

The Dangers of Secondhand Smoke



Secondhand smoke, also known as environmental tobacco smoke (ETS) or passive smoke, is the combination of two forms of smoke from burning tobacco products: sidestream smoke, or smoke that comes from a burning cigarette, pipe or cigar between puffs, and mainstream smoke, or the smoke that is exhaled by the smoker.

Secondhand smoke is a serious health risk.

- **Toxic Chemicals:** As much as 468,000 tons of tobacco are burned indoors each year. Secondhand smoke is the only source of air-borne nicotine and contains more than 4,000 chemical compounds; more than 40 are known to cause cancer.¹ Secondhand smoke includes such notorious chemicals as formaldehyde, cyanide, arsenic, carbon monoxide, methane, benzene, and radioactive polonium-210.² Levels of carcinogens increase in nonsmokers when they visit a public setting where smoking is allowed.³
- **No Safe Exposure:** The U.S. EPA classifies secondhand smoke as a Group A carcinogen—a substance known to cause cancer in humans—the same category as radon and asbestos. There is no safe level of exposure for Group A toxins.⁴
- **Immediate Effects:** Exposure to secondhand smoke can cause immediate adverse effects—eye irritation, throat irritation, coughing, chest discomfort and difficulty breathing.⁵ Evidence is rapidly accumulating that the cardiovascular system—platelet and endothelial function, arterial stiffness, atherosclerosis, oxidative stress, inflammation, heart rate variability, energy metabolism and increased infarct size—is exquisitely sensitive to toxins in secondhand smoke. The effects of even brief (minutes to hours) passive smoking are often nearly as large (averaging 80% to 90%) as chronic active smoking. The effects of secondhand smoke on the heart are substantial and rapid, explaining the relatively large risks for heart disease that have been reported in scientific studies.⁶
- **Illness and Disease:** Medical studies have shown secondhand smoke to be a significant factor in illnesses and diseases, including:

In Adults:

Lung Cancer	Heart Disease	Respiratory Illness
Asthma Attacks	Impotence	Stroke
Emphysema	Breast Cancer	Pancreatic Cancer
Periodontitis (bacteria infections in gums)		

In Children:

Asthma	Hearing Loss	Bronchitis
Low Birth Weight	Ear Infections	Sudden Infant Death Syndrome (SIDS)
Cavities	Pneumonia	Other Respiratory Illnesses

- **Heart Disease:** Exposure to secondhand smoke is consistently associated with an increased risk of coronary heart disease.⁷ The Center for Disease Control recommends that all patients with heart disease and or at an increased risk of heart disease should avoid all indoor environments that permit smoking.⁸ The American Heart Association confirms that secondhand smoke increases your risk of death due to heart disease including coronary attacks, heart failure and fatal arrhythmias.⁹
- **Lung Cancer:** Secondhand smoke is responsible for at least 3,000 lung cancer deaths of nonsmokers yearly, 30 times more lung cancer deaths than all other regulated air pollutants combined.¹⁰ Of the 3,000, 800 are from exposure to secondhand smoke at home, and 2,200 from exposure at work and other public places.¹¹ A nonsmoker who lives with a smoker has a 21 percent higher risk of developing lung cancer over their adult lifetime. But if the nonsmoker lived with a smoking parent as a child, the nonsmoker's risk jumps 63 percent above that of someone who has always lived in a smoke-free home.¹²
- **Asthma:** Secondhand smoke worsens asthma symptoms, especially in children.¹³
- **Emphysema:** Secondhand smoke can cause the debilitating disease pulmonary emphysema, causing severe damage to the walls of the air sacs, with the lungs eventually losing their capacity to expand and contract.¹⁴
- **Pancreatic Cancer:** Secondhand smoke exposure increases your risk of developing pancreatic cancer.¹⁵

- **Breast Cancer:** Women exposed to secondhand smoke are 2.6 times more likely to contract breast cancer.¹⁶
- **Diabetes:** Scientists have come up with several hypotheses for why smoking might make the body reject insulin.¹⁷ Studies suggest that the incidence of glucose intolerance, a precursor to diabetes in which the pancreas can no longer produce enough insulin to regulate blood sugar, had relations to the exposure of tobacco smoke, finding that smokers have the highest risk of glucose intolerance or diabetes.¹⁸
- **Risks During Pregnancy:** Regular exposure to secondhand smoke during early pregnancy doubles a woman's risk of having a baby with low-birth weight, even if she did not smoke.¹⁹ Adults whose mother smoked when they were in the womb were more likely to have respiratory problems and poorer lung functions in adulthood.²⁰
- **Deaths from Secondhand Smoke:** Each year in the United States, secondhand smoke exposure causes:
 - 3,000 deaths due to lung cancer
 - 35,000 to 62,000 deaths due to ischemic heart disease, and
 - 1,900 to 2,700 deaths due to sudden infant death syndrome.²¹
- **Leading Cause of Preventable Death:** Studies rank secondhand smoke as the third leading cause of preventable death in the United States, after active smoking and alcohol use, killing 53,000 nonsmokers each year.²²
- **Children's Health:** Every day, over 15 million children in the U.S. are exposed to secondhand smoke in the home, with countless others exposed in public places.²³ Children have twice the level of cotinine in their blood that adults do. Cotinine is found in the blood of someone who is a smoker or who has been exposed to secondhand smoke.²⁴ Children of any age who are exposed to secondhand smoke are more likely to suffer from asthma, middle ear infections and respiratory infections. They are also at risk of developing lung cancer or heart disease later in life. The U.S. EPA estimates that every year, between 150,000 and 300,000 children under 1-1/2 years of age get bronchitis or pneumonia from breathing secondhand tobacco smoke, resulting in thousands of hospitalizations. According to the EPA, "In children under 18 years of age, secondhand smoke exposure also results in more coughing and wheezing, a small but significant decrease in lung function, and an increase in fluid in the middle ear. Children with asthma have more frequent and more severe asthma attacks because of exposure to secondhand smoke, which is also a risk factor for the onset of asthma in children who did not previously have symptoms."²⁵
- **Worker's Health:** Worker health complaints are often related to indoor air quality. More than 59 percent of nonsmoking employees experience discomfort caused by secondhand smoke in workplaces that permit smoking.²⁶ Restaurant and bar workers are disproportionately affected by secondhand smoke. Studies show that levels of secondhand smoke are 1.6 to 2.0 times higher in restaurants and 3.9 to 6.1 times higher in bars than in office work places or other businesses.²⁷ It has been estimated that passive smoking in the workplace poses 200 times the acceptable risk for lung cancer, and 2,000 times the acceptable risk for heart disease.²⁸ Workers exposed to secondhand smoke in the workplace are 34 percent more likely to develop lung cancer.²⁹ A case study was conducted in a restaurant on employees before and after a smoking ban was passed. Researcher found that lung function increased among employees after the implementation of the ban, especially among non-smokers and asthmatics.³⁰
- **Pets:** Secondhand smoke is not only bad for humans, but can increase a pet's risk of disease. In a study, cats that were frequently exposed to secondhand smoke had a much higher risk of developing a common form of feline cancer.³¹

SmokeFreeOhio is a campaign by the American Cancer Society in collaboration with the American Heart Association, American Lung Association, the Ohio Health Commissioners Association, the Ohio Hospital Association, the Ohio State Medical Association, the Campaign for Tobacco-Free Kids, and other supporting organizations to create smoke-free public places and workplaces in the state of Ohio. Because secondhand smoke causes cancer, heart disease, and lung diseases, we believe that everyone has the right to breathe clean indoor air, free of secondhand smoke, in public places and workplaces.

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