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★ TREM2 level (Deming, 2019)

Yuetiva Deming, et al.
Science Translational Medicine

Dementia



STUDY SUMMARY

Identification of genetic variants that influence the risk of Alzheimer's disease.

STUDY DESCRIPTION

Alzheimer's disease causes continual degeneration of the brain, which results in a variety of effects ranging from memory loss to personality change. Prior studies show that variants in the TREM2 gene can increase risk of Alzheimer's disease. The TREM2 protein is found in the cerebrospinal fluid surrounding the brain and spinal cord. It plays an important role in activating the immune cells that help protect and repair our central nervous system. This study examined more than 800 individuals to confirm TREM2's correlation with Alzheimer's disease, specifically revealing that higher levels of the TREM2 protein can help protect against Alzheimer's. Furthermore, this study discovered two variants in and near the MS4A4A gene that affect the production of TREM2. Scientists hope that these discoveries may provide a basis for developing therapies against Alzheimer's disease.

DID YOU KNOW?

Increased risk of developing Alzheimer's disease seems to be linked to head injuries.

YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to higher TREM2 level. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to higher TREM2 level. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher TREM2 level. 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 [⊙]
rs1582763_A	A / A	735.10 (↑)	37%	1.15 x 10 ⁻¹⁵
rs6591561_G	A / G	-783.70 (↓)	32%	1.47 x 10 ⁻⁹