

## ☆ Eosinophilic granulomatosis with polyangiitis (Lyons, 2019)

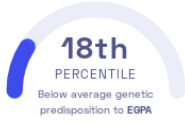
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Nature Communications

Lungs Inflammation Blood

### STUDY SUMMARY

Discovery of four genetic variants associated with eosinophilic granulomatosis, a rare autoimmune disease that affects the blood vessels.

### YOUR RESULT



### STUDY DESCRIPTION

Eosinophilic granulomatosis with polyangiitis (EGPA; also known as Churg-Strauss syndrome) is a rare autoimmune disease. It's characterized by abnormally high levels of eosinophil white blood cells and inflammation of small- and medium-sized blood vessels. The early stage of the disease is marked by an inflammation of the airways that causes asthma. Later stages also affect other organs, in particular the digestive tract and the heart. To understand the genetic factors contributing to the risk of EGPA, this genome-wide association study analyzed the genomes of over 7,000 individuals of European ancestry. The study discovered four genetic variants that have been previously associated with asthma and counts of eosinophil white blood cells.

### DID YOU KNOW?

The cause of EGPA is not fully understood. It is believed that an infection may initiate the inflammatory process. Inhaled allergens and certain medications may also play a role in triggering an onset of EGPA.

### YOUR DETAILED RESULTS

To calculate your genetic predisposition to EGPA we summed up the effects of genetic variants that were linked to EGPA 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 EGPA. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to EGPA. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to EGPA. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for EGPA to be 1.12**. 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 EGPA is in the **18th percentile**. This means that it is higher than the polygenic scores 18% of people. We consider this to be a **below average genetic predisposition to EGPA**. 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>
rs72946301_A	G / G	0.59 (-)	17%	$9.00 \times 10^{-11}$
rs1837263_C	T / C	0.42 (↑)	17%	$5.20 \times 10^{-11}$
rs9274704_A	A / G	0.70 (↑)	27%	$1.20 \times 10^{-20}$