



Smokers' Cars Loaded With Nicotine **Levels twice those found in places that permit smoking, study suggests**

By Steven Reinberg
HealthDay Reporter

MONDAY, Aug. 24 (HealthDay News) -- Passengers riding in the cars of smokers are exposed to nicotine levels nearly twice those found in restaurants and bars that permit smoking, a new study suggests.

The dangers of exposure to secondhand smoke are well known, including the risk for heart and respiratory disease, and have led to laws banning smoking in many public places. Many anti-smoking advocates believe the next frontier in the fight against secondhand smoke is in cars.

"These levels of exposure are unacceptable for nonsmoking passengers, particularly children, who are at increased risk for secondhand smoke-related health problems," said study co-author Patrick Breyse, director of the Division of Environmental Health Engineering at the Johns Hopkins University Bloomberg School of Public Health.

Breyse and his co-author Dr. Ana Navas-Acien, an assistant professor of occupational and environmental health at Hopkins, believe that smoking should be banned in cars as it has been in other places.

"The high secondhand tobacco smoke levels measured in this study support the urgent need for smoke-free education campaigns and legislative measures banning smoking in motor vehicles when passengers, especially children, are present," Navas-Acien said.

The report is published in the Aug. 25 online edition of *Tobacco Control*.

For the study, Breyse and Navas-Acien compared nicotine levels in the cars of 17 smokers and five nonsmokers whose commute to and from work took 30 minutes or longer. The researchers placed airborne nicotine samplers in the cars, one near the front passenger seat headrest and another in the back seat behind the driver.

The researchers then analyzed the samples and found a twofold increase in concentrations of nicotine for every cigarette smoked.

Navas-Acien and Breyse estimate that nicotine concentrations are twice as high in smokers' cars as in other public and private places studied, and 40 percent to 50 percent higher than in restaurants and bars that allow smoking.

"While partially opening windows reduced exposure to secondhand smoke it did not eliminate exposure within motor vehicles," Breyse said. "It is important to remember that there is no known safe level of exposure to secondhand smoke."

People in the study also completed a questionnaire that included questions on their knowledge and attitudes about the health risks of secondhand smoke and relevant regulations and legislation. Both

smokers and nonsmokers said smoking in a car posed a health risk to passengers. Among smokers, 53 percent said not being able to smoke in the car would help them to quit, and 93 percent said cars should be smoke-free voluntarily. Only 7 percent of smokers said there should be laws outlawing smoking in cars.

"Results of this research and other studies can be used to develop education campaigns aimed at eliminating secondhand smoke exposure in motor vehicles," Breyse said. "In addition, these results can be used to support legislative efforts aimed at banning smoking in vehicles, particularly when children are present."

Dr. Norman H. Edelman, chief medical officer of the American Lung Association, said "all those people who smoke in cars and think they are protecting the passengers by using AC [air conditioning] or opening the window are wrong and potentially impairing their passengers' health."

Matthew L. Myers, president of the Campaign for Tobacco-Free Kids, called the new study "a rude wake-up call -- cars literally become toxic gas chambers."

Myers also believes that laws banning smoking in cars are needed. "It is appropriate and necessary to ban smoking in cars where children are passengers," he said. "Children are not volunteers in cars. This is a more intense, more dangerous exposure to kids than in any other location."

More information

For more on the health risks of smoking, visit the [**U.S. National Institutes of Health**](#).

SOURCES: Patrick Breyse, Ph.D., professor, and director, division of environmental health engineering, Johns Hopkins University Bloomberg School of Public Health, Baltimore; Ana Navas-Acien, M.D., M.P.H., assistant professor, occupational and environmental health, Johns Hopkins University Bloomberg School of Public Health, Baltimore; Norman H. Edelman, M.D., chief medical officer, American Lung Association, Washington, D.C.; Matthew L. Myers, president, Campaign for Tobacco-Free Kids, Washington, D.C.; Aug. 25, 2009, *Tobacco Control*, online

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V