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★ Bipolar disorder (Mühleisen, 2014)

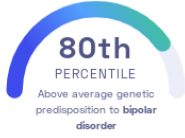
Thomas W. Mühleisen, et al.
Nature Communications

Behavior Mind

STUDY SUMMARY

Bipolar disorder is linked to several genetic variants, some of which are in the ADCY2 gene.

YOUR RESULT



STUDY DESCRIPTION

Bipolar disorder (aka manic-depressive illness) can cause abnormal shifts in mood, energy, and activity levels. Moods can range from periods of extremely "up" or energized behavior (called manic episodes) to extremely "down" or hopeless periods (called depressive episodes). Bipolar disorder is likely a polygenic disease, meaning that it is probably caused by variants in many genes. This study examined 2.3 million genetic variants in 9,747 patients and 14,278 controls from Europe, Canada, and Australia in order to detect genetic variants that may be associated with bipolar disorder. In addition to confirming previously discovered variants, the study also identified variants in new genes that may play a role in bipolar disorder. One of these variants was in the ADCY2 gene. It encodes an *enzyme* that produces cAMP, a key signaling molecule in neuronal growth and many other processes.

DID YOU KNOW?

If you have bipolar disorder, it's often helpful to have a daily schedule and routine that you stick to. Exercise, low levels of stress, and healthy eating can also help you manage bipolar disorder.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to bipolar disorder we summed up the effects of genetic variants that were linked to bipolar disorder 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 bipolar disorder. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to bipolar disorder. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to bipolar disorder. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for bipolar disorder to be 0.49**. 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 bipolar disorder is in the **80th percentile**. This means that it is higher than the polygenic scores 80% of people. We consider this to be an **above average genetic predisposition to bipolar disorder**. 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 [Ⓞ]
rs10994415_C	T / T	0.24 (-)	10%	6.88 x 10 ⁻¹¹
rs12290811_A	T / T	0.17 (-)	18%	1.09 x 10 ⁻⁹
rs17826816_G	A / G	0.13 (↑)	17%	9.89 x 10 ⁻⁹
rs12202969_A	G / A	0.11 (↑)	40%	1.08 x 10 ⁻⁸
rs6560435_G	G / G	0.12 (↑)	36%	2.05 x 10 ⁻⁸