

# Gene variants identified that may influence sexual orientation in men and boys

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(Medical Xpress)—A large team of researchers from several institutions in the U.S. and one each from Australia and the U.K. has found two gene variants that appear to be more prevalent in gay men than straight men, adding further evidence of sexual orientation having a biological component. In their paper published in *Scientific Reports*, the group describes their study, which consisted of comparing the genomes of multiple gay men against multiple straight men.

The results by the group represent the first identification of specific [genes](#) as perhaps influencing [sexual orientation](#) in males. The finding was made as part of a study of DNA samples from 1231 straight men and 1077 gay men. The team reports that they did not focus exclusively on any one part of the genome, instead scanning the entire genome looking for differences in single letters rather than whole [chromosomes](#), as has been done in the past. Doing so, the team further reports, allowed them to identify two gene variants that seemed to be linked to sexual orientation.

One of the genes is located on chromosome 13, which prior research has shown has an impact on the diencephalon, a part of the hypothalamus—a part of the brain shown to be differently sized between gay and straight men. The other gene was found on chromosome 14, which prior research has shown is mainly involved with the thyroid, though it does also have an impact on the brain via a protein involved in stimulating the thyroid. Some prior studies have led to findings that suggest the [thyroid](#) might also be involved in sexual orientation.

The findings by the team do not settle the argument of whether homosexuality in people is biology-based, but instead offers more [evidence](#) that suggests it is likely the case. Prior studies that looked at family histories have also offered some evidence of biology playing a role while other studies have found some differences in chromosomes. In this study, the number of samples tested was too small to offer conclusive evidence—larger studies will have to be undertaken to solidify the evidence.

**More information:** Genome-Wide Association Study of Male Sexual Orientation, *Scientific Reports* (2017). [DOI: 10.1038/s41598-017-15736-4](#)

## **Abstract**

Family and twin studies suggest that genes play a role in male sexual orientation. We conducted a genome-wide association study (GWAS) of male sexual orientation on a primarily European ancestry sample of 1,077 homosexual men and 1,231 heterosexual men using Affymetrix single nucleotide polymorphism (SNP) arrays. We identified several SNPs with p

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