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Corneal resistance factor (Simcoe, 2020)

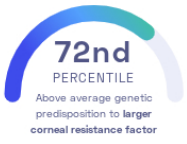
Mark Simcoe, et al.
Human Molecular Genetics

Eyes

STUDY SUMMARY

Identification of 258 genetic variants associated with the corneal resistance factor.

YOUR RESULT



STUDY DESCRIPTION

The cornea is a dome-shaped "window" covering the front part of the eye. It serves to both protect the eye and focus light to help us see. Damage to the cornea can be detrimental to eyesight, so doctors commonly use a number of metrics to measure the cornea's health. One metric is the corneal resistance factor, which measures the total resistance ability of the cornea. A low corneal resistance factor has previously been connected to glaucoma and other disorders of the eye. This genome-wide association study of over 100,000 individuals of European ancestry sought to identify variants correlated with corneal resistance factor. The study found 258 genetic variants linked to the corneal resistance factor. Many of the variants associated with corneal resistance factor were also linked to corneal hysteresis, another key measurement of the cornea's health that was examined in this study.

DID YOU KNOW?

To prevent corneal injuries is it highly recommended to wear safety glasses when performing housework such as using a drill or spraying pesticides.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to larger corneal resistance factor we summed up the effects of genetic variants that were linked to larger corneal resistance factor 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 larger corneal resistance factor. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to larger corneal resistance factor. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to larger corneal resistance factor. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for larger corneal resistance factor to be 1.07**. 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 larger corneal resistance factor is in the **72nd percentile**. This means that it is higher than the polygenic scores 72% of people. We consider this to be an **above average genetic predisposition to larger corneal resistance factor**. 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
rs76210128_C	C / C	-0.22 (↓)	77%	3.40×10^{-148}
rs7635832_T	T / T	0.22 (↑)	81%	6.90×10^{-134}
rs28425635_A	A / G	0.17 (↑)	66%	1.50×10^{-109}
rs142493024_G	G / G	0.66 (↑)	99%	1.10×10^{-101}
rs12686184_A	A / G	0.20 (↑)	82%	5.60×10^{-96}
rs72755233_G	G / G	-0.23 (↓)	89%	1.10×10^{-95}
rs11659764_T	T / T	0.33 (↑)	95%	3.90×10^{-92}
rs11616662_G	G / A	0.23 (↑)	90%	3.50×10^{-84}
rs74948688_C	C / T	0.28 (↑)	94%	2.30×10^{-81}
rs77542162_A	A / A	-0.47 (↓)	98%	2.20×10^{-78}
rs7722242_C	T / T	0.13 (–)	48%	5.00×10^{-76}
rs139657047_A	A / A	0.37 (↑)	97%	2.90×10^{-70}
rs12493217_G	G / G	-0.14 (↓)	77%	4.70×10^{-66}
rs6792542_A	A / C	0.13 (↑)	74%	1.80×10^{-60}
rs139498917_G	G / G	-1.14 (↓)	> 99%	2.10×10^{-55}
rs56009602_C	C / C	-0.26 (↓)	95%	4.70×10^{-54}
rs121908120_T	T / T	0.34 (↑)	97%	5.40×10^{-54}
rs72620820_G	G / G	0.13 (↑)	78%	8.60×10^{-53}
rs2393728_G	A / A	0.11 (–)	58%	5.80×10^{-51}
rs7863424_G	G / G	-0.11 (↓)	62%	2.50×10^{-48}
rs448203_T	T / C	0.11 (↑)	61%	6.90×10^{-48}
rs471064_G	A / A	0.12 (–)	19%	2.20×10^{-43}
rs908839_C	G / G	0.10 (–)	47%	2.50×10^{-43}
rs8070232_A	G / G	0.14 (–)	15%	4.20×10^{-43}
rs2797575_G	G / A	0.09 (↑)	56%	1.30×10^{-41}
rs1200108_G	G / A	-0.10 (↓)	35%	2.80×10^{-41}
rs12913547_T	T / C	-0.12 (↓)	79%	1.70×10^{-40}
rs6415788_G	T / T	0.09 (–)	40%	5.40×10^{-40}
rs150629672_C	C / C	0.50 (↑)	99%	6.70×10^{-39}
rs1042917_G	G / A	0.09 (↑)	50%	1.30×10^{-38}
rs75828199_C	C / C	0.26 (↑)	97%	3.60×10^{-36}
rs11789898_G	G / T	-0.12 (↓)	83%	3.80×10^{-36}
rs2645775_G	G / A	-0.11 (↓)	78%	4.50×10^{-36}
rs4582532_G	G / A	-0.08 (↓)	49%	1.10×10^{-33}
rs7936322_C	T / T	0.09 (–)	50%	2.00×10^{-32}
rs4656744_T	T / T	-0.09 (↓)	67%	3.20×10^{-32}
rs2325812_C	G / G	-0.11 (–)	17%	3.20×10^{-32}

rs6910919_C	T / T	-0.10 (–)	25%	6.40×10^{-31}
rs11774662_T	T / C	0.09 (↑)	64%	9.20×10^{-31}
rs12150284_C	C / C	0.08 (↑)	63%	1.40×10^{-30}
rs62257174_G	G / A	-0.09 (↓)	70%	3.20×10^{-30}
rs7025044_T	T / A	-0.13 (↓)	11%	1.00×10^{-29}
rs4641686_G	T / T	0.08 (–)	47%	7.10×10^{-29}
rs11594610_G	G / G	-0.10 (↓)	80%	1.60×10^{-28}
rs12526513_T	C / C	-0.08 (–)	45%	6.10×10^{-28}
rs3132302_A	A / G	0.10 (↑)	26%	9.40×10^{-28}
rs943423_G	G / A	-0.09 (↓)	30%	1.20×10^{-27}
rs2875238_T	T / C	-0.08 (↓)	36%	1.90×10^{-27}
rs10814543_C	C / C	-0.09 (↓)	69%	3.10×10^{-27}
rs13108668_G	C / C	-0.08 (–)	32%	2.20×10^{-26}
rs2980046_A	A / A	-0.08 (↓)	76%	7.90×10^{-26}
rs11077857_G	A / A	0.09 (–)	17%	9.00×10^{-25}
rs10071507_T	T / T	-0.08 (↓)	67%	1.40×10^{-24}
rs9510275_T	A / A	0.08 (–)	31%	5.60×10^{-24}
rs10817467_A	A / G	-0.08 (↓)	72%	1.10×10^{-23}
rs62279163_C	C / A	0.07 (↑)	67%	1.20×10^{-23}
rs62014489_G	G / G	-0.11 (↓)	88%	1.50×10^{-23}
rs17665178_C	C / C	0.08 (↑)	70%	2.80×10^{-23}
rs3740685_C	C / T	0.08 (↑)	29%	3.50×10^{-23}
rs7524924_A	A / G	-0.07 (↓)	54%	1.30×10^{-22}
rs2109019_A	C / C	-0.09 (–)	21%	1.30×10^{-22}
rs116713089_G	G / G	-0.14 (↓)	93%	3.20×10^{-22}
rs34869_G	C / C	-0.07 (–)	58%	3.90×10^{-22}
rs2468511_C	G / G	-0.09 (–)	19%	4.30×10^{-22}
rs8016138_C	C / T	-0.08 (↓)	30%	9.70×10^{-22}
rs11917483_T	T / C	-0.07 (↓)	66%	1.60×10^{-21}
rs10922476_A	A / A	0.07 (↑)	44%	2.20×10^{-21}
rs10758571_A	T / T	-0.07 (–)	40%	2.20×10^{-21}
rs12498681_G	G / A	-0.11 (↓)	88%	3.60×10^{-21}
rs75995975_C	C / C	0.13 (↑)	93%	6.30×10^{-21}
rs1931656_A	A / A	0.07 (↑)	46%	7.40×10^{-21}
rs11014595_A	A / A	0.07 (↑)	55%	1.20×10^{-20}
rs6816503_G	G / G	0.12 (↑)	93%	1.30×10^{-20}
rs10138009_C	C / T	-0.07 (↓)	60%	1.80×10^{-20}
rs35351529_T	T / T	0.11 (↑)	90%	4.70×10^{-20}
rs62292473_G	G / G	-0.10 (↓)	89%	5.60×10^{-20}
rs187977459_T	T / T	0.48 (↑)	> 99%	1.20×10^{-19}
rs58671886_G	G / G	0.12 (↑)	90%	1.30×10^{-19}
rs66613683_T	T / T	-0.09 (↓)	83%	3.70×10^{-19}
rs2745950_G	G / A	-0.07 (↓)	61%	1.10×10^{-18}
rs544072714_C	C / C	-0.12 (↓)	92%	1.20×10^{-18}
rs6437682_A	C / C	-0.07 (–)	40%	1.50×10^{-18}
rs12939159_C	C / C	0.10 (↑)	89%	3.50×10^{-18}
rs66756859_C	C / C	-0.11 (↓)	93%	4.30×10^{-18}
rs10871335_G	G / A	-0.09 (↓)	83%	4.80×10^{-18}
rs534975221_G	G / G	0.34 (↑)	99%	7.50×10^{-18}
rs2035835_G	G / C	-0.07 (↓)	32%	9.50×10^{-18}
rs11689201_A	A / A	0.06 (↑)	60%	1.40×10^{-17}
rs1794824_C	C / T	-0.06 (↓)	41%	2.40×10^{-17}
rs1772570_G	G / C	0.06 (↑)	67%	2.60×10^{-17}
rs1573019_C	T / T	0.07 (–)	24%	3.70×10^{-17}
rs7403354_C	C / C	0.08 (↑)	81%	5.70×10^{-17}
rs7919525_A	A / A	-0.07 (↓)	79%	1.20×10^{-16}
rs13018808_A	A / G	0.06 (↑)	71%	1.60×10^{-16}
rs13071684_C	C / T	-0.11 (↓)	92%	1.80×10^{-16}

rs66560819_G	G / G	0.13 (↑)	94%	2.30×10^{-16}
rs3782473_T	T / C	-0.07 (↓)	76%	2.40×10^{-16}
rs1344672_C	G / G	-0.06 (–)	55%	3.00×10^{-16}
rs6501742_T	G / G	-0.11 (–)	8%	3.60×10^{-16}
rs2950790_G	G / G	-0.07 (↓)	25%	4.10×10^{-16}
rs12193050_C	C / C	-0.11 (↓)	92%	4.10×10^{-16}
rs58933977_T	T / G	0.09 (↑)	85%	4.60×10^{-16}
rs2505507_C	C / C	0.07 (↑)	72%	7.30×10^{-16}
rs34372952_C	C / C	0.08 (↑)	84%	9.10×10^{-16}
rs11602544_A	A / A	-0.06 (↓)	51%	1.00×10^{-15}
rs11772848_G	G / A	0.07 (↑)	77%	1.40×10^{-15}
rs1042499_T	T / T	-0.13 (↓)	94%	1.60×10^{-15}
rs10124941_C	C / C	0.11 (↑)	93%	1.90×10^{-15}
rs17819228_C	C / C	-0.10 (↓)	90%	2.10×10^{-15}
rs256869_T	T / T	0.10 (↑)	92%	2.20×10^{-15}
rs4846306_G	G / A	-0.07 (↓)	26%	2.50×10^{-15}
rs115040818_T	T / T	0.14 (↑)	96%	2.60×10^{-15}
rs249768_G	T / T	0.07 (–)	79%	3.90×10^{-15}
rs6874844_T	T / C	0.07 (↑)	75%	4.50×10^{-15}
rs75529319_C	C / C	-0.25 (↓)	99%	8.50×10^{-15}
rs4646785_C	C / T	-0.07 (↓)	80%	1.10×10^{-14}
rs41310169_C	C / C	-0.28 (↓)	99%	1.20×10^{-14}
rs62289359_C	C / C	0.05 (↑)	54%	1.30×10^{-14}
rs1113483_T	T / T	-0.06 (↓)	48%	1.40×10^{-14}
rs663044_G	G / T	-0.06 (↓)	28%	1.40×10^{-14}
rs882855_T	C / C	0.06 (–)	38%	1.50×10^{-14}
rs67239293_G	G / G	-0.07 (↓)	83%	2.40×10^{-14}
rs61301974_T	T / A	0.06 (↑)	73%	3.20×10^{-14}
rs11857536_G	G / G	-0.07 (↓)	85%	6.10×10^{-14}
rs712097_C	C / C	-0.06 (↓)	67%	6.60×10^{-14}
rs1206035_T	T / T	-0.13 (↓)	95%	7.60×10^{-14}
rs7282723_C	T / T	0.06 (–)	64%	1.50×10^{-13}
rs6113029_G	G / G	0.07 (↑)	78%	1.80×10^{-13}
rs9669278_T	T / T	-0.06 (↓)	48%	1.90×10^{-13}
rs4561781_A	A / G	0.06 (↑)	70%	2.90×10^{-13}
rs2143109_A	A / A	0.05 (↑)	62%	3.10×10^{-13}
rs6726007_A	A / T	0.05 (↑)	53%	5.70×10^{-13}
rs78036526_C	C / C	0.09 (↑)	90%	5.70×10^{-13}
rs10170879_A	A / T	-0.06 (↓)	33%	6.20×10^{-13}
rs3904683_T	T / T	0.06 (↑)	65%	6.30×10^{-13}
rs840464_G	T / T	0.05 (–)	48%	8.10×10^{-13}
rs17089329_C	C / G	-0.07 (↓)	80%	8.20×10^{-13}
rs3775840_G	G / G	-0.06 (↓)	62%	1.00×10^{-12}
rs9844666_G	G / A	0.06 (↑)	76%	1.30×10^{-12}
rs4846476_G	G / G	0.06 (↑)	77%	1.40×10^{-12}
rs236940_T	T / C	0.05 (↑)	38%	1.40×10^{-12}
rs6072289_A	A / A	-0.07 (↓)	84%	1.60×10^{-12}
rs4938174_G	G / G	-0.05 (↓)	71%	1.80×10^{-12}
rs13089362_A	G / G	-0.05 (–)	44%	2.50×10^{-12}
rs8072109_A	A / G	-0.05 (↓)	59%	2.50×10^{-12}
rs12731820_G	G / A	0.05 (↑)	57%	2.70×10^{-12}
rs7903474_T	T / T	0.06 (↑)	76%	3.20×10^{-12}
rs61162043_A	A / A	-0.05 (↓)	37%	3.60×10^{-12}
rs61528732_T	T / T	-0.12 (↓)	95%	3.90×10^{-12}
rs62269315_T	T / T	0.06 (↑)	81%	4.40×10^{-12}
rs9364323_G	G / G	-0.07 (↓)	84%	6.00×10^{-12}
rs10492232_T	T / T	0.08 (↑)	89%	6.10×10^{-12}
rs10510110_T	T / C	0.05 (↑)	53%	9.10×10^{-12}
rs3810027_C	C / G	0.05 (↑)	67%	1.10×10^{-11}

rs9285863_T	T / T	0.05 (↑)	67%	1.40×10^{-11}
rs73224432_C	C / C	-0.05 (↓)	76%	1.60×10^{-11}
rs1580697_A	A / G	0.05 (↑)	37%	1.70×10^{-11}
rs7394259_G	G / G	0.07 (↑)	86%	2.00×10^{-11}
rs180976308_G	G / G	-0.42 (↓)	> 99%	2.00×10^{-11}
rs4578552_A	G / G	0.07 (–)	14%	2.10×10^{-11}
rs2237421_T	T / C	-0.05 (↓)	51%	2.70×10^{-11}
rs78253835_T	T / T	0.13 (↑)	96%	2.70×10^{-11}
rs4653159_G	G / A	-0.06 (↓)	17%	2.90×10^{-11}
rs12686780_C	C / C	-0.06 (↓)	83%	2.90×10^{-11}
rs13297186_G	G / G	0.05 (↑)	32%	3.00×10^{-11}
rs144596877_G	G / G	0.21 (↑)	99%	3.80×10^{-11}
rs12309229_G	G / G	0.04 (↑)	67%	4.50×10^{-11}
rs62075722_A	A / G	0.05 (↑)	36%	4.70×10^{-11}
rs3890958_G	A / A	-0.05 (–)	65%	7.10×10^{-11}
rs41281862_G	G / G	-0.07 (↓)	87%	8.00×10^{-11}
rs9688830_T	T / G	0.04 (↑)	55%	9.80×10^{-11}
rs16856870_A	A / A	-0.11 (↓)	95%	1.00×10^{-10}
rs4077168_A	A / A	0.05 (↑)	70%	1.10×10^{-10}
rs1451018_C	C / C	-0.06 (↓)	82%	1.10×10^{-10}
rs73181764_T	C / C	0.05 (–)	71%	1.20×10^{-10}
rs4790881_C	C / A	0.05 (↑)	30%	1.20×10^{-10}
rs6676809_A	A / A	0.06 (↑)	85%	1.30×10^{-10}
rs1366689_T	T / T	-0.06 (↓)	84%	1.30×10^{-10}
rs6749785_T	T / T	-0.04 (↓)	59%	1.50×10^{-10}
rs11245342_C	C / C	-0.05 (↓)	74%	1.50×10^{-10}
rs1469024_C	T / T	-0.05 (–)	37%	1.50×10^{-10}
rs6715589_C	T / T	0.05 (–)	60%	1.70×10^{-10}
rs13073544_G	G / G	0.05 (↑)	72%	1.70×10^{-10}
rs1499894_C	T / T	0.05 (–)	56%	1.70×10^{-10}
rs1844594_G	G / A	0.05 (↑)	54%	1.80×10^{-10}
rs10151339_G	G / T	0.06 (↑)	70%	1.80×10^{-10}
rs72843943_G	G / G	0.06 (↑)	81%	2.00×10^{-10}
rs7623659_C	T / T	0.05 (–)	70%	2.40×10^{-10}
rs139002703_C	C / C	0.13 (↑)	97%	2.40×10^{-10}
rs1414154_C	C / C	0.05 (↑)	38%	2.50×10^{-10}
rs4819855_G	G / G	-0.05 (↓)	74%	2.60×10^{-10}
rs117801489_T	T / T	-0.18 (↓)	98%	3.30×10^{-10}
rs56114706_G	G / G	-0.05 (↓)	69%	3.40×10^{-10}
rs807037_G	C / C	0.04 (–)	34%	3.60×10^{-10}
rs58627364_C	C / C	0.07 (↑)	87%	4.80×10^{-10}
rs11688492_T	C / C	0.04 (–)	55%	5.00×10^{-10}
rs11499034_T	T / T	-0.18 (↓)	99%	5.10×10^{-10}
rs28368296_C	T / T	-0.06 (–)	15%	5.20×10^{-10}
rs114797817_A	A / A	0.19 (↑)	99%	5.70×10^{-10}
rs2032423_T	T / C	0.04 (↑)	44%	6.10×10^{-10}
rs10865493_C	A / A	0.08 (–)	8%	6.60×10^{-10}
rs1956213_C	C / C	0.04 (↑)	65%	6.60×10^{-10}
rs1445844_A	G / G	-0.05 (–)	34%	7.30×10^{-10}
rs2806681_G	G / A	-0.05 (↓)	45%	8.40×10^{-10}
rs141621919_A	A / A	-0.11 (↓)	96%	8.40×10^{-10}
rs2616418_G	G / G	-0.04 (↓)	64%	9.90×10^{-10}
rs215545_T	C / C	0.06 (–)	24%	1.00×10^{-9}
rs2348477_T	T / T	0.04 (↑)	46%	1.10×10^{-9}
rs13138854_G	G / T	-0.05 (↓)	50%	1.20×10^{-9}
rs12790261_C	C / C	-0.08 (↓)	92%	1.20×10^{-9}
rs2301742_T	T / G	-0.04 (↓)	49%	1.40×10^{-9}
rs17006525_T	C / C	-0.05 (–)	61%	1.60×10^{-9}
rs76667725_A	A / A	-0.06 (↓)	79%	1.60×10^{-9}

rs16893327_T	C / C	0.06 (–)	74%	1.60×10^{-9}
rs4827893_C	G / G	0.05 (–)	79%	1.60×10^{-9}
rs141773782_A	A / A	0.15 (↑)	98%	1.80×10^{-9}
rs10045442_T	C / C	0.05 (–)	22%	1.90×10^{-9}
rs2167972_T	T / T	-0.05 (↓)	54%	2.10×10^{-9}
rs2256606_T	T / T	0.07 (↑)	90%	2.20×10^{-9}
rs117693113_A	A / A	0.14 (↑)	97%	2.20×10^{-9}
rs116899497_C	C / C	-0.09 (↓)	94%	2.20×10^{-9}
rs224979_G	G / A	0.04 (↑)	56%	2.50×10^{-9}
rs12448432_G	G / A	0.06 (↑)	79%	2.50×10^{-9}
rs10853015_A	C / C	0.05 (–)	24%	2.60×10^{-9}
rs6725266_C	C / A	0.04 (↑)	46%	2.70×10^{-9}
rs116998555_C	C / C	0.47 (↑)	> 99%	2.70×10^{-9}
rs13141170_T	T / C	0.05 (↑)	69%	2.70×10^{-9}
rs2160726_G	G / G	-0.04 (↓)	57%	2.70×10^{-9}
rs7886690_T	T / T	0.03 (↑)	74%	3.00×10^{-9}
rs8068844_T	T / T	-0.04 (↓)	66%	3.10×10^{-9}
rs113542380_G	G / A	-0.08 (↓)	93%	3.50×10^{-9}
rs393091_C	C / T	-0.04 (↓)	37%	3.60×10^{-9}
rs7319674_A	A / A	0.05 (↑)	62%	3.80×10^{-9}
rs141951483_C	C / T	0.07 (↑)	91%	5.40×10^{-9}
rs12354975_G	G / G	-0.11 (↓)	96%	6.10×10^{-9}
rs149879035_G	G / G	-0.19 (↓)	99%	7.40×10^{-9}
rs10010325_C	C / A	-0.05 (↓)	51%	7.80×10^{-9}
rs4794213_C	T / T	0.04 (–)	63%	7.80×10^{-9}
rs1113231_C	C / T	-0.04 (↓)	63%	1.00×10^{-8}
rs11730582_T	T / C	-0.04 (↓)	52%	1.10×10^{-8}
rs10172196_G	G / A	0.05 (↑)	70%	1.30×10^{-8}
rs17182988_G	G / G	0.08 (↑)	93%	1.30×10^{-8}
rs183759316_G	G / G	-0.20 (↓)	99%	1.30×10^{-8}
rs4345115_T	T / C	0.04 (↑)	61%	1.40×10^{-8}
rs10901294_C	C / C	-0.08 (↓)	93%	1.70×10^{-8}
rs74454622_C	C / C	-0.08 (↓)	92%	1.90×10^{-8}
rs77583146_G	G / G	0.19 (↑)	99%	1.90×10^{-8}
rs868949_T	C / C	-0.05 (–)	70%	2.00×10^{-8}
rs1991161_C	C / T	-0.04 (↓)	43%	2.10×10^{-8}
rs8041717_G	G / G	-0.05 (↓)	79%	2.20×10^{-8}
rs151190321_T	T / T	-0.13 (↓)	97%	2.50×10^{-8}
rs2286936_A	A / A	-0.06 (↓)	84%	2.50×10^{-8}
rs13208672_G	T / T	-0.05 (–)	80%	2.80×10^{-8}
rs8071654_A	A / A	-0.06 (↓)	85%	2.90×10^{-8}
rs142662688_G	G / G	0.55 (↑)	> 99%	3.10×10^{-8}
rs2836484_C	C / C	0.04 (↑)	51%	3.30×10^{-8}
rs154001_C	T / T	0.04 (–)	32%	5.00×10^{-8}