



## **Secondhand Smoke (SHS) Facts**

### **Overview**

Secondhand smoke is a mixture of gases and fine particles that includes—

- Smoke from a burning cigarette, cigar, or pipe tip,<sup>1</sup>
- Smoke that has been exhaled or breathed out by the person or people smoking, and<sup>1</sup>
- More than 700 chemicals, including hundreds that are toxic and about 70 that can cause cancer.<sup>2</sup>

Most exposure to secondhand smoke occurs in homes and workplaces. Secondhand smoke exposure also continues to occur in public places such as restaurants, bars, and casinos and in private vehicles.<sup>3</sup>

### **Health Effects: Children**

In children, secondhand smoke causes the following:<sup>3</sup>

- Ear infections
- More frequent and severe asthma attacks
- Respiratory symptoms (e.g., coughing, sneezing, shortness of breath)
- Respiratory infections (i.e., bronchitis, pneumonia)
- A greater risk for sudden infant death syndrome (SIDS)

In children aged 18 months or younger, secondhand smoke exposure is responsible for—

- an estimated 150,000–300,000 new cases of bronchitis and pneumonia annually, and
- approximately 7,500–15,000 hospitalizations annually in the United States.<sup>4</sup>

### **Health Effects: Adults**

In adults who have never smoked, secondhand smoke can cause heart disease and/or lung cancer.<sup>3</sup>

#### **Heart Disease**

- For nonsmokers, breathing secondhand smoke has immediate harmful effects on the cardiovascular system that can increase the risk for heart attack. People who already have heart disease are at especially high risk.<sup>3,5</sup>
- Nonsmokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25–30%.<sup>3</sup>

- Secondhand smoke exposure causes an estimated 46,000 heart disease deaths annually among adult nonsmokers in the United States.<sup>6</sup>

## **Lung Cancer**

- Nonsmokers who are exposed to secondhand smoke at home or work increase their lung cancer risk by 20–30%.<sup>3</sup>
- Secondhand smoke exposure causes an estimated 3,400 lung cancer deaths annually among adult nonsmokers in the United States.<sup>6</sup>

There is no risk-free level of contact with secondhand smoke; even brief exposure can be harmful to health.<sup>3</sup>

## **Estimates of Secondhand Smoke Exposure**

When a nonsmoker breathes in secondhand smoke, the body begins to metabolize or break down the nicotine that was in the smoke. During this process, a nicotine byproduct called cotinine is created. Exposure to nicotine and secondhand smoke can be measured by testing saliva, urine, or blood for the presence of cotinine.<sup>3</sup>

## **Secondhand Smoke Exposure Has Decreased in Recent Years**

- Measurements of cotinine have shown how exposure to secondhand smoke has steadily decreased in the United States over time.<sup>3,7</sup>
  - During 1988–1991, approximately 87.9% of nonsmokers had measurable levels of cotinine.
  - During 1999–2000, approximately 52.5% of nonsmokers had measurable levels of cotinine.
  - During 2007–2008, approximately 40.1% of nonsmokers had measurable levels of cotinine.
- The decrease in exposure to secondhand smoke over the last 20 years is due to the growing number of laws that ban smoking in workplaces and public places, the increase in the number of households with smoke-free home rules, and the decreases in adult and youth smoking rates.<sup>8,9</sup>

## **Many in the United States Continue to be Exposed to Secondhand Smoke<sup>7</sup>**

- An estimated 88 million nonsmokers in the United States were exposed to secondhand smoke in 2007–2008.
- Children are at particular risk for exposure to secondhand smoke: 53.6% of young children (aged 3–11 years) were exposed to secondhand smoke in 2007–2008.
- While only 5.4% of adult nonsmokers in the United States lived with someone who smoked inside their home, 18.2% of children (aged 3–11 years) lived with someone who smoked inside their home in 2007–2008.

## **Disparities in Secondhand Smoke Exposure**

### **Racial and Ethnic Groups**

- Although declines in cotinine levels have occurred in all racial and ethnic groups, cotinine levels have consistently been found to be higher in non-Hispanic black Americans than in non-Hispanic white Americans and Mexican Americans.<sup>7,8,9</sup> In 2007–2008:
  - 55.9% of non-Hispanic blacks were exposed to secondhand smoke.
  - 40.1% of non-Hispanic whites were exposed to secondhand smoke.
  - 28.5% of Mexican Americans were exposed to secondhand smoke.

### Low Income



- Secondhand smoke exposure tends to be high for persons with low incomes: 60.5% of persons living below the poverty level in the United States were exposed to secondhand smoke in 2007–2008.<sup>7</sup>




### Occupational Disparities

- Occupational disparities in secondhand smoke exposure decreased over the past two decades, but substantial differences in exposure among workers remain. African-American male workers, construction workers, and blue collar workers and service workers are among some of the groups who continue to experience particularly high levels of secondhand smoke exposure relative to other workers.<sup>10</sup>

Eliminating smoking in indoor spaces is the only way to fully protect nonsmokers from secondhand smoke exposure. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings does not eliminate secondhand smoke exposure.<sup>3</sup>

### References

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## **For Further Information**

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