Environmental tobacco smoke (ETS), also termed secondhand smoke, harms the health of thousands of Americans each year. ETS is a mixture of the smoke given off by the burning end of cigarettes, pipes, or cigars, and the smoke exhaled from the lungs of smokers. This mixture contains over 4,000 substances. More than 40 of these are known to cause cancer in humans and animals, and many are strong respiratory irritants.

Exposure to secondhand smoke, called involuntary smoking or passive smoking, is concentrated indoors, where ETS is often the most significant pollutant. Indoor levels of the particles you may inhale (the “tars” in the cigarettes) from ETS often exceed the national air quality standard established by EPA for outdoor air. The high levels of carbon monoxide in secondhand smoke also warrant concern.

In January 1993, EPA released an assessment of the health risks of passive smoking in a report entitled Respiratory Health Effects of Passive Smoke: Lung Cancer and Other Disorders. The report summarizes the findings of an extensive investigation conducted by the Agency. It incorporates comments from two open public reviews and recommendations from EPA’s Science Advisory Board—a panel of independent scientific experts in this field. The board endorsed the conclusions of the report and the methodologies used. In particular, the board unanimously endorsed the report’s classification of ETS as a human lung carcinogen.

Based on the overall weight of available scientific evidence, EPA concluded that widespread exposure to secondhand smoke in the United States presents a serious and substantial public health risk.

Secondhand smoke is responsible for approximately 3,000 lung cancer deaths annually in nonsmokers in the United States. ETS is classified as a known human, or Group A, carcinogen under EPA’s carcinogen assessment guidelines. This classification is reserved for those compounds or mixtures that show the strongest evidence of a cause-and-effect relationship in humans. Other agents classified by EPA as Group A carcinogens include radon, asbestos, and benzene, to name a few. Of these ETS is the only one found to cause elevated cancer risks at commonly found indoor levels.

The report also includes the finding that secondhand smoke has subtle but significant other effects on the respiratory health of adult nonsmokers.
These include coughing, phlegm production, chest discomfort, and reduced lung function.

Infants and young children whose parents smoke are among the most seriously affected by exposure to secondhand smoke. They experience an increased risk of lower respiratory tract infections such as pneumonia and bronchitis. EPA estimates that passive smoking is responsible for between 150,000 and 300,000 lower respiratory tract infections in infants and children under 18 months of age annually, resulting in between 7,500 and 15,000 hospitalizations each year. Children who have been exposed to secondhand smoke are also more likely to have reduced lung function and symptoms of respiratory irritation such as cough, excess phlegm, and wheezing. Passive smoking can lead to a buildup of fluid in the middle ear, the single most common cause of hospitalization of children for an operation.

Asthmatic children are especially at risk. EPA estimates that exposure to secondhand smoke increases the number of episodes and the severity of symptoms for between 200,000 and one million asthmatic children. Passive smoking is also a risk factor contributing to the development of new asthmatic cases in thousands of children each year.

EPA firmly believes that the scientific evidence is sufficient to warrant actions to protect nonsmokers from involuntary exposure to secondhand smoke. Accordingly, we are conducting a public outreach program to communicate the findings of the report to the public.

In July, the Agency published a brochure, What You Can Do About Secondhand Smoke, which specifies actions that parents, decision makers, and building occupants can take to protect nonsmokers, including children, from indoor exposure to secondhand smoke. The brochure also contains a special message for smokers about how they can help protect people around them. Copies of the publication may be obtained by calling EPA's Indoor Air Quality Information Clearinghouse at 800-436-4318.

What kinds of actions are being advised? The following steps can help curb ETS exposure in the home, at child-care centers and schools, in the workplace, and in restaurants and bars:

- Don't smoke in your home or permit others to do so. If a family member smokes indoors, we recommend increasing ventilation in the area by opening windows or using exhaust fans. We also recommend that smoking should not occur if children are present, particularly infants and toddlers. Baby-sitters and others who work in the home should not be allowed to smoke indoors or near children.

- Every organization dealing with children—schools, day-care facilities, and other places where children spend time—should have a smoking policy that protects children from exposure to ETS.

- Every company should have a smoking policy that protects nonsmokers from involuntary exposure to tobacco smoke. Many businesses and organizations already have policies in place and more and more are instituting them, but these policies vary in their effectiveness. Simply separating smokers and nonsmokers within the same area, such as a cafeteria, will still expose nonsmokers to recirculated smoke and to smoke drifting in from smoking areas. Instead, companies should either prohibit smoking indoors or limit smoking to rooms that have been specially designed to prevent smoke from escaping to other areas of the building.

- If smoking is permitted in a restaurant or bar, smoking areas should be located in well-ventilated areas so nonsmoker will face less exposure. More and more restaurants and restaurant chains are prohibiting smoking in their facilities, and cities and counties across the United States are restricting smoking in restaurants within their jurisdictions.

EPA will be publishing guidance to help organizations establish smoking policies in indoor environments. Providing our children and the public with a smoke-free environment must be a national priority.