

**ASTHMA IN CHILDREN BORN AFTER INFERTILITY AND ASSISTED REPRODUCTIVE TREATMENT (ART): EVIDENCE FROM THE MILLENNIUM COHORT STUDY**

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**Background:** Recent reports suggest an excess risk of asthma in children born after assisted reproductive treatment (ART). Using data from a large UK cohort we examine asthma in children born after infertility and ART.

**Methods:** Children were recruited at 9months, and surveyed at 5 and 7years. Mothers reported pregnancy planning, time to conception (TTC) and fertility treatment. They were then grouped into 'unplanned', 'planned', 'TTC ≤12months', 'TTC >12months', ovulation induction used (OI) and ART required. At age 5 and 7 mothers were asked if their child had asthma or related symptoms, using validated questions from the ISAAC questionnaire.

Data were available for 14,248 children at age 5, and 12,986 at age 7. Logistic regression was used to estimate odds ratios, adjusting for family history of asthma, socioeconomic, pregnancy-related and environmental risk factors.

**Results:** 58% of pregnancies were planned: 52% with TTC ≤12months, 4% with TTC >12months, 1% following OI and 1% after ART. In general, children born after ART had older, wealthier, more highly educated parents who were less likely to smoke, less likely to have asthma themselves, and more likely to breastfeed than the planned, TTC < 12month group. ART children had a higher risk of asthma at age 5 (adjusted OR2.2 (95%CI: 1.3, 4.0)) and age 7 (adjusted OR1.7 (95%CI: 1.0, 3.0)). There was no excess risk observed in children born after prolonged TTC or OI.

**Conclusions:** Children born after ART may have an increased risk of asthma, even after controlling for confounding other risk factors.