
 **Air pollution does not increase asthma risk** (*Environ Int.* 2020 Jan 18;136:105474)


There is uncertainty regarding the role of air pollution on pediatric asthma and allergic conditions, especially as air pollution levels have started to decrease in recent decades in many parts of the world. In five European countries, the association of long-term air pollution levels at the home with pediatric eczema, rhinoconjunctivitis and asthma prevalence in five birth cohorts was studied. Current eczema, rhinoconjunctivitis and asthma were assessed in children aged four ( $n = 6527$ ) and eight years ( $n = 2489$ ). Individual outdoor levels of nitrogen dioxide (NO<sub>2</sub>), nitrogen oxides, mass of particulate matter with a diameter <10  $\mu\text{m}$  (PM<sub>10</sub>), 10-2.5  $\mu\text{m}$  (PM<sub>coarse</sub>) and <2.5  $\mu\text{m}$  (PM<sub>2.5</sub>), and PM<sub>2.5</sub> absorbance were assigned to the birth, four- and eight-year home addresses using highly defined spatial air pollution exposure models. The overall prevalence of pediatric eczema, rhinoconjunctivitis and asthma at four years was 15.4%, 5.9% and 12.4%. No increase was found in the prevalence of these outcomes at four or eight years with increasing air pollution exposure.

In this large meta-analysis of five birth cohorts, there was no indication of adverse effects of long-term air pollution exposure on the prevalence of current pediatric eczema, rhinoconjunctivitis or asthma.

 **High flow nasal cannula for bronchiolitis** (*Eur J Pediatr.* 2019 Dec 11. doi: 10.1007/s00431-019-03533-2)

Continuous positive airway pressure (CPAP) has been used in infants with bronchiolitis for decades. Recently, high flow nasal cannula (HFNC) therapy has been introduced. In this study, 50 children with bronchiolitis were randomized to treatment with CPAP or HFNC. Objectives were to compare the respiratory rate, pCO<sub>2</sub>, and Modified Woods Clinical Asthma Score (M-WCAS) in groups receiving CPAP or HFNC. Neonatal Infant Pain Score (NIPS), treatment duration, treatment failure, and hospitalization length were also compared. No differences were observed in development of respiratory rate, pCO<sub>2</sub>, or M-WCAS. NIPS was higher in the CPAP group. Treatment failure was scarce in both groups. No significant differences in treatment duration or length of hospitalization were observed.

In infants and young children with bronchiolitis, HFNC may be an effective and pleasant alternative to CPAP. Larger multicenter studies are needed to further explore differences in treatment failure and treatment duration.

 **Breast feeding delays menopause** (*JAMA New Open.* 2020;3(1):e1919615)


Pregnancy and breastfeeding prevent ovulation and may slow the depletion of the ovarian follicle pool. These factors may lower the risk of early menopause, a condition associated with increased risk of cardiovascular disease and other adverse health outcomes.

In this study the association of parity and breastfeeding with the risk of early menopause was studied.

This population-based cohort study within the Nurses' Health Study II cohort (1989-2015) included premenopausal participants who were aged 25 to 42 years at baseline. Response rates were 85% to 90% for each cycle, and follow-up continued until menopause, age 45 years, hysterectomy, oophorectomy, death, cancer diagnosis, loss to follow-up, or end of follow-up in May, 2015. History and duration of total and exclusive breastfeeding were assessed three times during follow-up. Menopause status and age were assessed every 2 years.

In a stratified analysis of parous women, risk of early menopause was lowest among those reporting exclusive breastfeeding for 7 to 12 months in each level of parity (women with 2 pregnancies and 7-12 months of breastfeeding: HR, 0.79; 95% CI, 0.66-0.96;  $\geq 3$  pregnancies and 7-12 months of breastfeeding: HR, 0.68; 95% CI, 0.52-0.88; 2 pregnancies and  $\geq 13$  months of breastfeeding: HR, 0.87; 95% CI, 0.66-1.15;  $\geq 3$  pregnancies and 13-18 months of breastfeeding: HR, 0.86; 95% CI, 0.66-1.13; and  $\geq 3$  pregnancies and  $\geq 19$  months of breastfeeding: HR, 0.98; 95% CI, 0.72-1.32).

In this study, an inverse association of parity with risk of early menopause was observed. Breastfeeding was associated with significantly lower risk, even after accounting for parity.

 **Transient elastography for liver fibrosis** (*Eur J Pediatr.* 2020 Jan 21. doi: 10.1007/s00431-019-03561-y)

The objectives of this prospective case-control study were to determine liver stiffness (LSM) by transient elastography (TE) in children with newly diagnosed chronic liver disease (CLD) and to find out normal values in healthy Indian children. Two groups (50 CLD who underwent liver biopsy and 50 healthy children) aged 5-18 years were recruited prospectively. Liver biopsies were scored as per Metavir scoring and compared with TE. The median age of 100 recruited children was 13.6 years. In healthy children, normal LSM was 4.9 (2.5-7.3) kPa with significantly higher LSM in adolescent males (5.6 (4.1-7.3) kPa) as compared with females (4.3 (3.7-4.9) kPa),  $P=0.001$ . In the CLD group, TE was excellent in discriminating significant fibrosis ( $\geq F2$ ) at a cut-off value of 10.6 kPa with area under receiver operating characteristic curve of 0.96. Metavir fibrosis stage and age were independent variables associated with higher LSM in stepwise multiple logistic regression analysis. Normal liver stiffness depends on race, gender, and age. TE is an excellent non-invasive tool to assess significant liver fibrosis and can be used as an alternative to liver biopsy.

This is the first study from India to show the normative data of transient elastography in healthy Indian children.

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