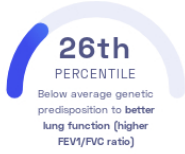


STUDY SUMMARY

Identification of 165 genetic variants correlated with lung function.

YOUR RESULT



STUDY DESCRIPTION

Proper lung function is critical for providing oxygen to the cell in our bodies. It can be assessed by measuring various parameters. One parameter of lung function is the maximum air volume that can be expired after a deep breath, also known as the forced vital capacity (FVC). Another parameter is the air volume that can be expired in the first second of expiration, known as the forced expiratory volume in 1 second (FEV1). A low FEV1/FVC ratio is an indicator for chronic obstructive pulmonary disease (COPD). This genome-wide association study examined over 400,000 individuals of European ancestry and identified 165 genetic variants associated with the FEV1/FVC ratio. Many variants were located near genes that play a role in the formation of elastic fibers that allow our lungs to expand and contract as we breathe.




























DID YOU KNOW?

Smoking is the largest risk factor for developing COPD. In fact, up to 90% of all cases of COPD can be linked to smoking. Refraining from smoking, and limiting exposure to secondhand are important to keep your lungs healthy.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to better lung function (higher FEV1/FVC ratio) we summed up the effects of genetic variants that were linked to better lung function (higher FEV1/FVC ratio) 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 better lung function (higher FEV1/FVC ratio). The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to better lung function (higher FEV1/FVC ratio). Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to better lung function (higher FEV1/FVC ratio). By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for better lung function (higher FEV1/FVC ratio) to be -0.59**. 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 better lung function (higher FEV1/FVC ratio) is in the **26th percentile**. This means that it is higher than the polygenic scores 26% of people. We consider this to be a **below average genetic predisposition to better lung function (higher FEV1/FVC ratio)**. 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 [Ⓞ]
rs2070600_T	C / C	0.15 (-)	6%	3.00 x 10 ⁻¹⁸⁹
rs13141641_T	T / T	-0.07 (↓)	60%	3.65 x 10 ⁻¹⁸⁴
rs7763012_T	T / G	-0.07 (↓)	70%	4.71 x 10 ⁻¹⁶⁵
rs1441358_T	T / T	0.06 (↑)	66%	4.12 x 10 ⁻¹⁴⁵
rs34712979_A	G / G	-0.07 (-)	26%	4.18 x 10 ⁻¹³⁴
rs17280293_A	A / A	-0.18 (↓)	97%	2.34 x 10 ⁻¹³¹
rs13116999_A ^{NEW}	G / G	0.05 (-)	54%	6.63 x 10 ⁻¹¹¹
rs7733410_A	G / G	0.05 (-)	44%	1.56 x 10 ⁻⁹⁶
rs2609279_T	T / C	0.05 (↑)	22%	2.08 x 10 ⁻⁷⁶
rs7090277_A	T / A	0.04 (↑)	52%	3.96 x 10 ⁻⁶⁷
rs2869966_T	C / T	-0.04 (↓)	41%	5.78 x 10 ⁻⁶⁶
rs62201738_A	A / A	-0.07 (↓)	92%	9.45 x 10 ⁻⁶³
rs9436733_T	C / C	0.04 (-)	48%	5.95 x 10 ⁻⁶¹
rs11134789_A	C / A	-0.04 (↓)	34%	3.06 x 10 ⁻⁶⁰
rs4308141_C	C / C	-0.05 (↓)	80%	3.58 x 10 ⁻⁵⁹
rs9274247_A	G / G	-0.05 (-)	32%	9.79 x 10 ⁻⁵⁷
rs11858992_A	A / C	0.04 (↑)	40%	4.83 x 10 ⁻⁵⁶
rs2798641_T	C / C	-0.04 (-)	18%	3.89 x 10 ⁻⁴⁸
rs34093919_A	NA	0.15 (-)	1%	1.69 x 10 ⁻⁴⁷
rs1192415_A	A / A	0.04 (↑)	81%	2.27 x 10 ⁻⁴⁷
rs7970544_T	G / G	0.04 (-)	19%	1.45 x 10 ⁻⁴⁶
rs10059996_T ^{NEW}	T / G	-0.04 (↓)	36%	1.53 x 10 ⁻⁴²
rs2244692_A	G / G	-0.03 (-)	45%	4.60 x 10 ⁻⁴²
rs12522114_A	C / A	-0.04 (↓)	27%	1.47 x 10 ⁻⁴¹
rs1529672_A	C / A	0.04 (↑)	17%	1.73 x 10 ⁻⁴¹
rs55884799_T	T / T	-0.04 (↓)	83%	4.01 x 10 ⁻⁴⁰
rs1294417_T	C / C	-0.03 (-)	46%	3.93 x 10 ⁻³⁹
rs11648508_T	G / G	0.03 (-)	68%	9.86 x 10 ⁻³⁹
rs11134766_T	C / C	-0.06 (-)	6%	8.04 x 10 ⁻³⁸
rs35107139_A	A / A	0.03 (↑)	60%	3.40 x 10 ⁻³⁶
rs28446321_A	T / A	-0.05 (↓)	9%	4.72 x 10 ⁻³⁶
rs1896797_A	G / A	0.03 (↑)	49%	2.48 x 10 ⁻³⁴
rs79898473_T ^{NEW}	T / C	-0.03 (↓)	67%	2.31 x 10 ⁻³³
rs13198081_C	G / C	0.03 (↑)	35%	3.07 x 10 ⁻³³
rs9385988_A ^{NEW}	G / G	-0.03 (-)	72%	2.43 x 10 ⁻³²
rs6533183_T	C / T	-0.03 (↓)	66%	2.60 x 10 ⁻³²
rs2999090_A	A / A	-0.04 (↓)	88%	6.76 x 10 ⁻³²
rs2355237_A	A / G	0.03 (↑)	51%	1.77 x 10 ⁻³¹

rs78442819_C	G / C	-0.04 (↓)	20%	2.25 x 10 ⁻³¹
rs13206405_A	C / A	0.03 (↑)	20%	4.67 x 10 ⁻³¹
rs987068_C	G / C	-0.03 (↓)	69%	1.46 x 10 ⁻³⁰
rs10983184_T	C / C	0.03 (-)	64%	9.05 x 10 ⁻²⁸
rs35246838_T	T / C	0.04 (↑)	87%	1.41 x 10 ⁻²⁷
rs1800888_T 	NA	-0.11 (-)	2%	2.41 x 10 ⁻²⁷
rs35251997_A 	A / A	-0.05 (↓)	93%	2.82 x 10 ⁻²⁷
rs879394_T	G / G	-0.03 (-)	24%	4.71 x 10 ⁻²⁶
rs996865_T 	C / C	-0.05 (-)	8%	1.82 x 10 ⁻²⁵
rs1570203_A	G / A	0.02 (↑)	53%	5.78 x 10 ⁻²⁵
rs12715478_A	A / A	0.03 (↑)	59%	1.35 x 10 ⁻²⁴
rs1338227_T	G / T	0.02 (↑)	58%	3.92 x 10 ⁻²⁴
rs2544536_T 	C / C	-0.02 (-)	49%	4.15 x 10 ⁻²⁴
rs12627264_T 	G / G	0.04 (-)	13%	6.85 x 10 ⁻²⁴
rs8082036_C 	C / C	0.02 (↑)	51%	7.31 x 10 ⁻²⁴
rs17666332_T	T / T	0.03 (↑)	72%	9.22 x 10 ⁻²⁴
rs62213732_T	C / T	0.02 (↑)	63%	9.34 x 10 ⁻²⁴
rs62015883_T	C / C	-0.03 (-)	18%	1.22 x 10 ⁻²³
rs11722225_T	T / C	-0.05 (↓)	93%	1.68 x 10 ⁻²³
rs62316310_A 	G / G	0.03 (-)	26%	2.24 x 10 ⁻²³
rs75128958_A 	G / G	-0.04 (-)	8%	2.33 x 10 ⁻²³
rs1491106_T	G / T	0.02 (↑)	38%	2.81 x 10 ⁻²³
rs79234094_A 	G / G	0.03 (-)	26%	3.18 x 10 ⁻²³
rs9636166_A	A / A	0.04 (↑)	87%	3.66 x 10 ⁻²³
rs2012453_A	G / G	0.02 (-)	41%	4.25 x 10 ⁻²³
rs9661802_A 	A / A	0.02 (↑)	67%	5.56 x 10 ⁻²³
rs2076295_T	T / G	-0.02 (↓)	55%	6.95 x 10 ⁻²³
rs8068952_C 	C / C	-0.03 (↓)	78%	1.21 x 10 ⁻²²
rs2027761_T	C / C	0.04 (-)	11%	1.31 x 10 ⁻²²
rs12698403_A	G / A	-0.02 (↓)	44%	1.48 x 10 ⁻²²
rs10059661_C 	C / C	-0.03 (↓)	83%	1.78 x 10 ⁻²²
rs74053129_A 	G / G	0.04 (-)	10%	2.15 x 10 ⁻²²
rs11165787_A	A / G	0.02 (↑)	69%	1.63 x 10 ⁻²¹
rs72902177_T	C / C	-0.03 (-)	14%	2.20 x 10 ⁻²¹
rs113745635_T	C / C	-0.03 (-)	22%	2.35 x 10 ⁻²¹
rs330939_T 	T / T	0.02 (↑)	62%	4.46 x 10 ⁻²¹
rs11172113_T	T / T	-0.02 (↓)	59%	7.04 x 10 ⁻²¹
rs513953_A	A / G	-0.03 (↓)	25%	7.42 x 10 ⁻²¹
rs141942982_T 	G / G	-0.04 (-)	11%	9.67 x 10 ⁻²¹
rs9970286_A 	G / G	0.02 (-)	33%	1.92 x 10 ⁻²⁰
rs62012772_T 	T / T	-0.03 (↓)	82%	2.42 x 10 ⁻²⁰
rs72673461_T 	T / T	0.05 (↑)	95%	3.12 x 10 ⁻²⁰
rs1107677_T	C / T	0.02 (↑)	49%	3.88 x 10 ⁻²⁰
rs2799098_A 	A / A	-0.03 (↓)	82%	5.00 x 10 ⁻²⁰
rs11234768_T	T / T	0.03 (↑)	85%	5.07 x 10 ⁻²⁰
rs1756281_A	A / G	0.02 (↑)	70%	1.38 x 10 ⁻¹⁹
rs6445932_T	T / G	-0.02 (↓)	75%	2.38 x 10 ⁻¹⁹
rs9610955_C	G / G	-0.03 (-)	20%	2.69 x 10 ⁻¹⁹
rs17531405_C 	G / G	0.03 (-)	18%	2.80 x 10 ⁻¹⁹
rs9633803_T 	C / C	-0.03 (-)	21%	2.92 x 10 ⁻¹⁹
rs2283847_T	C / T	-0.02 (↓)	56%	3.62 x 10 ⁻¹⁹
rs2353940_T	C / C	0.02 (-)	75%	5.01 x 10 ⁻¹⁹
rs8089099_A 	G / A	0.02 (↑)	28%	1.52 x 10 ⁻¹⁸
rs6501455_A	A / G	0.02 (↑)	50%	5.68 x 10 ⁻¹⁸
rs755249_T	C / C	-0.02 (-)	23%	9.82 x 10 ⁻¹⁸
rs35420030_T 	T / T	-0.04 (↓)	95%	3.08 x 10 ⁻¹⁷
rs17163397_A 	A / G	-0.03 (↓)	88%	3.30 x 10 ⁻¹⁷
rs1416685_C 	G / C	0.02 (↑)	41%	5.62 x 10 ⁻¹⁷
rs12470864_A 	A / A	-0.02 (↓)	39%	1.04 x 10 ⁻¹⁶
rs12202314_T 	T / T	-0.02 (↓)	68%	2.17 x 10 ⁻¹⁶

rs11098196_T	G / T	-0.02 (↓)	51%	2.42 × 10 ⁻⁸
rs3791679_A	A / A	-0.02 (↓)	77%	3.02 × 10 ⁻⁸
rs2571445_A	A / G	-0.02 (↓)	40%	3.08 × 10 ⁻⁸
rs10919604_A	A / G	0.02 (↑)	60%	4.48 × 10 ⁻⁸
rs6032942_C	G / C	0.02 (↑)	23%	5.18 × 10 ⁻⁸
rs7752448_A	A / A	0.03 (↑)	88%	7.31 × 10 ⁻⁸
rs1978968_T	C / C	0.02 (-)	24%	1.25 × 10 ⁻⁸
rs721917_A	G / G	0.02 (-)	58%	1.65 × 10 ⁻⁸
rs2637254_A	G / G	-0.02 (-)	51%	3.02 × 10 ⁻⁸
rs541601_T	C / C	-0.02 (-)	18%	5.29 × 10 ⁻⁸
rs56104880_T	T / T	0.02 (↑)	70%	5.29 × 10 ⁻⁸
rs9661687_T	T / T	-0.03 (↓)	86%	6.11 × 10 ⁻⁸
rs1951121_T	G / G	0.02 (-)	60%	7.55 × 10 ⁻⁸
rs2261360_T	G / G	0.02 (-)	23%	8.74 × 10 ⁻⁸
rs6435952_A	T / T	0.03 (-)	15%	1.06 × 10 ⁻¹⁴
rs9634470_T	C / C	-0.02 (-)	74%	2.73 × 10 ⁻¹⁴
rs60820984_T	C / C	-0.02 (-)	19%	4.32 × 10 ⁻¹⁴
rs2084448_T	T / T	0.02 (↑)	71%	4.65 × 10 ⁻¹⁴
rs4128298_T	T / T	-0.02 (↓)	72%	4.97 × 10 ⁻¹⁴
rs1406225_T	G / G	-0.02 (-)	28%	8.73 × 10 ⁻¹⁴
rs4413223_A	G / G	-0.02 (-)	17%	1.30 × 10 ⁻¹³
rs4721457_T	T / T	0.02 (↑)	86%	1.73 × 10 ⁻¹³
rs586936_A	G / G	-0.02 (-)	40%	2.11 × 10 ⁻¹³
rs72743974_A	A / A	-0.02 (↓)	83%	3.98 × 10 ⁻¹³
rs57649467_A	G / G	0.02 (-)	39%	5.38 × 10 ⁻¹³
rs12918140_C	G / G	-0.03 (-)	12%	6.72 × 10 ⁻¹³
rs34245505_C	C / C	-0.02 (↓)	81%	6.83 × 10 ⁻¹³
rs4318980_A	G / A	-0.02 (↓)	42%	9.08 × 10 ⁻¹³
rs11653958_A	A / A	0.02 (↑)	74%	9.17 × 10 ⁻¹³
rs10841302_C	C / C	0.02 (↑)	56%	2.29 × 10 ⁻¹²
rs10836366_T	T / T	0.02 (↑)	75%	2.33 × 10 ⁻¹²
rs62289340_T	C / C	0.02 (-)	44%	2.36 × 10 ⁻¹²
rs193686_T	T / T	-0.02 (↓)	68%	4.07 × 10 ⁻¹²
rs11620380_A	C / C	-0.03 (-)	11%	4.61 × 10 ⁻¹²
rs1985511_A	T / T	0.02 (-)	45%	5.60 × 10 ⁻¹²
rs56383987_T	C / C	-0.04 (-)	6%	7.08 × 10 ⁻¹²
rs1274475_A	G / A	0.02 (↑)	39%	8.30 × 10 ⁻¹²
rs1799807_T	T / T	0.06 (↑)	98%	8.59 × 10 ⁻¹²
rs6710301_A	C / C	0.02 (-)	15%	2.71 × 10 ⁻¹¹
rs2146098_A	G / G	0.02 (-)	65%	4.15 × 10 ⁻¹¹
rs7098573_A	G / G	-0.02 (-)	72%	6.12 × 10 ⁻¹¹
rs7465401_T	T / T	-0.02 (↓)	73%	6.83 × 10 ⁻¹¹
rs4309038_C	G / G	0.02 (-)	44%	2.13 × 10 ⁻¹⁰
rs4279944_T	C / C	0.02 (-)	15%	2.18 × 10 ⁻¹⁰
rs9807668_T	C / C	0.03 (-)	10%	4.93 × 10 ⁻¹⁰
rs985256_A	C / C	0.02 (-)	22%	5.86 × 10 ⁻¹⁰
rs1244869_T	T / G	0.02 (↑)	63%	6.16 × 10 ⁻¹⁰
rs7176074_T	G / G	0.03 (-)	5%	6.60 × 10 ⁻¹⁰
rs11739847_A	G / G	-0.02 (-)	20%	1.40 × 10 ⁻⁹
rs1102077_A	C / C	0.02 (-)	76%	2.02 × 10 ⁻⁹
rs2894837_A	A / A	0.01 (↑)	64%	3.78 × 10 ⁻⁹
rs2701110_A	C / C	0.02 (-)	17%	4.53 × 10 ⁻⁹
rs10874851_A	A / C	-0.01 (↓)	48%	5.07 × 10 ⁻⁹
rs6539952_A	C / A	-0.02 (↓)	26%	6.84 × 10 ⁻⁹
rs1689510_C	G / G	-0.01 (-)	34%	8.36 × 10 ⁻⁹
rs7914842_A	G / G	0.01 (-)	58%	2.70 × 10 ⁻⁸
rs78101726_A	A / G	0.02 (↑)	85%	3.65 × 10 ⁻⁸

N/A indicates variants that could not be imputed using the 1000 genomes project datasets and variants that have a frequency of < 5%. Your genome was sequenced at 30x/100x coverage and is not imputed. However, to calculate percentiles, we need to compare your data with other users imputed data. To make the data comparable, we need to exclude some of the variants from your data.

