

Painkillers during pregnancy lead to early puberty in girls

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The more weeks a woman takes pain-relieving medication during pregnancy, the earlier their daughters enter puberty. This is shown by a new study from Aarhus University.

For the majority of [girls](#), [puberty](#) begins when they are around 10 or 11

years old. Puberty onset can be earlier if the mother has taken painkillers containing paracetamol during pregnancy. Researchers from Aarhus University examined the correlation between the intake of the analgesic paracetamol during pregnancy and pubertal [development](#) in boys and girls. The results have just been published in the *American Journal of Epidemiology*.

"We found a dose-response correlation. That is to say, the more weeks with paracetamol during pregnancy, the earlier puberty in girls, but not in boys," says Ph.D. student Andreas Ernst from the Department of Public Health, Aarhus University, who is behind the study.

The study is based on the largest collection of puberty data in the Danish birth cohort (BSIG.dk). A group of around 100,000 women provided detailed information about their use of paracetamol three times during their pregnancy. A total of 15,822 children, 7,697 boys and 8,125 girls born to these mothers between 2000 to 2003 were followed from the age of 11 and throughout puberty with questionnaires every six months about several different aspects of their development.

The study showed that girls on average enter puberty between 1.5 and three months earlier if the mother took painkillers for more than 12 weeks during pregnancy.

"While entering puberty 1.5 to three months earlier may seem unimportant, when taken together with the frequent use of paracetamol during pregnancy, our findings ought to make people take notice. Our results are certainly not the decisive factor that should change current practice, but the perception of paracetamol as a safe and harmless choice during pregnancy ought to be challenged," explains Andreas Ernst.

Worldwide, the average consumption of paracetamol has been increasing, and studies suggest that more than 50 percent of pregnant

women make use of painkillers containing [paracetamol](#) at least once during their [pregnancy](#). "As earlier pubertal development has previously been tied to an increased risk of more frequent and serious diseases in adulthood such as obesity, diabetes, cardiovascular diseases and testicular and breast cancer, it's important to identify possible causes of [early puberty](#) so we can prevent this development," says Andreas Ernst.

More information: Andreas Ernst et al, Acetaminophen (Paracetamol) Exposure During Pregnancy and Pubertal Development in Boys and Girls From a Nationwide Puberty Cohort, *American Journal of Epidemiology* (2018). [DOI: 10.1093/aje/kwy193](https://doi.org/10.1093/aje/kwy193)

Provided by Aarhus University

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