How your DNA influences your sex life

18/4/16

[**Karen Kaplan**](http://www.latimes.com/la-bio-karen-kaplan-staff.html#nt=byline)[**Contact Reporter**](mailto:karen.kaplan@latimes.com?subject=Regarding:%20%22How%20your%20DNA%20influences%20your%20sex%20life%22)

Your DNA doesn’t determine when you lose your virginity, but it may play a larger role in the matter than scientists had thought.

A new study identifies 38 specific places in the human genome that appear to be associated with the age at which people first had sex. These spots affect a range of genes, including some that seem to affect the timing of puberty and others that have been linked with risk-taking behavior.

Altogether, the influence of these DNA variants accounts for about one-quarter of the variation in how old people are when they have sex for the first time, according to the [study published Monday](http://www.nature.com/ng/journal/vaop/ncurrent/full/ng.3551.html) in the journal Nature Genetics. Environmental and cultural factors, along with individual choice, explain the rest, the study authors said.

“While social and cultural factors are clearly relevant, we show that age at first sexual intercourse is also influenced by genes,” [John Perry](http://www.mrc-epid.cam.ac.uk/people/john-perry/), a researcher at the University of Cambridge in England, said in a statement.

Perry and his colleagues singled out these 38 pieces of DNA with the help of more than 125,000 contributors to the[UK Biobank](http://www.ukbiobank.ac.uk/about-biobank-uk/). Each of these volunteers -- all between the ages of 40 and 69 -- provided a blood sample for genetic analysis. They also reported how old they were when they lost their virginity. (The median age was 18 for both men and women in the study.)

The researchers sorted through all that data to find associations between specific DNA variants and the age at first sex, or AFS. Thirty-three of the variants were found in both men and women (though sometimes to differing degrees); four were seen in men only, and one was unique to women.

To see if their findings were just a fluke, they tested those same genetic variants in two other large groups -- Americans in the [Women’s Genome Health Study](http://www.clinchem.org/content/54/2/249.long) and Icelanders working with scientists at [DeCode Genetics](http://www.decode.com/research/" \t "_blank). (Although these people hadn’t said how old they were when they first had sex, they did say how old they were when their first child was born, and the two traits have a strong genetic correlation.) Sure enough, the analysis confirmed all 38 variants, according to the study.

The researchers also noted that DNA’s influence on the age at which someone loses their virginity has remained stable -- with heritability explaining about 26% to 28% of the variation -- even as cultural influences have caused people to start having sex at younger and younger ages.

“We show that a substantial proportion of variation in AFS is due to genetic factors, which likely act through a variety of biological mechanisms,” the study authors concluded.

Others were more skeptical about the results. The fact that the study turned up so many variants related to age at first sex was a red flag for [Alicia Smith](http://psychiatry.emory.edu/faculty/smith_alicia.html), who investigates the genetic roots of psychiatric disorders at Emory University in Atlanta.

“In many cases, this indicates that the statistical model used to test the association doesn’t fit the data and that there are false positives in the results,” said Smith, who wasn’t involved in the research.

Though the report focuses on the role of genetics, she said the findings also suggest this role is rather limited. The study “supports the idea that the age at which a man or woman first has sex is overwhelmingly due to non-genetic factors, such as social or environmental context,” she said.

But understanding the genetic factors is important, the study authors explained, because when DNA predicted an earlier sexual debut, people also had a few strikes against them. For instance, the researchers found that people with these variants were 26% less likely to qualify for college admission and 33% more likely to start smoking.

Knowing this might help researchers identify teens who could benefit most from programs aimed at promoting healthy behaviors, the study authors said.