓)	41%	3.10×10^{-8}
rs9427672_A NEW	G / G	-0.03 (−)	24%	3.10×10^{-8}
rs159963_A	A / A	-0.03 (↓)	56%	3.20×10^{-8}
rs11643192_A NEW	C / A	0.03 (↑)	41%	3.40×10^{-8}