

study design, their findings support the potential benefit of air pollution reduction for asthma control.

REVIEWER COMMENTS. With this study, the authors confirm the association of air pollution with impaired respiratory health in children, both with and without asthma. Regulations for clean air are good policy for children's health.

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Alan Goldsobel, MD
San Jose, CA

The Independent Role of Prenatal and Postnatal Exposure to Active and Passive Smoking on the Development of Early Wheeze in Children

Vardavas CI, Hohmann C, Patelarou E, et al. *Eur Respir J*. 2016;48(1):115-124

PURPOSE OF THE STUDY. To examine the association of maternal passive smoking during pregnancy and wheezing in children up to 2 years.

STUDY POPULATION. The authors of this study included 15 cohorts in the European project Environmental Health Risks in European Birth Cohorts. The cohorts were recruited from 1990 to 2008. A total of 37 459 mother-child pairs were available, and 27 993 had complete data on secondhand smoke exposure and wheeze.

METHODS. Active and passive smoke exposure was obtained from questionnaire data submitted by each cohort. Four exposure definitions were created: prenatal active smoking, prenatal passive smoking, postnatal passive smoking, and unexposed. Eight exclusive exposure groups were created from these definitions. The primary outcome variable was any wheezing during the first 2 years of life by parental self-report. Other variables assessed included sex, family history of atopy, birth weight, gestational age, siblings, and parental education. Multilevel mixed-effects logistic regression was used to examine the effect of exposure to tobacco smoke on the development of wheeze. The model was adjusted for sex, family history of atopy, parental education, birth weight, gestational age, and siblings. Stratified analyses were performed for sex, family history of atopy, and geographic location of the cohorts. A meta-analysis was performed to take into account the heterogeneity between the cohorts.

RESULTS. Compared with the unexposed children, children with maternal prenatal passive exposure to smoking had an 11% increased risk of wheezing up to the age of 2 years (odds ratio [OR] 1.11; 95% confidence interval [CI] 1.03-1.20). Children with maternal prenatal passive smoking and postnatal passive smoking had a 29% increased risk of wheezing compared with unexposed children (OR 1.29; 95% CI 1.19-1.40). The most significant risk was found in children with active prenatal maternal smoking, passive prenatal maternal smoking, and postnatal passive smoking (OR 1.73; 95% CI 1.59-

1.88). The risk of wheezing with smoke exposure was higher among children with a parental history of allergy.

CONCLUSIONS. Maternal passive prenatal smoke exposure is an independent risk factor for the development of wheeze in children up to the age of 2 years. The association was stronger in children with a family history of atopy.

REVIEWER COMMENTS. The authors of this study expand our current understanding of exposure to tobacco smoke and the associated risk of wheeze in children. The authors assessed the type (active versus passive) and time frame (prenatal versus postnatal) of smoke exposure and evaluated the independent and combined effects of these variables. The risk of developing wheezing was highest in children exposed to active and passive smoking both prenatally and postnatally. These findings support the need to protect pregnant women and young children from passive smoke exposure and to further focus efforts on smoking cessation interventions for pregnant women and their partners.

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Brittany Esty, MD
Wanda Phipatanakul, MD, MS
Boston, MA

Perceptions of e-Cigarettes and Noncigarette Tobacco Products Among US Youth

Amrock SM, Lee L, Weitzman M. *Pediatrics*. 2016;138(5):e20154306

PURPOSE OF THE STUDY. Electronic cigarettes are the most commonly used tobacco product among youth in the United States, and the authors of this study sought to determine the perception of youth regarding their harm and addictiveness versus other tobacco products.

STUDY POPULATION. A cross-sectional survey of students in grades 6 to 12 was performed.

METHODS. Data from the 2012 and 2014 National Youth Tobacco Survey were analyzed to describe correlates of perceptions of harm and addictiveness of e-cigarettes, cigars, and smokeless tobacco compared with cigarettes and to assess trends in perceptions of e-cigarettes' harm among different demographic groups.

RESULTS. In 2014, the majority of students (73%) believed that e-cigarettes were less harmful than cigarettes, compared with 20% for smokeless tobacco and 25.8% for cigars. In addition, 47% postulated that e-cigarettes were less addictive than cigarettes, compared with only 14% for smokeless tobacco and 31.5% for cigars. Factors associated with perception of decreased harm and addictiveness included the use of the product, being a boy, being non-Hispanic white, and having a household member who used the product. Between 2012 and 2014, youth increasingly believed that e-cigarettes were less harmful than cigarettes.

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Brittany Esty and Wanda Phipatanakul

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