

# Secondhand Smoke

## What Is Secondhand Smoke?

Secondhand smoke, also known as environmental tobacco smoke (ETS) or passive smoke, is a mixture of 2 forms of smoke from burning tobacco products:

- \* Sidestream smoke: smoke that comes from the end of a lighted cigarette, pipe, or cigar
- \* Mainstream smoke: smoke that is exhaled by a smoker

When non-smokers are exposed to secondhand smoke it is called involuntary smoking or passive smoking. Non-smokers exposed to secondhand smoke absorb nicotine and other toxic chemicals just like smokers do. The more secondhand smoke you are exposed to, the higher the level of these harmful chemicals in your body.

## Why Is Secondhand Smoke a Problem?

Secondhand smoke is classified as a "known human carcinogen" (cancer-causing agent) by the US Environmental Protection Agency (EPA), the US National Toxicology Program, and the International Agency for Research on Cancer (IARC), a branch of the World Health Organization.

Tobacco smoke contains over 4,000 chemical compounds. More than 60 of these are known or suspected to cause cancer.

Secondhand smoke can be harmful in many ways. In the United States alone, each year it is responsible for:

- \* an estimated 35,000 deaths from heart disease in non-smokers who live with smokers
- \* about 3,400 lung cancer deaths in non-smoking adults
- \* other breathing problems in non-smokers, including coughing, mucus, chest discomfort, and reduced lung function
- \* 150,000 to 300,000 lung infections (such as pneumonia and bronchitis) in children younger than 18 months of age, which result in 7,500 to 15,000 hospitalizations

- \* increases in the number and severity of asthma attacks in about 200,000 to 1 million children who have asthma
- \* more than 750,000 middle ear infections in children

Pregnant women exposed to secondhand smoke are also at increased risk of having low birth weight babies.

An issue that continues to be studied is whether secondhand smoke may increase the risk of breast cancer. Both mainstream and secondhand smoke contain about 20 chemicals that, in high concentrations, cause breast cancer in rodents. Chemicals in tobacco smoke reach breast tissue and are found in breast milk.

The evidence regarding secondhand smoke and breast cancer risk in human studies is still being debated, partly because the risk has not been shown to be increased in active smokers. One possible explanation for this is that tobacco smoke may have different effects on breast cancer risk in smokers and in those who are exposed to secondhand smoke.

A report from the California Environmental Protection Agency in 2005 concluded that the evidence regarding secondhand smoke and breast cancer is "consistent with a causal association" in younger, mainly premenopausal women. The 2006 US Surgeon General's report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke*, concluded that there is "suggestive but not sufficient" evidence of a link at this point. In any case, women should be told that this possible link to breast cancer is yet another reason to avoid contact with secondhand smoke.

The 2006 US Surgeon General's report reached several important conclusions:

- \* Secondhand smoke causes premature death and disease in children and in adults who do not smoke.
- \* Children exposed to secondhand smoke are at an increased risk of sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes breathing (respiratory) symptoms and slows lung growth in their children.

\* Secondhand smoke immediately affects the heart and blood circulation in a harmful way. It also causes heart disease and lung cancer.

\* The scientific evidence shows that there is no "safe" level of exposure to secondhand smoke.

\* Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite a great deal of progress in tobacco control.

\* The only way to fully protect non-smokers from exposure to secondhand smoke indoors is to prevent all smoking in that indoor space or building. Separating smokers from non-smokers, cleaning the air, and ventilating buildings cannot keep non-smokers from being exposed to secondhand smoke.

## **Where Is Secondhand Smoke a Problem?**

There are 3 locations where you should be especially concerned about exposure to secondhand smoke:

### **Your Workplace**

The workplace is a major source of secondhand smoke exposure for adults. Secondhand smoke meets the criteria to be classified as a potential cancer-causing agent by the Occupational Safety and Health Administration (OSHA), the federal agency responsible for health and safety regulations in the workplace. The National Institute for Occupational Safety and Health (NIOSH), another federal agency, also recommends that secondhand smoke be considered a potential occupational carcinogen. Because there are no known safe levels, they recommend that exposures to secondhand smoke be reduced to the lowest possible levels.

Secondhand smoke exposure in the workplace has been linked to an increased risk for heart disease and lung cancer among adult non-smokers. The Surgeon General has concluded that smoke-free workplace policies are the only effective way to do away with secondhand smoke exposure in the workplace. Separating smokers from non-smokers, cleaning the air, and ventilating the building cannot prevent exposure if people smoke inside the building. Aside from protecting non-smokers, workplace smoking restrictions may also encourage smokers who wish to quit or reduce their use of tobacco products.

## **Public Places**

Everyone can be exposed to secondhand smoke in public places, such as restaurants, shopping centers, public transportation, schools, and daycare centers. Although some businesses are reluctant to ban smoking, there is no credible evidence that going smoke-free is bad for business. Public places where children go are a special area of concern.

## **Your Home**

Making your home smoke-free may be one of the most important things you can do for the health of your family. Any family member can develop health problems related to secondhand smoke. Children are especially sensitive. In the United States, 21 million, or 35% of children live in homes where residents or visitors smoke in the home on a regular basis. About 50% to 75% of children in the United States have detectable levels of cotinine, the breakdown product of nicotine, in their blood.

Think about it: we spend more time at home than anywhere else. A smoke-free home protects your family, your guests, and even your pets.

## **What About Smoking Odors?**

There is no research in the medical literature about the cancer-causing effects of cigarette odors. The literature does show that secondhand tobacco smoke can get into hair, clothing, and other surfaces. Though unknown, the cancer-causing effects would likely be very small compared to direct exposure to secondhand smoke, such as living in a house with a smoker.

## **What Can Be Done About Secondhand Smoke?**

Local, state, and federal authorities can enact public policies to protect people from secondhand smoke and protect children from tobacco-caused diseases and addiction. Because there are no safe levels of secondhand smoke, it is important that any such policies be as strong as possible, and that they do not prevent action at other levels of government.

Many US local and state governments, and even federal governments in some other countries, have decided that protecting the health of employees and others in public places is of the utmost importance. And many have passed clean indoor air laws in recent years. While the laws vary from place to place, they are becoming more common. Detailed information on smoking restrictions in each state is available from the American Lung Association at <http://slati.lungusa.org>.

To learn how you can become involved in reducing exposure to secondhand smoke, contact your American Cancer Society at 1-800-ACS-2345 (1-800-227-2345).

## **Additional Resources**

### **Other Organizations**

In addition to the American Cancer Society, other sources of information and support include\*:

American Heart Association

Telephone: 1-800-AHA-USA-1 (1-800-242-8721)

Internet Address: [www.americanheart.org](http://www.americanheart.org)

American Lung Association

Telephone: 1-800-LUNG-USA (1-800-586-4872)

Internet Address: [www.lungusa.org](http://www.lungusa.org)

Environmental Protection Agency (EPA)

Internet Address: [www.epa.gov](http://www.epa.gov)

Centers for Disease Control and Prevention (CDC)

Office on Smoking and Health

Internet Address: [www.cdc.gov/tobacco/](http://www.cdc.gov/tobacco/)

National Cancer Institute

Telephone: 1-800-4-CANCER (1-800-422-6237)

Internet Address: [www.cancer.gov](http://www.cancer.gov)

Smokefree.gov

(Info on state phone-based quitting programs)

Telephone: 1-800-QUITNOW (1-800-784-8669)  
Internet Address: [www.smokefree.gov](http://www.smokefree.gov)

\*Inclusion on this list does not imply endorsement by the American Cancer Society.

No matter who you are, we can help. Contact us anytime, day or night, for information and support. Call us at 1-800-ACS-2345 or visit <http://www.cancer.org>.

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