

☆ Plant and fish-based diet (Niarchou, 2020)

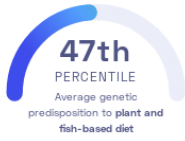
Maria Niarchou, et al.  
Translational Psychiatry

Brain Behavior

STUDY SUMMARY

Identification of 63 genetic variants associated with a plant and fish-based diet.

YOUR RESULT



STUDY DESCRIPTION

Schizophrenia is a chronic brain disorder that affects how a person thinks, feels, and behaves. It affects about 1% of the population. While the development of schizophrenia is driven by genetics, environmental factors, such as diet, are also thought to play a role as weight gain and obesity are common in schizophrenia patients. Therefore, to determine the genetic basis of diet and whether there is a link between diet and schizophrenia risk, researchers examined the genomes of over 335,000 individuals of European ancestry. The study identified 63 genetic variants associated with a diet rich in fish and vegetables. Interestingly, the researchers found that the genetic factors contributing to a diet rich in fish and vegetables were also contributing to the risk of developing schizophrenia. This unexpected result highlights that the relationship between diet and schizophrenia is very complex.

DID YOU KNOW?

Unlike most other brain disorders, schizophrenia typically appears when a person is in his or her or early 20s.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to plant and fish-based diet we summed up the effects of genetic variants that were linked to plant and fish-based diet 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 plant and fish-based diet. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to plant and fish-based diet. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to plant and fish-based diet. By adding up the effect sizes of the highlighted variants we calculated your polygenic score for plant and fish-based diet to be **-0.02**. 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 plant and fish-based diet is in the **47th percentile**. This means that it is higher than the polygenic scores 47% of people. We consider this to be an **average genetic predisposition to plant and fish-based diet**. 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>
rs946711_A	A / C	0.03 (↑)	70%	1.60 x 10 <sup>-24</sup>
rs58094641_A	A / G	-0.02 (↓)	68%	1.30 x 10 <sup>-19</sup>
rs35287743_G	G / G	0.03 (↑)	89%	1.70 x 10 <sup>-19</sup>
rs1370063_T	T / A	0.02 (↑)	37%	1.90 x 10 <sup>-18</sup>
rs9650622_G	G / G	0.02 (↑)	59%	6.90 x 10 <sup>-16</sup>
rs1248825_A	A / C	-0.02 (↓)	30%	3.90 x 10 <sup>-14</sup>
rs6690619_C	T / T	0.02 (-)	59%	5.70 x 10 <sup>-14</sup>
rs4953150_C	C / C	0.02 (↑)	66%	6.20 x 10 <sup>-14</sup>
rs7969719_C	C / C	0.02 (↑)	68%	4.70 x 10 <sup>-13</sup>
rs380743_G	G / A	0.02 (↑)	66%	7.30 x 10 <sup>-13</sup>
rs56367474_C	C / T	0.02 (↑)	75%	8.00 x 10 <sup>-13</sup>
rs10986983_C	C / T	0.02 (↑)	65%	1.60 x 10 <sup>-12</sup>
rs12682352_T	C / C	-0.02 (-)	52%	1.60 x 10 <sup>-12</sup>
rs6699744_A	A / T	-0.02 (↓)	68%	2.00 x 10 <sup>-12</sup>
rs61656398_G	G / G	0.02 (↑)	83%	2.70 x 10 <sup>-12</sup>
rs16891727_C	C / C	0.02 (↑)	89%	3.30 x 10 <sup>-12</sup>
rs1217105_T	G / G	-0.02 (-)	27%	3.80 x 10 <sup>-12</sup>
rs11859365_A	A / A	-0.02 (↓)	72%	7.10 x 10 <sup>-12</sup>
rs2425026_C	C / T	-0.02 (↓)	45%	8.20 x 10 <sup>-12</sup>
rs2413052_T	T / C	-0.02 (↓)	82%	9.60 x 10 <sup>-12</sup>
rs11706682_T	T / T	-0.02 (↓)	67%	1.40 x 10 <sup>-11</sup>
rs6756149_C	C / C	-0.02 (↓)	58%	6.50 x 10 <sup>-11</sup>
rs10510554_T	T / C	-0.02 (↓)	47%	7.80 x 10 <sup>-11</sup>
rs9362897_G	T / T	-0.02 (-)	43%	2.10 x 10 <sup>-10</sup>
rs7762448_A	A / A	0.02 (↑)	86%	2.20 x 10 <sup>-10</sup>
rs6887_C	C / C	-0.02 (↓)	86%	2.70 x 10 <sup>-10</sup>
rs1410054_A	A / G	0.02 (↑)	24%	2.90 x 10 <sup>-10</sup>
rs913455_C	G / G	-0.03 (-)	7%	3.70 x 10 <sup>-10</sup>
rs4458235_A	T / T	0.02 (-)	43%	4.00 x 10 <sup>-10</sup>
rs45501495_C	C / C	-0.02 (↓)	68%	9.40 x 10 <sup>-10</sup>
rs364926_C	C / C	-0.02 (↓)	83%	9.60 x 10 <sup>-10</sup>
rs12906493_T	T / T	-0.02 (↓)	79%	1.20 x 10 <sup>-9</sup>
rs10741616_G	G / G	0.02 (↑)	57%	1.50 x 10 <sup>-9</sup>
rs17049185_G	G / G	-0.02 (↓)	79%	3.10 x 10 <sup>-9</sup>
rs2463652_C	A / A	-0.01 (-)	72%	3.20 x 10 <sup>-9</sup>
rs34634095_C	A / A	0.02 (-)	59%	3.20 x 10 <sup>-9</sup>
rs613597_A	A / A	0.01 (↑)	76%	4.30 x 10 <sup>-9</sup>
rs145555_C	C / C	-0.01 (↓)	70%	1.50 x 10 <sup>-9</sup>

rs2918869_C	C / C	-0.01 (↓)	72%	4.80 × 10 <sup>-9</sup>
rs1946266_A	C / C	0.01 (-)	69%	4.60 × 10 <sup>-9</sup>
rs12826749_C	G / G	0.01 (-)	68%	7.00 × 10 <sup>-9</sup>
rs7737940_A	A / G	-0.01 (↓)	68%	7.00 × 10 <sup>-9</sup>
rs13082002_T	T / A	-0.01 (↓)	60%	7.30 × 10 <sup>-9</sup>
rs3117318_A	A / A	0.02 (↑)	85%	7.40 × 10 <sup>-9</sup>
rs3800314_T	T / G	0.01 (↑)	47%	7.70 × 10 <sup>-9</sup>
rs4278546_A	A / G	-0.01 (↓)	64%	8.10 × 10 <sup>-9</sup>
rs80264330_T	T / T	-0.03 (↓)	96%	8.60 × 10 <sup>-9</sup>
rs16959955_T	T / T	-0.02 (↓)	79%	1.00 × 10 <sup>-8</sup>
rs1897495_C	T / T	-0.01 (-)	61%	1.10 × 10 <sup>-8</sup>
rs12700239_C	C / C	0.02 (↑)	85%	1.30 × 10 <sup>-8</sup>
rs2498381_A	A / A	-0.01 (↓)	37%	1.40 × 10 <sup>-8</sup>
rs9956276_C	C / C	-0.02 (↓)	79%	2.30 × 10 <sup>-8</sup>
rs13160801_C	C / G	0.01 (↑)	63%	2.70 × 10 <sup>-8</sup>
rs62132802_C	C / T	-0.01 (↓)	61%	2.70 × 10 <sup>-8</sup>
rs10180461_T	T / C	0.01 (↑)	70%	2.80 × 10 <sup>-8</sup>
rs7978702_G	G / G	-0.02 (↓)	68%	3.00 × 10 <sup>-8</sup>
rs56374431_A	A / A	0.02 (↑)	70%	3.50 × 10 <sup>-8</sup>
rs1345777_C	C / C	-0.01 (↓)	65%	3.70 × 10 <sup>-8</sup>
rs6870162_A	A / A	0.01 (↑)	40%	3.70 × 10 <sup>-8</sup>
rs17818263_G	G / G	0.01 (↑)	74%	4.20 × 10 <sup>-8</sup>
rs2320925_G	G / G	0.01 (↑)	83%	4.20 × 10 <sup>-8</sup>