



Preterm birth and asthma and COPD in adulthood: a nationwide register study from two Nordic countries

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In this population-based study of 2.4 million people from Finland and Norway, adults born preterm were at higher risk for asthma and COPD at ages 18–50 years. The risks were observed across all gestational ages before full term in a dose-response manner. <https://bit.ly/3YqnUGe>

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Abstract

Background Preterm birth affects lungs in several ways but few studies have follow-up until adulthood. We investigated the association of the entire spectrum of gestational ages with specialist care episodes for obstructive airway disease (asthma and chronic obstructive pulmonary disease (COPD)) at age 18–50 years.

Methods We used nationwide registry data on 706 717 people born 1987–1998 in Finland (4.8% preterm) and 1 669 528 born 1967–1999 in Norway (5.0% preterm). Care episodes of asthma and COPD were obtained from specialised healthcare registers, available in Finland for 2005–2016 and in Norway for 2008–2017. We used logistic regression to estimate odds ratios (ORs) for having a care episode with either disease outcome.

Results Odds of any obstructive airway disease in adulthood for those born at <28 or 28–31 completed weeks were 2–3-fold of those born full term (39–41 completed weeks), persisting after adjustments. For individuals born at 32–33, 34–36 or 37–38 weeks, the odds were 1.1- to 1.5-fold. Associations were similar in the Finnish and the Norwegian data and among people aged 18–29 and 30–50 years. For COPD at age 30–50 years, the OR was 7.44 (95% CI 3.49–15.85) for those born at <28 weeks, 3.18 (95% CI 2.23–4.54) for those born at 28–31 weeks and 2.32 (95% CI 1.72–3.12) for those born at 32–33 weeks. Bronchopulmonary dysplasia in infancy increased the odds further for those born at <28 and 28–31 weeks.

Conclusion Preterm birth is a risk factor for asthma and COPD in adulthood. The high odds of COPD call for diagnostic vigilance when adults born very preterm present with respiratory symptoms.

