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Oral contraceptive use not linked to major birth defects

The study's findings should reassure patients and doctors, say experts

Oral contraceptive use just before or during pregnancy is not associated with an increased risk of major birth defects, suggest the findings of a study published in **The BMJ** this week.

Oral contraceptives are a leading form of contraception worldwide. When used properly, these are over 99% effective.

However, around 9% of women become pregnant in the first year of use because of missing a dose, taking the pill with certain other medications, or illnesses.

When planning a pregnancy, most women stop using oral contraceptives, and usually become pregnant within a few months.

Despite decades of research on the safety of oral contraceptive use, little is known about the association between these drugs that contain sex hormones, and major birth defects, especially among these women who become pregnant while taking the drug or after recently stopping use.

So a team of US and Danish researchers carried out a large prospective observational study to examine the association between oral contraceptive use around the time of conception, and into pregnancy, with major birth defects.

All live births, birth defects, and maternal medical conditions were analysed from several national Danish medical registries between 1997 and 2011.

The final analyses included 880,694 liveborn infants, 2.5% of whom had a major birth defect—like an orofacial cleft or limb defect—within the first year of life

Infants with birth defects with known causes, such as fetal alcohol syndrome, or chromosomal aberrations, were excluded.

Recent oral contraceptive use less than three months before the pregnancy or use during early pregnancy was analysed based on prescription information from a national registry.

In total, 68% of mothers used oral contraceptives, but stopped more than three months before pregnancy, and 21% never used oral contraceptives.

Overall, 8% recently stopped using oral contraceptives within 0-3 months before pregnancy, and 1% used oral contraceptives beyond pregnancy—both these categories were analysed as exposed.

Findings from the study revealed no increased risk of any major birth defect associated with oral contraceptive exposure.

The prevalence of major birth defects, per 1000 births, was consistent across each group: 25.1 for never users, 25.0 for oral contraceptive use more than three months before pregnancy, 24.9 for oral contraceptive use within 0-3 months before pregnancy, and 24.8% for oral contraceptive use after

pregnancy.

Other risk factors for birth defects and those that increase the likelihood of contraceptive use were adjusted for.

These factors included age at pregnancy, place of birth, level of education, household income, history of birth defects from previous pregnancies, smoking in pregnancy, and healthcare use such as prescription drug use and hospital admissions.

This is an observational study so no definitive conclusions can be made about cause and effect.

Nevertheless, the authors say the findings should reassure "women who have a breakthrough pregnancy during oral contraceptive use or even [those who] intentionally become pregnant within a few months of stopping oral contraceptive use [because] any exposure is unlikely to cause her fetus to develop a major birth defect."

[Ends]

Note to Editors:

Article: Maternal use of oral contraceptives and risk of birth defects in Denmark: prospective, nationwide cohort study
<http://www.bmj.com/cgi/doi/10.1136/bmj.h6712>

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