

Study shows rate of extreme inbreeding in the U.K. and possible health impacts of it

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A team of researchers has found a way to gauge the rate of extreme inbreeding (EI) in the U.K. and its possible health repercussions. In their paper published in the journal *Nature Communications*, the group

describes their study of data from the U.K. Biobank and what they found.

The researchers began their study by noting that not a lot of research has been done surrounding EI, which they define as reproduction between people that are closely related, such as siblings or aunts or uncles. They note that EI is considered taboo in most societies, and is very often outlawed. This has led to [limited information](#) on the topic. To learn more about EI in the U.K., the researchers turned to the U.K. Biobank, which contains information from approximately 450,000 voluntary participants, all of whom have European ancestry.

In sifting through the data in the Biobank, the researchers looked at [genetic information](#), specifically, for large runs of homozygosity—an indicator of close family ties between parents. They report that they found 125 cases of individuals who they believed were the product of inbreeding—a rate of one in 3,652. That number differs significantly from police incest reports, which show a rate of one in 5,247.

The researchers then looked at the health histories of those individuals and compared them with people in society at large. They report that they found that such individuals were at a slightly higher risk of a variety of health effects. They were on average slightly shorter, were less smart, and were less able to reproduce. They also were more likely to have lung function problems and were more likely to contract diseases than the average person.

The researchers acknowledge that their dataset might have been somewhat limited—people who volunteer to be tested and have their data added to the Biobank tend to be wealthy, healthy and more highly educated. That could have skewed the results. If so, the researchers suggest it likely skews low, because those with more [health problems](#) due to inbreeding would not volunteer to as participants. They conclude by

claiming that their study backs up claims of the ill health effects of inbreeding.

More information: Loic Yengo et al. Extreme inbreeding in a European ancestry sample from the contemporary UK population, *Nature Communications* (2019). [DOI: 10.1038/s41467-019-11724-6](https://doi.org/10.1038/s41467-019-11724-6)

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