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## Article Details

**Title:** Maternal use of oral contraceptives and risk of birth defects in Denmark: prospective, nationwide cohort study.

**Authors:**

**Source:** BMJ. 2016 Jan 6;352:h6712. doi: 10.1136/bmj.h6712.

**Relevance Rating:** 7.00

**Newsworthiness Rating:** 6.00

**Abstract:**

**STUDY QUESTION:** Is oral contraceptive use around the time of pregnancy onset associated with an increased risk of major birth defects? **METHODS:** In a prospective observational cohort study, data on oral contraceptive use and major birth defects were collected among 880 694 live births from Danish registries between 1997 and 2011. We conservatively assumed that oral contraceptive exposure lasted up to the most recently filled prescription. The main outcome measure was the number of major birth defects throughout one year follow-up (defined according to the European Surveillance of Congenital Anomalies classification). Logistic regression estimated prevalence odds ratios of any major birth defect as well as categories of birth defect subgroups. **STUDY ANSWER AND LIMITATIONS:** Prevalence of major birth defects (per 1000 births) was consistent across each oral contraceptive exposure group (25.1, never users; 25.0, use >3 months before pregnancy onset (reference group); 24.9, use 0-3 months before pregnancy onset (that is, recent use); 24.8, use after pregnancy onset). No increase in prevalence of major birth defects was seen with oral contraceptive exposure among women with recent use before pregnancy (prevalence odds ratio 0.98 (95% confidence interval 0.93 to 1.03)) or use after pregnancy onset (0.95 (0.84 to 1.08)), compared with the reference group. There was also no increase in prevalence of any birth defect subgroup (for example, limb defects). It is unknown whether women took oral contraceptives up to the date of their most recently filled prescription. Also, the rarity of birth defects made disaggregation of the results difficult. Residual confounding was possible, and the analysis lacked information on folate, one of the proposed mechanisms. **WHAT THIS STUDY ADDS:** Oral contraceptive exposure just before or during pregnancy does not appear to be associated with an increased risk of major birth defects. **FUNDING, COMPETING INTERESTS, DATA SHARING:** BMC was funded by the Harvard T H Chan School of Public Health's Maternal Health Task Force and Department of Epidemiology Rose Traveling Fellowship; training grant T32HD060454 in reproductive, perinatal, and paediatric epidemiology and award F32HD084000 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development; and grant T32CA09001 from the National Cancer Institute. The authors have no competing interests or additional data to share.

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