

## ☆ Fat consumption (Meddens, 2020)

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Molecular Psychiatry

Diet

### STUDY SUMMARY

Identification of 6 genetic variants associated with fat consumption.

### YOUR RESULT



### STUDY DESCRIPTION

Fats are essential *macronutrients* that serve as structural building blocks in the body. More specifically, the *membranes* of our cells are mostly made of fat. Moreover, fats also allow certain vitamins to be absorbed by the intestines. On average, adults consume 44 to 77 grams of fat per day. To identify genetic variants that are associated with fat consumption, this genome-wide association study examined the genomes of over 260,000 individuals of European ancestry. The study identified 6 genetic variants associated with fat consumption. One of these, the rs429358 variant in the APOE gene and has been previously linked to Alzheimer's disease risk. Specifically, the rs429358 T allele is associated with increased fat consumption and decreased Alzheimer's risk. Fat consumption was also found to be negatively correlated with body mass index (BMI) and physical activity.

### DID YOU KNOW?

Fat has more than twice as many calories per gram as carbohydrates and proteins.

### YOUR DETAILED RESULTS

To calculate your genetic predisposition to higher fat consumption we summed up the effects of genetic variants that were linked to higher fat consumption 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 higher fat consumption. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to higher fat consumption. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to higher fat consumption. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for higher fat consumption to be -0.06**. 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 higher fat consumption is in the **13th percentile**. This means that it is higher than the polygenic scores 13% of people. We consider this to be a **below average genetic predisposition to higher fat consumption**. 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>
rs1229984_T	C / C	0.10 (-)	6%	$2.64 \times 10^{-28}$
rs33988101_T	T / T	-0.03 (↓)	23%	$1.66 \times 10^{-28}$
rs9927317_C	C / G	-0.02 (↓)	60%	$4.77 \times 10^{-12}$
rs7012814_A	G / A	-0.02 (↓)	45%	$1.12 \times 10^{-11}$
rs429358_T	T / T	0.02 (↑)	86%	$8.65 \times 10^{-10}$
rs57193069_A	G / G	-0.02 (-)	67%	$1.80 \times 10^{-8}$