

Secondhand smoke exposure in childhood increases lung cancer risk later in life

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Children exposed to secondhand cigarette smoke have an increased risk of developing lung cancer in adulthood, even if they never smoked.

Results of this study are published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research, as part of a special tobacco focus in the December issue.

This year alone, more than 219,000 Americans will be diagnosed with lung cancer; more than 159,000 will die from it and some of those may be people who have never smoked. Studies to date have shown that exposure to [secondhand smoke](#) in adulthood has detrimental health effects, but data are limited on one's risk of developing lung cancer when exposed as a child.

What makes this study different from previous research is that it was conducted in two independent cohorts and included a molecular analysis of gene variants of innate immunity — the mannose binding lectin-2 gene, or MBL2 gene. The MBL2 gene is known to affect susceptibility to respiratory diseases.

Using the ongoing National Cancer Institute-Maryland Lung Cancer study (624 cases; 348 controls), Curtis C. Harris, M.D., chief of the Laboratory of Human Carcinogenesis at NCI, and colleagues collected information on secondhand smoke history among men and women. They used DNA for genotyping the MBL2 gene. Then, to compare, Harris, Ping Yang, M.D., Ph.D., professor of epidemiology at the Mayo Clinic

in Rochester, Minn., and colleagues used results from a Mayo Clinic study (461 never smokers; 172 cases; 289 controls).

Harris and colleagues found an association between childhood exposure to secondhand tobacco smoke and increased risk of [lung cancer](#) in adulthood. Furthermore, MBL2 activity was associated with an even more increased risk among those who were exposed to secondhand smoke in childhood.

Based on the results of this study, Harris said "children should not be exposed to secondhand tobacco smoke due to the long-term health implications they can face in adulthood." He added that these results warrant further investigation in a larger study population.

Source: American Association for Cancer Research ([news](#) : [web](#))

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