

Maternal asthma medication associated with premature births, small birth weight in infants

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Pregnant women stopping asthma medicines may be at risk of preterm birth. Picture description: Pregnant woman pictured holding pill packet. Credit: Swansea University distributed under a CC-BY licence

Prescriptions for asthma medicines, whether continued or discontinued during pregnancy, are associated with premature births and small birth weight, according to a new study published this week in the open-access journal *PLOS ONE* by Sue Jordan of Swansea University and colleagues.

The prevalence of [asthma](#) in pregnancy has increased worldwide in recent years and there is no consensus on the effect of asthma or [asthma medications](#) on perinatal outcomes. However, it is known that medicines prescribed for asthma can cross the placenta.

In the new study, researchers analyzed all births in Wales after 24 gestational weeks between January 2000 and December 2010, with associated maternal prescription data (117,717 births). Exposure to any asthma medication was defined as the woman having been prescribed at least one asthma medicine in the three trimesters of

pregnancy. Pregnancies terminated for [fetal anomalies](#), infants with congenital anomalies, pregnancies that were not singletons, and those exposed to other drugs or substances associated with perinatal outcomes were excluded.

Prescriptions for asthma were associated with [birth](#) before 32 weeks gestation (aOR 1.33, 95%CI 1.10-1.61) and birthweights below the 10th percentile (aOR 1.10, 95%CI 1.03-1.18). Moreover, the discontinuation of asthma [medicine](#) during pregnancy was associated with both birth before 32 weeks (aOR 1.53, 95%CI 1.11-2.10) and birth before 37 weeks gestation (aOR 1.22, 95%CI 1.06-1.41). Stillbirth was also more prevalent among women prescribed asthma medicines than the unexposed population (aOR 1.56, 95%CI 1.21-2.00), particularly if the medicines had been discontinued during pregnancy (aOR 1.91, 95%CI 1.29-2.82). The authors conclude that increased monitoring, targeted support and active asthma management are needed before, during and after pregnancy.

The authors add: "This analysis of prescription records for over 100,000 pregnancies found that women who stopped their asthma medicines during [pregnancy](#) were at increased risk of preterm birth and not breastfeeding at 6-8 weeks, whereas women who continued with their inhaled corticosteroids were at lower risk. Prescriptions records could be used to identify the women who need extra help and support."

More information: Davies G, Jordan S, Thayer D, Tucker D, Humphreys I (2020) Medicines prescribed for asthma, discontinuation and perinatal outcomes, including breastfeeding: A population cohort analysis. *PLoS ONE* 15(12): e0242489. doi.org/10.1371/journal.pone.0242489

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