

## ☆ Re-experiencing in PTSD (Stein, 2021)

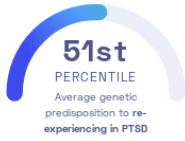
Murray Stein, et al.  
Nature Genetics

Mind Behavior

### STUDY SUMMARY

Identification of 9 genetic variants associated with re-experiencing, a symptom of post-traumatic stress disorder.

#### YOUR RESULT



#### STUDY DESCRIPTION

Post-traumatic stress disorder (PTSD) is a mental health condition caused by experiencing a traumatic event. Though many people associate PTSD with war veterans, anyone can experience the disorder. Common symptoms of PTSD include flashbacks and nightmares related to the traumatic event, avoidance of particular situations, and being easily startled. Flashbacks and nightmares are collectively referred to as "re-experiencing". This genome-wide association study examined over 180,000 individuals of European ancestry to better understand the genetic factors associated with re-experiencing in PTSD patients. The study found 9 genetic variants associated with re-experiencing. Two genes linked to re-experiencing were TCF4 and MAD1L1. TCF4 is involved with nervous system development early in life. MAD1L1 encodes for a component of the cellular machinery that is involved in cell division.



Re-experiencing traumatic events is a typical symptom of PTSD.

#### DID YOU KNOW?

Experiencing PTSD increases an individual's risk of substance abuse by 2-4x.

#### YOUR DETAILED RESULTS

To calculate your genetic predisposition to re-experiencing in PTSD we summed up the effects of genetic variants that were linked to re-experiencing in PTSD 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 re-experiencing in PTSD. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to re-experiencing in PTSD. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to re-experiencing in PTSD. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for re-experiencing in PTSD to be -0.08**. 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 re-experiencing in PTSD is in the **51st percentile**. This means that it is higher than the polygenic scores 51% of people. We consider this to be an **average genetic predisposition to re-experiencing in PTSD**. 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 <sup>Ⓞ</sup>	YOUR GENOTYPE <sup>Ⓞ</sup>	EFFECT SIZE <sup>Ⓞ</sup>	VARIANT FREQUENCY <sup>Ⓞ</sup>	SIGNIFICANCE <sup>Ⓞ</sup>
rs35371867_A	A / A	0.10 (↑)	68%	$1.24 \times 10^{-10}$
rs2777888_G	A / A	0.09 (-)	50%	$2.26 \times 10^{-10}$
rs10235664_C	T / T	-0.11 (-)	36%	$4.66 \times 10^{-10}$
rs242925_T	C / C	-0.09 (-)	48%	$5.50 \times 10^{-10}$
rs1501485_G	A / G	-0.08 (↓)	51%	$1.22 \times 10^{-8}$
rs11773880_G	G / G	-0.10 (↓)	22%	$1.97 \times 10^{-8}$
rs3417209_A	T / T	0.12 (-)	12%	$2.34 \times 10^{-8}$
rs10977193_A	G / G	-0.09 (-)	33%	$4.17 \times 10^{-8}$