

Nicotine Levels Higher in Children Exposed to Secondhand Smoke in the Home

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(PhysOrg.com) -- New research published in Cancer Epidemiology, Biomarkers & Prevention, a journal of the American Association for Cancer Research, supports the World Health Initiative's efforts for a home smoking ban, according to researchers at Johns Hopkins University.

Specifically, hair [nicotine](#) concentrations were higher in children exposed to secondhand smoke at home, and the younger the children, the higher the concentration under the same level of secondhand smoke exposure at home.

"This study provides adequate evidence to support home smoking bans, particularly in homes with small children," said Sungroul Kim, Ph.D., a research associate at the Institute for Global Tobacco Control at the Johns Hopkins Bloomberg School of Public Health.

Kim and colleagues used hair nicotine concentrations as a biomarker of [secondhand smoke](#) exposure, because it is less affected by day-to-day exposure variation compared to the presence of nicotine in other body fluid samples.

The study included 1,284 children from 31 countries in Latin America, Asia, Eastern Europe and the Middle East.

Among the houses with high nicotine concentrations in the indoor air (more than 10 mg/m³ compared with less than 0.01 mg/m³), women had

three times the level of hair nicotine concentrations; children had a 6.8-fold increase in hair nicotine concentrations.

Furthermore, children who were younger than 6 years old had 12 percent higher levels of nicotine concentration than those who were older. Those who spent more than 19 hours a day at home had 15 percent higher levels of nicotine concentration in their hair than those who spent less than 19 hours a day at home after adjusting other explanatory variables.

“Clearly the younger [children](#) are the most at risk; this is a call to action on a global level,” said Kim.

These results were published as part of a special focus on tobacco in the December issue of Cancer Epidemiology, Biomarkers & Prevention.

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

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