

# ★ Rheumatoid arthritis (Stahl, 2010)

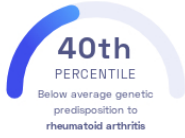
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Nature Genetics

Autoimmunity Joints

## STUDY SUMMARY

Identification of 7 novel genetic variants that may confer an increased risk of developing rheumatoid arthritis.

### YOUR RESULT



### STUDY DESCRIPTION

Rheumatoid arthritis is caused by the body's own immune system mistakenly attacking joints which causes damage and swelling. This restricts and makes movement painful. To better understand genetic risk factors for developing rheumatoid arthritis, this genome-wide association study examined over 25,000 individuals of European ancestry. 7 novel genetic variants associated with an increased risk of developing rheumatoid arthritis were discovered. Several of these variants are located in or near genes previously found to play an important role in immune system function. Collectively, these explain an estimated 4% of the heritability for rheumatoid arthritis.

### DID YOU KNOW?

Smoking is a known risk factor for developing rheumatoid arthritis, and smokers generally have more severe symptoms.

### YOUR DETAILED RESULTS

To calculate your genetic predisposition to rheumatoid arthritis we summed up the effects of genetic variants that were linked to rheumatoid arthritis 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 rheumatoid arthritis. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to rheumatoid arthritis. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to rheumatoid arthritis. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for rheumatoid arthritis to be 0.38**. 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 rheumatoid arthritis is in the **40th percentile**. This means that it is higher than the polygenic scores 40% of people. We consider this to be a **below average genetic predisposition to rheumatoid arthritis**. 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>
rs6910071_G	A / A	1.06 (-)	22%	$1.00 \times 10^{-299}$
rs2476601_A	G / G	0.66 (-)	10%	$9.10 \times 10^{-74}$
rs874040_C <span>NEW</span>	G / C	0.13 (↑)	33%	$1.00 \times 10^{-16}$
rs11676922_T <span>NEW</span>	T / T	0.11 (↑)	49%	$1.00 \times 10^{-14}$
rs6920220_A	G / A	0.20 (↑)	22%	$8.90 \times 10^{-13}$
rs6859219_A <span>NEW</span>	C / A	-0.25 (↓)	18%	$9.60 \times 10^{-12}$
rs706778_T <span>NEW</span>	C / C	0.13 (-)	44%	$1.40 \times 10^{-11}$
rs3093023_A <span>NEW</span>	G / G	0.12 (-)	47%	$1.60 \times 10^{-11}$
rs10488631_C <span>NEW</span>	T / T	0.17 (-)	13%	$4.20 \times 10^{-11}$
rs951005_G <span>NEW</span>	A / A	-0.17 (-)	14%	$3.90 \times 10^{-10}$
rs934734_G <span>NEW</span>	G / A	0.12 (↑)	52%	$5.30 \times 10^{-10}$
rs4810485_T	T / G	-0.16 (↓)	25%	$2.80 \times 10^{-9}$
rs3087243_A	G / A	-0.14 (↓)	44%	$1.20 \times 10^{-8}$
rs26232_T <span>NEW</span>	C / C	-0.13 (-)	29%	$4.10 \times 10^{-8}$
rs13315591_C <span>NEW</span>	T / C	0.25 (↑)	10%	$4.60 \times 10^{-8}$