

**CONCLUSIONS.** Extreme preterm birth (23–27 weeks' gestation) but not later preterm birth is associated with an increased risk of asthma, at least in young adulthood.

**REVIEWER COMMENTS.** This is the first study with adequate statistical power to evaluate the risk of asthma beyond adolescence in people who were born extremely prematurely. A meta-analysis of 19 previous studies revealed an overall odds ratio of 1.07 for risk of asthma when comparing people born at gestational ages of <37 weeks to those born at ≥37 weeks (*J Allergy Clin Immunol.* 2006;118[4]:823–830), but this study did not disclose specific data for extremely preterm children. One possible explanation for the findings in the Crump et al study is that preterm birth and asthma might share common genetic determinants. The results of at least 2 previous studies suggest that maternal asthma might be associated with preterm delivery (*Thorax.* 1995;50[5]:525–530 and *Am J Obstet Gynecol.* 2001;184[2]:90–96). Other studies reported that maternal asthma is associated with an increased risk of asthma in their children (*Am J Respir Crit Care Med.* 1998;157[4 pt 1]:1073–1078 and *Environ Health Perspect.* 2001;109[6]:579–582).

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### Lung Function and Respiratory Symptoms at 11 Years in Children Born Extremely Preterm: The Epicure Study

Fawke J, Lum S, Kirkby J, et al. *Am J Respir Crit Care Med.* 2010;182(2):237–245

**PURPOSE OF THE STUDY.** More extremely preterm (EP) infants (≤25 weeks' gestational age) are surviving. What becomes of these children in terms of lung function?

**METHODS.** This was a national cohort study that involved all infants born at ≤25 completed weeks' gestation in the United Kingdom and Ireland between March and December 1995 ( $N = 182$ ). At the age of 11 years, parents completed a questionnaire and the children performed spirometry. Schoolmates born at term matched for age, gender, and ethnic origin served as controls. Current asthma was defined as "use of asthma medication or wheeze in the past 12 months by children with a doctor diagnosis of asthma, or use of asthma medication and wheeze in the past 12 months even if no prior diagnosis of asthma."

**RESULTS.** Twice as many EP-born children (25% vs 13%;  $P < .01$ ) had current asthma. Baseline spirometry was reduced (forced expiratory volume in 1 second [FEV<sub>1</sub>] 83% vs 100% of predicted;  $P < .001$ ) and bronchodilator responsiveness (>12% increase in FEV<sub>1</sub>) was increased (27% vs 8%;  $P < .001$ ) in EP-born children. These changes

were most marked in those with previous bronchopulmonary dysplasia. Fifty-six percent of EP-born children had abnormal baseline spirometry results, but fewer than half of them were receiving any medication.

**CONCLUSIONS.** After extremely preterm birth, impaired lung function and increased respiratory morbidity persist into middle childhood, especially among those with bronchopulmonary dysplasia. Many of these children might not be receiving appropriate treatment.

**REVIEWER COMMENTS.** A large percentage of children who survive being born extremely prematurely go on to have persistent asthma in childhood. An even higher percentage of them have abnormal spirometry results, and many show reversibility with bronchodilator; however, only half of them are on asthma medication, which indicates that they are receiving inadequate treatment. These children deserve close monitoring through history and spirometry to diagnose and treat asthma.

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## DIAGNOSIS AND MANAGEMENT

### Changing Trends in Asthma in 9–12 Year Olds Between 1964 and 2009

Malik G, Tagiyeva N, Aucott L, McNeill G, Turner SW. *Arch Dis Child.* 2011;96(3):227–321

**PURPOSE OF THE STUDY.** This study is a continuation of the Aberdeen Schools Asthma Survey; the first survey was completed in 1964. Subsequent surveys were repeated in 1989, 1994, 1999, and 2004. This survey reports lifetime prevalence of asthma, eczema, hay fever, and wheeze in the previous 3 years. Trends over a 10-year period (1999, 2004, and 2009) were analyzed.

**STUDY POPULATION.** Children aged 9 to 12 years in Aberdeen, United Kingdom, were invited to participate in this study.

**METHODS.** Questionnaires were distributed to children by school staff, completed by parents at home, returned to school staff, and then collected by the research team. The same questionnaire that was used in 2004 was used for this study. In addition, International Study of Allergy and Asthma in Children (ISAAC) questions were included.

**RESULTS.** A total of 2253 children were eligible for the study, and 1196 (53%) of the surveys were returned. The average age of the children was 10.8 years, and 588 (49%) of them were male. Of 31 eligible primary schools, 26 participated in the study. The number of schools that participated was similar to the number that participated

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