

Indoor smoking bans: Are they creating unhealthy outdoor zones for secondhand smoke?

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With the growing number of smoking bans in restaurants and bars driving smokers outside, researchers in Athens, Georgia, are hoping to find out whether secondhand smoke from smokers clustered outside these establishments is posing a health hazard of its own.

On Monday, May 22, at the American Thoracic Society 2007 International Conference, the researchers presented findings from a study in which they measured the increase of pollutants from secondhand smoke.

“Athens is a college town, and we have thousands of college kids standing shoulder to shoulder outside bars and restaurants on weekend nights. In select areas outside certain establishments, we believe many of these young people are exposed to elevated levels of secondhand smoke,” says researcher Luke Naeher, Ph.D., of the University of Georgia College of Public Health. “You can have 40 to 50 smokers in a small area— which translates to fairly aggressive exposures to secondhand smoke, even if it’s outside. We want to know what those exposures are, and if it’s unhealthy, we want to tell policy makers who are making decisions about these regulations.”

Athens, which has more than 100 pubs and restaurants, banned smoking in bars and restaurants partially in 2004 and then fully in 2005. Smokers gather in a small common area outside many establishments.

In order to study how much secondhand smoke was being created in these areas, Dr. Naeher and his students measured carbon monoxide and small particles, known as PM_{2.5}, which penetrate deep into the lung. Both substances are found in secondhand smoke, but they are also found in car exhaust. To determine how much of these substances came from smoke, the researchers went downtown for four weekend afternoons and evenings and measured the air in front of five locations, including two restaurants, two bars and one area with no smokers. They measured the particles and carbon monoxide every 30 seconds, and then every five minutes they counted the number of cars, smokers and nonsmokers who passed by.

They found that a rise in the pollutants was associated with an increase in the number of smokers, and not with motor vehicle traffic. “This suggests that we can measure the increase in these pollutants from secondhand smoke,” Dr. Naeher says. The researchers are conducting a follow-up study in which they will collect urine and saliva samples from students to look for chemicals that are specific to cigarette smoke, which should provide more definitive data about how much secondhand smoke people congregating outside bars and restaurants are exposed to.

“There’s a wide range of health effects that are tied to secondhand smoke,” Dr. Naeher says. “With more inside smoking bans, more people seem to be smoking outside. Are we creating zones that are potentially unhealthy” That’s what we’re trying to figure out.”

Source: American Thoracic Society

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