Childhood Exposure to Secondhand Smoke May Increase Risk of Adult Lung Disease Death



August 16, 2018—A new study suggests that long-term exposure to secondhand smoke during childhood increases the risk of chronic obstructive pulmonary disease (COPD) death in adulthood. The study also suggests secondhand smoke exposure as an adult increases the risk of death not only from COPD but also several other conditions.

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Secondhand smoke is known to have adverse effects on the lung and vascular systems in both children and adults. But it is unknown whether childhood exposure to secondhand smoke is associated with mortality in adulthood. To explore the issue, American Cancer Society epidemiologists led by W. Ryan Diver, MSPH, examined associations of childhood and adult secondhand smoke exposure with death from all causes, ischemic heart disease, stroke, and chronic obstructive pulmonary disease among 70,900 never-smoking men and women from the Cancer Prevention Study II Nutrition Cohort. Study participants, primarily ages 50 to 74 at the beginning of the study, answered questions about their secondhand smoke exposure during childhood and as adults and were followed for 22 years.

Those who reported having lived with a daily smoker throughout their childhood had 31% higher mortality from chronic obstructive pulmonary disease compared to those who did not live with a smoker. In a calculation done for this release, Diver says the increase in COPD mortality corresponds to about 7 additional deaths per year per 100,000 never-smoking study participants. Although the study counted only deaths, the increase in fatal COPD implies that living with a smoker during childhood could also increase risk of non-fatal COPD.

In addition, secondhand smoke exposure (10 or more hours/week) as an adult was associated with a 9% higher risk of all-cause mortality, a 27% higher risk of death from ischemic heart disease, a 23% higher risk of death from stroke, and a 42% higher risk of death from COPD.

“This is the first study to identify an association between childhood exposure to secondhand smoke and death from chronic obstructive pulmonary disease in middle age and beyond,” said Diver. “The results also suggest that adult secondhand smoke exposure increases the risk of chronic obstructive pulmonary disease death. Overall, our findings provide further evidence for reducing secondhand smoke exposure throughout life.”

Article: Secondhand Smoke Exposure in Childhood and Adulthood in Relation to Adult Mortality Among Never Smokers; Ryan Diver, Eric J. Jacobs, Susan M. Gapstur Am J Prev Med 2018;55(3):345-352 doi: 10.1016/j.amepre.2018.05.005

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