

☆ Retinal detachment (Boutin, 2019)

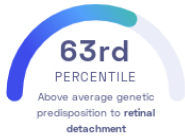
Thibaud S. Boutin, et al.
Human Molecular Genetics

Eyes

STUDY SUMMARY

Identification of 11 genetic variants associated with retinal detachment.

YOUR RESULT



STUDY DESCRIPTION

The retina is a thin layer of cells in the back of the eye that detects light and enables vision. Retinal detachment is a serious medical condition that occurs when the retina is pulled away from its normal position and damaged in the process. If retinal detachment is not immediately treated it can result in permanent blindness. Though common, genetic predisposition to retinal detachment is not well understood. To determine genetic risk factors for retinal detachment, this study analyzed the genomes of over 5,000 individuals of European ancestry who suffered retinal detachment. The study discovered 11 genetic variants associated with retinal detachment. Multiple variants have been previously linked to other eye conditions including macular degeneration, nearsightedness, and glaucoma.

DID YOU KNOW?

Because retinal detachment can be caused by external eye injuries, it is recommended to wear safety glasses during potentially hazardous activities. Typical symptoms of retinal detachment are blurry vision, the sudden appearance of floaters and flashes of light.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to retinal detachment we summed up the effects of genetic variants that were linked to retinal detachment 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 retinal detachment. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to retinal detachment. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to retinal detachment. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for retinal detachment to be -0.80**. 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 retinal detachment is in the **63rd percentile**. This means that it is higher than the polygenic scores 63% of people. We consider this to be an **above average genetic predisposition to retinal detachment**. 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 ^⓪	YOUR GENOTYPE ^⓪	EFFECT SIZE ^⓪	VARIANT FREQUENCY ^⓪	SIGNIFICANCE ^⓪
rs10766567_T	A / T	-0.17 (↓)	37%	3.13×10^{-18}
rs74764079_T	T / T	-0.33 (↓)	97%	1.20×10^{-11}
rs1042602_C	A / A	-0.12 (-)	63%	1.01×10^{-9}
rs4373767_T	C / C	0.12 (-)	63%	1.30×10^{-9}
rs11992725_G	A / A	0.12 (-)	32%	2.10×10^{-9}
rs11187838_G	G / A	-0.11 (↓)	57%	3.64×10^{-9}
rs1248634_G	G / A	-0.12 (↓)	71%	3.67×10^{-9}
rs11217712_T	T / G	-0.11 (↓)	31%	2.65×10^{-8}
rs4243042_T	A / A	-0.12 (-)	47%	3.33×10^{-8}
rs7940691_T	T / T	0.11 (↑)	36%	3.50×10^{-8}
rs9651980_T	C / T	0.17 (↑)	9%	4.72×10^{-8}