Childhood stages.

Members on the risk of wheeze and asthma at various prospective impact of smoking by parents or household smoking in individuals up to 18 years of age.

To determine estimates of the prospective impact of smoking by parents or household members on the risk of wheeze and asthma at various childhood stages.

Study Population. Children up to age 18 years exposed to environmental tobacco smoke

Methods. Search of Medline, Embase, and conference abstracts to characterize cohort investigations of the incidence of asthma or wheeze in association with exposure to prenatal or postnatal maternal, paternal, or household smoking in individuals up to 18 years of age.

Results. The authors identified 79 prospective studies. Exposure to pre- or postnatal passive smoke was associated with a 30% to 70% increased risk of incident wheezing (strongest effect from postnatal maternal smoking on wheeze in children aged ≤2 years, odds ratio [OR] = 1.70, 95% confidence interval [CI] = 1.24–2.35, 4 studies) and a 21% to 85% increase in incident asthma (strongest effect from prenatal maternal smoking on asthma in children aged ≤2 years, OR = 1.85, 95% CI = 1.35–2.53, 5 studies).

Conclusions. Exposure to passive smoking increases the incidence of wheeze and asthma in children and young people by at least 20%. Preventing parental smoking is crucially important to the prevention of asthma.

Reviewer Comments. The study is limited by inclusion of atopic pediatric populations and the difficulty in establishing asthma in young children, as well as confounding impact of smoking of mother, father, and or other household members. However, the authors demonstrate, using 9 times more articles than previous studies, that passive smoking has a devastating effect of 28% to 70% enhanced risk of incidence of wheeze and/or asthma. Clearly, action to limit exposure to passive smoke in pediatric populations with chronic respiratory conditions is imperative.

Tobacco and Air Pollution

Prenatal and Passive Smoke Exposure and Incidence of Asthma and Wheeze: Systematic Review and Meta-analysis


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