

★ Age at first birth (Barban, 2016)

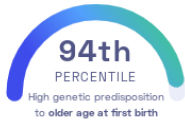
Nicola Barban, et al.
Nature Genetics

Behavior Sex

STUDY SUMMARY

Discovery of 10 genetic variants associated with age at first birth.

YOUR RESULT



STUDY DESCRIPTION

Human reproductive behavior has been associated with infertility and neuropsychiatric disorders. While environmental factors (e.g. cultural and economics) are strongly linked to reproductive behavior, genetics is thought to explain up to 50%. This genome-wide association study of nearly 700,000 individuals of European ancestry found 10 variants associated with the age at first birth, a commonly used measure of reproductive behavior. Most of the discovered variants are much more significant in females than in males. Multiple variants are near genes that have roles in the production of sperm and eggs, as well as in the fertilization process when a sperm and an egg fuse. These findings may help explain why postponing reproduction may be more harmful to some than others and help develop drugs against age-related fertility decline.

DID YOU KNOW?

The risk of Down Syndrome and some other chromosomal abnormalities significantly increases with the mother's age. The effects of paternal age appear to be smaller. The most significant association is between paternal age and a form of dwarfism.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to older age at first birth we summed up the effects of genetic variants that were linked to older age at first birth 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 older age at first birth. The variants highlighted in blue have **negative effect sizes** and decrease your genetic predisposition to older age at first birth. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to older age at first birth. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for older age at first birth to be 0.47**. 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 older age at first birth is in the **94th percentile**. This means that it is higher than the polygenic scores 94% of people. We consider this to be a **high genetic predisposition to older age at first birth**. 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 [Ⓞ]
rs2777888_A	A / A	0.11 (↑)	51%	4.68×10^{-16}
rs2347867_A	G / A	0.09 (↑)	65%	1.38×10^{-10}
rs10953766_A	A / A	0.09 (↑)	43%	1.82×10^{-10}
rs6885307_A	A / C	-0.11 (↓)	80%	2.32×10^{-10}
rs10908567_C	C / C	0.09 (↑)	70%	5.59×10^{-10}
rs1160544_A	A / A	-0.08 (↓)	40%	2.90×10^{-9}
rs242997_A	A / G	-0.08 (↓)	61%	3.38×10^{-9}
rs293566_T	T / C	0.08 (↑)	65%	1.41×10^{-8}
rs10056247_T	C / T	0.08 (↑)	29%	4.37×10^{-8}
rs2721195_T	C / C	-0.07 (-)	47%	6.25×10^{-7}

