

# Prevalence of homosexuality in men is stable throughout time since many carry the genes

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Around half of all heterosexual men and women potentially carry so-called homosexuality genes that are passed on from one generation to the next. This has helped homosexuality to be present among humans throughout history and in all cultures, even though homosexual men normally do not have many descendants who can directly inherit their genes. This idea is reported by Giorgi Chaladze of the Ilia State University in Georgia, and published in Springer's journal *Archives of Sexual Behavior*. Chaladze used a computational model that, among others, includes aspects of heredity and the tendency of homosexual men to come from larger families.

According to previous research, sexual orientation is influenced to a degree by genetic factors and is therefore heritable. Chaladze says this poses a problem from an evolutionary perspective, because [homosexual men](#) tend not to have many offspring to whom they can provide their [genetic material](#). In fact, they have on average five times fewer children than their heterosexual counterparts.

Chaladze used an individual-based genetic model to explain the stable, yet persistent, occurrence of [homosexuality](#) within larger populations. He took into account findings from recent studies that show that homosexual men tend to come from larger families. These suggest that the genes responsible for homosexuality in men increase fecundity (the actual number of children someone has) among their female family members, who also carry the genes. Other reports also suggest that many [heterosexual men](#) are carriers of the genes that could predispose

someone to homosexuality.

Based on Chaladze's calculations, male homosexuality is maintained in a population at low and stable frequencies if half of the men and roughly more than half of the women carry genes that predispose men to homosexuality.

"The trend of female family members of homosexual men to have more offspring can help explain the persistence of homosexuality, if we also consider that those males who have such genes are not always homosexuals," says Chaladze.

The possibility that many heterosexual men are carriers can also explain why estimates of the number of men who have reported any same-sex [sexual behavior](#) and same-sex sexual attraction are much higher than estimates of those who self-identify as homosexual or bisexual. According to Chaladze, non-homosexual male carriers might sometimes manifest interest in [homosexual behavior](#) without having a homosexual identity.

The possibility that a large percentage of heterosexual people are carriers of genetic material predisposing to homosexuality has implications for genomic studies. Researchers should therefore consider including participants who do not have homosexual relatives in such studies.

**More information:** Chaladze, G. (2016). Heterosexual Male Carriers Could Explain Persistence of Homosexuality in Men: Individual-Based Simulations of an X-Linked Inheritance Model, *Archives of Sexual Behavior*. [DOI: 10.1007/s10508-016-0742-2](https://doi.org/10.1007/s10508-016-0742-2)

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