




Chlamydia trachomatis during pregnancy and childhood asthma-related morbidity: a population-based prospective cohort

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***Chlamydia trachomatis* infection during pregnancy is associated with increased odds of wheezing and asthma, and impaired lung function in childhood, and may be a target for prevention strategies focused on improving offspring respiratory health** <https://bit.ly/34fSXda>

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ABSTRACT

Introduction: *Chlamydia trachomatis* is the most commonly reported sexually transmitted disease and although infection during pregnancy is associated with neonatal complications, long-term respiratory consequences are unknown. We aimed to determine whether *C. trachomatis* infection during pregnancy is associated with asthma-related symptoms across childhood

Methods: This study among 2475 children and their mothers was embedded in a population-based prospective cohort study. Maternal urine samples were tested for *C. trachomatis* infection during pregnancy. Questionnaires provided information on childhood physician-attended lower respiratory tract infections and wheezing, and current asthma at age 10 years. Lung function was measured by spirometry at age 10 years.

Results: The prevalence of *C. trachomatis* infection during pregnancy was 3.2% (78 out of 2475). *C. trachomatis* infection during pregnancy was not associated with lower respiratory tract infections until age 6 years, but was associated with a higher odds of wheezing in children until age 10 years (OR 1.50 (95% CI 1.10–2.03)). *C. trachomatis* infection during pregnancy was associated with an increased odds of asthma (OR 2.29 (95% CI 1.02–5.13)), and with a lower forced expiratory volume in 1 s/forced vital capacity and forced expiratory flow at 75% of forced vital capacity (z-score difference –0.28 (95% CI –0.52––0.04) and –0.24 (95% CI –0.46––0.01), respectively) in children at age 10 years. The observed associations were only partly explained by mode of delivery, gestational age at birth or birthweight.

Conclusions: *C. trachomatis* infection during pregnancy is associated with increased odds of wheezing, asthma and impaired lung function. The causality of the observed associations and potential underlying mechanisms need to be explored.