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Study hints at dangers of secondhand smoke

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ATLANTA — The first 800 people in a massive federal study of exposure to tobacco smoke had signs of nicotine in their bodies whether they smoked or not, researchers said yesterday.

"We really weren't expecting that," said Dr. James Pirkle of the Centers for Disease Control and Prevention.

The CDC is testing 23,000 Americans over age 4 for cotinine,

a byproduct of nicotine that is found in blood serum. The researchers found cotinine in all of the first 800 people tested.

The preliminary results came two weeks after an Environmental Protection Agency report that labeled secondhand smoke a carcinogen and said it kills about 3,000 nonsmokers a year from lung cancer alone. Critics have said the EPA failed to document how many people are exposed to secondhand smoke and at what levels.

"What we're doing will meet that objection head-on," Pirkle said. "We have a very sensitive method of measuring exposure that separates active from passive smoke. It will allow us to figure out the extent of the problem using an objective measure — that's a pretty rare thing."

In contrast to many earlier studies that relied on participants to describe their exposure to smoke, the CDC is using sophisticated technology to measure the remnants of smoke in blood serum.

People with more than 10 to 15 nanograms of cotinine per milliliter of serum are usually smokers or use nicotine patches or gum, the CDC said. Levels below 10 to 15 nanograms indicate a person has breathed secondhand smoke. A nanogram is a billionth of a gram.

The 800, aged 4 to 91, had levels that ranged from less than 0.1 to 650 nanograms.

The CDC wouldn't provide any more details, or even give the number of smokers and nonsmok-

ers, saying it was too early to analyze the numbers or draw conclusions.

The CDC will have more figures when the study, which started in 1988, ends next year. Pirkle said. The agency seldom releases such preliminary figures but did so yesterday because it wanted Americans to know it was working to answer questions the EPA report raised about smoke exposure, Pirkle said.

Even the early results were surprising, he said.

"In smaller studies, researchers haven't been able to find cotinine in about 20 or 30 percent of the people," Pirkle said. "It could be that we're using a much more sensitive method to measure cotinine, which picks up previously undetected levels."

In the study, the CDC also gives each person a questionnaire that will help pinpoint the ways nonsmokers with high cotinine levels were exposed. The study also will show what age groups get the most exposure to smoke.

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