

How long a virgin? It's written in your genes: study

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A depiction of the double helical structure of DNA. Its four coding units (A, T, C, G) are color-coded in pink, orange, purple and yellow. Credit: NHGRI

A DNA study of more than 380,000 people has uncovered a rather surprising role for human genes: helping to determine the age at which you first have sex.

Factors such as family stability, peer pressure and personality type are all known to influence whether teenagers choose to engage in sex young, or abstain until adulthood.

Now a huge gene trawl has revealed that "genes have a substantial influence" too, according to study co-author Ken Ong of the Institute of Metabolic Science at the University of Cambridge.

Genetic factors, he told AFP, "explain around 25 percent of the differences in the [age](#) when people start to have sex".

The genes likely influence such factors as the age at which puberty hits, and whether or not you possess a risk-taking personality.

The average age of sexual maturity for both genders has decreased from about 18 years in 1880, to 12.5 in 1980, according to the study authors.

Scientists have blamed changes in nutrition and the larger physical size of children today, as well as exposure to hormone-disrupting chemicals.

Ong and a team analysed the genes of more than 125,000 participants in a British health study, and noted an association between 38 gene variants and the age at which they first had intercourse.

They cross-checked this with gene datasets for 241,000 people in Iceland and 20,000 in the United States, for a total sample size of over 380,000 people.

"We found that the size of the influence of [genetic factors](#) remained

constant across decades of growing up, from the 1950s to the 1980s—this shows that genetic factors are relevant across a wide range of cultures and social attitudes," Ong said.

Beyond socio-cultural factors

Many of the gene variants were also linked to other reproductive traits, such as age at birth of one's first child, and the number of children borne, they found.

The research was published in the journal *Nature Genetics*.

Previous research had shown that people who start having sex at a young age are more likely to underperform at school and have poorer physical and mental health.

Early onset puberty has been linked to a higher risk for diabetes, heart disease and some cancers.

But most research so far has focused on the socio-cultural causes for teenage sex.

The team said it hoped the findings will help identify and help children more prone, genetically and otherwise, to engage in risky behaviour.

More information: Physical and neurobehavioral determinants of reproductive onset and success, *Nature Genetics*, nature.com/articles/doi:10.1038/ng.3551

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