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Visceral adiposity (Karlsson, 2019)

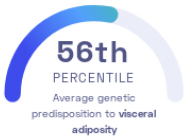
Torgny Karlsson, et al.
Nature Medicine

Obesity

STUDY SUMMARY

Identification of over 100 novel genetic variants correlated with fat build-up around the body's internal organs.

YOUR RESULT



STUDY DESCRIPTION

Visceral adipose tissue is a particularly harmful type of fat typically stored around the body's internal organs. It acts as a source of inflammation for the organs, and it can lead to an increased risk of developing cardiovascular and metabolic diseases, like coronary artery disease and diabetes. By examining genetic data from nearly 400,000 individuals of European ancestry, this study discovered 102 novel variants that may contribute to an individual's risk of visceral adipose tissue accumulation. These genetic variants were also linked to an increased risk of high blood pressure, heart attack, type 2 diabetes, and high fat levels in the blood.

DID YOU KNOW?

Increased visceral fat storage are often linked with chronic stress. To help reduce stress, two great options are meditation and exercise.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to visceral adiposity we summed up the effects of genetic variants that were linked to visceral adiposity 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 visceral adiposity. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to visceral adiposity. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to visceral adiposity. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for visceral adiposity to be 0.19**. 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 visceral adiposity is in the **56th percentile**. This means that it is higher than the polygenic scores 56% of people. We consider this to be an **average genetic predisposition to visceral adiposity**. 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
rs56094641_G	A / G	0.06 (↑)	40%	3.82×10^{-145}
rs538656_T	G / T	0.05 (↑)	24%	1.79×10^{-64}
rs13393304_A	G / G	-0.04 (-)	17%	6.12×10^{-42}
rs62106258_C NEW	NA	-0.08 (-)	5%	1.46×10^{-40}
rs539515_C	A / A	0.04 (-)	21%	1.43×10^{-35}
rs62262093_T	T / T	-0.03 (↓)	48%	1.34×10^{-33}
rs11030112_A	G / A	0.03 (↑)	32%	2.65×10^{-32}
rs10938398_A	G / G	0.03 (-)	43%	1.00×10^{-29}
rs72892910_T	G / G	0.04 (-)	17%	7.24×10^{-28}
rs2229616_T	NA	-0.10 (-)	2%	1.16×10^{-27}
rs7498665_G	A / G	0.03 (↑)	40%	1.83×10^{-26}
rs4808762_C	T / T	0.03 (-)	29%	3.55×10^{-26}
rs10182458_G	G / G	0.03 (↑)	49%	5.90×10^{-26}
rs4402589_T	T / G	-0.03 (↓)	45%	6.17×10^{-26}
rs10423928_A	T / A	-0.03 (↓)	19%	1.01×10^{-25}
rs2307111_C	T / C	-0.03 (↓)	39%	1.08×10^{-24}
rs7132908_A	G / A	0.03 (↑)	38%	1.19×10^{-23}
rs9471333_C	C / T	0.02 (↑)	45%	1.06×10^{-22}
rs113211479_A	G / G	0.02 (-)	40%	3.70×10^{-22}
rs3784692_C	T / T	-0.02 (-)	40%	5.70×10^{-22}
rs17770336_T	C / T	0.02 (↑)	32%	7.85×10^{-21}
rs10740991_G	C / C	0.03 (-)	28%	1.33×10^{-20}
rs1454687_C NEW	C / C	0.02 (↑)	49%	1.49×10^{-20}
rs9469899_A	G / G	0.02 (-)	36%	2.13×10^{-20}
rs71658797_A	T / A	0.03 (↑)	12%	4.79×10^{-20}
rs9320823_T	T / C	-0.02 (↓)	40%	4.92×10^{-20}
rs7156625_A	G / G	0.03 (-)	22%	1.99×10^{-19}
rs6096886_G	A / G	-0.03 (↓)	19%	2.35×10^{-19}
rs6857_T	C / C	-0.03 (-)	17%	2.80×10^{-19}
rs6739755_A	A / G	0.02 (↑)	40%	3.95×10^{-19}
rs2678204_G	T / G	0.02 (↑)	34%	1.16×10^{-18}
rs9358912_T	G / G	-0.02 (-)	27%	1.22×10^{-18}
rs2304608_A	C / C	0.03 (-)	16%	1.91×10^{-18}
rs35060985_A	G / G	0.02 (-)	32%	2.52×10^{-18}
rs2613500_T	T / C	-0.03 (↓)	20%	5.48×10^{-18}
rs1591726_T	T / T	0.02 (↑)	32%	4.06×10^{-17}
rs1652376_T	G / T	-0.02 (↓)	46%	4.17×10^{-17}
rs1225060_A	G / A	0.02 (↑)	28%	7.88×10^{-17}
rs62190394_T NEW	C / T	0.02 (↑)	31%	2.02×10^{-16}

rs76040172_A	G / G	-0.05 (-)	5%	2.60 x 10^{-16}
rs2253310_C	C / G	-0.02 (↓)	37%	3.16 x 10^{-16}
rs3810291_G	G / A	-0.02 (↓)	32%	3.64 x 10^{-16}
rs62084234_G	A / A	0.03 (-)	20%	3.68 x 10^{-16}
rs62261725_G	A / G	-0.02 (↓)	33%	5.52 x 10^{-16}
rs12477088_C	T / T	-0.02 (-)	41%	6.17 x 10^{-16}
rs4239060_A	G / A	-0.03 (↓)	19%	8.98 x 10^{-16}
rs879620_C	T / T	-0.02 (-)	39%	9.02 x 10^{-16}
rs4665896_C	T / T	0.02 (-)	47%	1.79 x 10^{-15}
rs10756714_G	A / A	-0.02 (-)	44%	3.35 x 10^{-15}
rs7550711_T	NA	0.06 (-)	3%	5.20 x 10^{-15}
rs9989141_C	C / T	-0.02 (↓)	37%	6.77 x 10^{-15}
rs62477685_T	T / T	-0.02 (↓)	42%	7.78 x 10^{-15}
rs2260051_A	A / T	-0.02 (↓)	44%	8.29 x 10^{-15}
rs13017207_A	G / G	-0.02 (-)	40%	9.17 x 10^{-15}
rs13062093_G	T / T	0.02 (-)	37%	1.51 x 10^{-14}
rs4482463_C	A / A	0.04 (-)	8%	1.68 x 10^{-14}
rs8015400_C	A / A	-0.02 (-)	32%	5.22 x 10^{-14}
rs112506159_A	A / AATGTACC	-0.02 (↓)	27%	6.54 x 10^{-14}
rs9277988_C	T / T	0.02 (-)	20%	7.16 x 10^{-14}
rs757318_A	C / C	-0.02 (-)	48%	7.36 x 10^{-14}
rs55726687_A	G / G	0.02 (-)	21%	8.12 x 10^{-14}
rs1928496_C	T / T	-0.02 (-)	26%	9.30 x 10^{-14}
rs10896012_C	T / T	0.02 (-)	22%	9.46 x 10^{-14}
rs113866544_C	T / C	0.04 (↑)	7%	1.20 x 10^{-13}
rs66679256_T	C / T	0.02 (↑)	45%	1.29 x 10^{-13}
rs40067_A	G / G	-0.02 (-)	17%	1.59 x 10^{-13}
rs6265_T	C / C	-0.02 (-)	19%	1.93 x 10^{-13}
rs6870983_T	C / C	-0.02 (-)	21%	2.58 x 10^{-13}
rs11150745_G	A / G	-0.02 (↓)	32%	3.11 x 10^{-13}
rs7845090_G	G / A	0.02 (↑)	29%	3.19 x 10^{-13}
rs653958_G	A / A	0.02 (-)	37%	3.28 x 10^{-13}
rs62107115_A	G / A	0.02 (↑)	33%	3.36 x 10^{-13}
rs55742087_T	C / C	-0.02 (-)	18%	3.61 x 10^{-13}
rs56813533_T	T / T	-0.02 (↓)	37%	6.42 x 10^{-13}
rs13135092_G	A / A	0.03 (-)	8%	7.31 x 10^{-13}
rs2481665_C	C / C	-0.02 (↓)	44%	7.82 x 10^{-13}
rs10962547_A	T / T	0.02 (-)	17%	1.03 x 10^{-12}
rs12459368_G	A / A	-0.02 (-)	27%	1.15 x 10^{-12}
rs9641499_A	C / C	-0.02 (-)	43%	1.20 x 10^{-12}
rs577525_T	T / C	-0.02 (↓)	44%	1.52 x 10^{-12}
rs72663503_T	C / C	0.02 (-)	23%	1.65 x 10^{-12}
rs1834144_A	C / C	-0.02 (-)	37%	1.72 x 10^{-12}
rs113658831_G	C / C	0.02 (-)	16%	1.97 x 10^{-12}
rs13337177_T	G / G	-0.02 (-)	18%	2.02 x 10^{-12}
rs245775_A	G / G	-0.02 (-)	27%	2.16 x 10^{-12}
rs2239647_A	A / C	0.02 (↑)	45%	2.63 x 10^{-12}
rs76327888_T	G / G	0.02 (-)	17%	2.90 x 10^{-12}
rs4929923_T	T / C	-0.02 (↓)	35%	3.78 x 10^{-12}
rs114593013_G	A / A	-0.04 (-)	6%	4.16 x 10^{-12}
rs2926614_T	T / C	-0.02 (↓)	18%	4.16 x 10^{-12}
rs17773430_C	T / C	0.02 (↑)	31%	5.38 x 10^{-12}
rs2635727_T	C / C	-0.02 (-)	24%	5.90 x 10^{-12}
rs56356382_C	T / T	-0.02 (-)	19%	6.51 x 10^{-12}
rs4757136_T	A / A	-0.02 (-)	42%	6.54 x 10^{-12}
rs61910767_T	C / C	-0.02 (-)	17%	6.95 x 10^{-12}
rs719802_T	T / T	0.02 (↑)	39%	7.84 x 10^{-12}
rs7893571_G	T / T	-0.02 (-)	34%	1.17 x 10^{-11}
rs3787075_G	C / C	0.02 (-)	34%	1.26 x 10^{-11}
rs11655587_T	C / T	-0.02 (↓)	36%	1.38 x 10^{-11}
rs35697587_G	G / A	0.02 (↑)	49%	1.62 x 10^{-11}

rs7982447_C	T / T	0.02 (-)	21%	1.62×10^{-11}
rs7649970_T	C / T	0.03 (↑)	12%	1.78×10^{-11}
rs2172131_T	T / C	0.02 (↑)	42%	1.85×10^{-11}
rs145350287_A	NA	-0.04 (-)	4%	1.92×10^{-11}
rs61813293_T	G / T	0.02 (↑)	14%	1.93×10^{-11}
rs7608397_T	T / T	-0.02 (↓)	43%	1.98×10^{-11}
rs3943933_A	A / A	0.02 (↑)	48%	2.18×10^{-11}
rs2926864_A	A / G	0.02 (↑)	34%	2.68×10^{-11}
rs10187101_T	C / C	-0.02 (-)	36%	2.69×10^{-11}
rs591939_G	A / A	0.02 (-)	25%	2.89×10^{-11}
rs111610668_G	A / G	-0.02 (↓)	38%	2.99×10^{-11}
rs2730806_T	A / A	0.02 (-)	48%	3.35×10^{-11}
rs8074454_C	C / C	0.02 (↑)	33%	3.75×10^{-11}
rs72995085_C	T / C	-0.02 (↓)	18%	3.77×10^{-11}
rs704061_C	T / C	0.02 (↑)	45%	3.94×10^{-11}
rs11679338_C	T / T	-0.02 (-)	34%	4.20×10^{-11}
rs59893724_G	A / A	-0.02 (-)	25%	5.29×10^{-11}
rs12739999_A	G / G	0.02 (-)	17%	5.46×10^{-11}
rs7942037_C	G / G	-0.02 (-)	36%	5.64×10^{-11}
rs4500930_T	C / T	0.02 (↑)	34%	5.75×10^{-11}
rs583077_G	G / T	0.02 (↑)	46%	5.90×10^{-11}
rs7822494_C	T / T	-0.02 (-)	45%	6.53×10^{-11}
rs34811474_A	G / A	-0.02 (↓)	23%	6.96×10^{-11}
rs9911991_C	C / C	0.02 (↑)	23%	8.83×10^{-11}
rs4855804_C	G / G	0.02 (-)	50%	8.92×10^{-11}
rs67463976_C	C / C	0.02 (↑)	42%	9.11×10^{-11}
rs7165759_A	G / G	-0.02 (-)	30%	1.02×10^{-10}
rs41286710_T	NA	-0.04 (-)	5%	1.05×10^{-10}
rs10774018_C	G / G	0.02 (-)	22%	1.10×10^{-10}
rs12336914_C	G / C	0.02 (↑)	48%	1.22×10^{-10}
rs4073582_A	G / A	-0.02 (↓)	36%	1.22×10^{-10}
rs2180454_T	C / C	-0.02 (-)	23%	1.23×10^{-10}
rs3791687_T	A / A	0.02 (-)	23%	1.24×10^{-10}
rs9985922_C	G / G	0.02 (-)	13%	1.37×10^{-10}
rs9843340_C	T / T	-0.02 (-)	15%	1.74×10^{-10}
rs3850986_G	G / T	-0.02 (↓)	33%	2.12×10^{-10}
rs112108364_G	T / G	0.02 (↑)	28%	3.27×10^{-10}
rs217669_C	T / C	0.02 (↑)	27%	3.32×10^{-10}
rs13075615_T	C / C	-0.02 (-)	15%	3.97×10^{-10}
rs254024_T	G / G	0.02 (-)	44%	4.19×10^{-10}
rs112154095_T	C / C	-0.02 (-)	19%	4.30×10^{-10}
rs6433243_T	C / C	0.02 (-)	35%	4.56×10^{-10}
rs13263674_G	A / A	0.02 (-)	29%	4.65×10^{-10}
rs1784461_A	G / G	0.02 (-)	40%	5.02×10^{-10}
rs11864188_T	A / T	-0.02 (↓)	32%	5.23×10^{-10}
rs68169458_C	T / C	0.02 (↑)	30%	5.39×10^{-10}
rs1398060_T	C / C	-0.02 (-)	46%	5.40×10^{-10}
rs2477467_T	C / T	0.02 (↑)	24%	5.43×10^{-10}
rs62007782_A	G / G	-0.02 (-)	27%	5.44×10^{-10}
rs13331491_T	C / T	-0.02 (↓)	26%	5.90×10^{-10}
rs62259475_A	G / G	0.02 (-)	37%	6.05×10^{-10}
rs4648664_C	C / C	-0.02 (↓)	46%	6.11×10^{-10}
rs215628_C	T / T	0.02 (-)	39%	6.48×10^{-10}
rs1474518_C	T / T	-0.02 (-)	24%	6.62×10^{-10}
rs2962082_A	A / A	-0.02 (↓)	48%	6.72×10^{-10}
rs7654647_T	A / T	0.02 (↑)	41%	6.86×10^{-10}
rs1724557_C	C / A	0.02 (↑)	41%	6.87×10^{-10}
rs6561937_T	A / A	0.02 (-)	25%	6.96×10^{-10}
rs2667761_C	T / C	-0.02 (↓)	36%	7.27×10^{-10}

rs809955_A	G / G	-0.02 (-)	37%	7.45×10^{-10}
rs10773302_G	G / T	-0.02 (↓)	27%	7.66×10^{-10}
rs56398417_T	T / T	-0.02 (↓)	31%	7.72×10^{-10}
rs12001634_A	T / T	-0.02 (-)	34%	7.88×10^{-10}
rs11640322_A	G / G	0.02 (-)	29%	8.80×10^{-10}
rs35972789_A	NA	-0.04 (-)	4%	1.01×10^{-9}
rs11776713_C	T / T	-0.02 (-)	48%	1.04×10^{-9}
rs2859977_T	C / C	0.02 (-)	16%	1.11×10^{-9}
rs12072739_G	A / A	0.02 (-)	23%	1.12×10^{-9}
rs28473022_A	G / G	0.03 (-)	5%	1.13×10^{-9}
rs1861026_T	C / C	0.02 (-)	17%	1.23×10^{-9}
rs62277680_G	NA	0.04 (-)	5%	1.66×10^{-9}
rs3764002_T	T / T	-0.02 (↓)	26%	1.69×10^{-9}
rs2499468_C	C / A	-0.02 (↓)	35%	1.98×10^{-9}
rs111768603_T	G / G	-0.02 (-)	11%	1.98×10^{-9}
rs13097150_T	C / C	0.02 (-)	38%	2.03×10^{-9}
rs362307_T	C / T	0.03 (↑)	7%	2.04×10^{-9}
rs3737992_A	G / A	-0.02 (↓)	17%	2.14×10^{-9}
rs1762509_A	A / G	0.02 (↑)	34%	2.20×10^{-9}
rs2820223_C	T / C	0.02 (↑)	49%	2.25×10^{-9}
rs2020942_T	T / T	0.02 (↑)	40%	2.28×10^{-9}
rs2095484_C	T / C	-0.02 (↓)	39%	2.37×10^{-9}
rs2949785_C	G / C	-0.02 (↓)	23%	2.54×10^{-9}
rs778094_G	G / G	0.01 (↑)	42%	2.57×10^{-9}
rs4743930_T	C / C	0.02 (-)	25%	2.67×10^{-9}
rs749953_T	C / T	-0.02 (↓)	23%	2.74×10^{-9}
rs60886478_T	C / C	-0.03 (-)	7%	2.77×10^{-9}
rs6788620_A	G / G	0.01 (-)	41%	2.82×10^{-9}
rs78719460_A	G / G	0.02 (-)	31%	2.83×10^{-9}
rs1229984_T	NA	-0.05 (-)	2%	2.84×10^{-9}
rs62183012_C	C / C	-0.02 (↓)	29%	2.97×10^{-9}
rs9867802_C	A / C	0.02 (↑)	34%	2.97×10^{-9}
rs9832402_G	A / A	-0.02 (-)	25%	2.99×10^{-9}
rs61903695_G	A / A	0.02 (-)	26%	3.04×10^{-9}
rs11119208_A	A / G	0.02 (↑)	39%	3.05×10^{-9}
rs2472297_T	C / C	0.02 (-)	27%	3.08×10^{-9}
rs7243566_T	C / C	-0.02 (-)	25%	3.20×10^{-9}

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.