

## ☆ Restless leg syndrome (Winkelmann, 2011)

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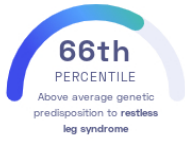
Mind Sleep



### STUDY SUMMARY

Restless leg syndrome is associated with variants near the MEIS1 gene and in the TOX3 gene.

### YOUR RESULT



### STUDY DESCRIPTION



Restless leg syndrome causes uncomfortable sensations in the legs and irresistible urges to move them. This most often affects the patient at night, making it difficult to get a good night's sleep. While previous genome-wide studies have discovered variants correlated to this condition, they do not explain all of the heritability of it. This genome-wide association study identified genetic variants linked to restless leg syndrome by studying 2,448 individuals of European ancestry. Two genetic variants stood out as highly significant - one in an intron (noncoding region) near the MEIS1 gene and the other in the TOX3 gene. The product of the TOX3 gene is involved in unwinding DNA to activate other genes. The MEIS1 gene encodes a protein that regulates the activity of other genes and is required for the production of blood cells.

### DID YOU KNOW?

In addition to taking medication, the symptoms of restless leg syndrome can be alleviated by taking warm baths, massaging your leg muscles, exercising, avoiding caffeine, and having a good sleep schedule.

### YOUR DETAILED RESULTS

To calculate your genetic predisposition to restless leg syndrome we summed up the effects of genetic variants that were linked to restless leg syndrome 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 restless leg syndrome. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to restless leg syndrome. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to restless leg syndrome. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for restless leg syndrome to be 2.07**. 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 restless leg syndrome is in the **66th percentile**. This means that it is higher than the polygenic scores 66% of people. We consider this to be an **above average genetic predisposition to restless leg syndrome**. 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>
rs2300478_G	G / G	0.52 (↑)	30%	$3.40 \times 10^{-49}$
rs12593813_G	A / G	0.34 (↑)	72%	$1.37 \times 10^{-22}$
rs9357271_T	T / C	0.39 (↑)	79%	$7.75 \times 10^{-22}$
rs3104767_G 	G / T	0.30 (↑)	62%	$9.40 \times 10^{-19}$
rs6747972_A 	G / G	0.21 (-)	47%	$9.03 \times 10^{-11}$
rs1975197_A	G / G	0.25 (-)	19%	$3.49 \times 10^{-10}$