

Long-term use of hormonal contraceptives is associated with an increased risk of brain tumors

January 22 2015

Taking a hormonal contraceptive for at least five years is associated with a possible increase in a young woman's risk of developing a rare tumour, glioma of the brain. This project focussed on women aged 15 -49 years and the findings are published in the *British Journal of Clinical Pharmacology*.

Hormonal contraceptives, including [oral contraceptives](#), contain female sex hormones and are widely used by [women](#) all over the world. While only a little is known about the causes of glioma and other brain tumours, there is some evidence that female sex hormones may increase the risk of some cancer types, although there is also evidence that contraceptive use may reduce the risk in certain [age](#) groups. "This prompted us to evaluate whether using hormonal contraceptives might influence the risk of gliomas in women of the age range who use them," says research team leader Dr David Gaist of the Odense University Hospital and University of Southern Denmark.

In this project, the researchers drew data from Denmark's national administrative and health registries, enabling them to identify all the women in Denmark who were between 15 and 49 years of age and had a first-time diagnosis of glioma between 2000 and 2009. They found 317 cases and compared each of these women with eight age-matched women who didn't have gliomas.

"It is important to keep this apparent increase in risk in context," says Dr Gaist. "In a population of women in the reproductive age, including those who use hormonal contraceptives, you would anticipate seeing 5 in 100,000 people develop a glioma annually, according to the nationwide Danish Cancer Registry."

"While we found a statistically significant association between [hormonal contraceptive](#) use and glioma risk, a risk-benefit evaluation would still favour the use of hormonal contraceptives in eligible users," says Dr Gaist, who points out that it is important to carry on evaluating long-term contraceptive use in order to help women choose the best contraception for them.

Dr Gaist also emphasizes that the findings need to be interpreted with care, as discussed in the published research paper. "Despite that, we feel our study is an important contribution and we hope that our findings will spark further research on the relationship between female hormonal agents and glioma risk," he says.

More information: Andersen L., Friis S., Hallas J., Ravn P., Kristensen B. & Gaist D. 2014. Hormonal contraceptive use and risk of glioma among younger women: a nationwide case-control study. *BJCP*. [DOI: 10.1111/bcp.12535](https://doi.org/10.1111/bcp.12535)

Provided by Wiley

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