



# Clean Air for Every Worker

In the face of irrefutable scientific evidence of the risks associated with exposure to secondhand smoke, many corporations, government agencies, and municipalities have taken steps to reduce exposure. By developing smoke-free policies, they are sending a clear message: they want to improve the health and safety of their employees and their community.

In 1986 the Surgeon General of the United States reported that involuntary smoking (exposure to secondhand smoke) can cause lung cancer in healthy nonsmokers.

Since 1992 the US Environmental Protection Agency has classified secondhand smoke as a Group A carcinogen—a substance that produces cancer in humans.<sup>1</sup>

Secondhand smoke kills more people than all other Group A carcinogens combined. Other Group A carcinogens include asbestos, benzene, arsenic, and radon.<sup>2</sup>

Secondhand smoke consists of two different kinds of smoke. Approximately 85% is sidestream smoke, the smoke emitted from the burning cigarette, cigar, or pipe between puffs. The remainder is the mainstream smoke exhaled by the smoker.<sup>3, 4</sup>

Although mainstream and sidestream smoke are chemically very similar, undiluted sidestream smoke burns at a lower temperature. It contains higher concentrations of many of the toxic elements in tobacco smoke, including nicotine, carbon monoxide, benzene, ammonia, 4-aminobiphenyl, and benzo[a]pyrene.<sup>3</sup>

Secondhand smoke contains 5,000 chemical compounds, a large number of which are known to cause cancer.<sup>4</sup>

At one air change per hour, it takes more than three hours for 95% of the smoke from one cigarette to clear the room once smoking has ended.<sup>5</sup>

Using current indoor air quality standards, ventilation rates would have to be increased more than one thousand-fold to reduce the cancer risk associated with secondhand smoke to a level considered acceptable to federal regulatory agencies. Such a ventilation rate is impractical, since it would result in a virtual windstorm indoors.<sup>5</sup>

Pregnant women who smoke and nonsmoking pregnant women exposed daily to tobacco smoke are more likely to have low-birthweight babies who are at risk for death and disease in infancy and early childhood.<sup>1</sup>

Children of parents who smoke have a higher incidence of symptoms of respiratory irritation such as coughing, phlegm, and wheezing.<sup>3</sup>

It is estimated that more than one-third (35%) of all deaths from sudden infant death syndrome (SIDS) are due to maternal tobacco use. US children are three times more likely to die from SIDS caused by maternal smoking than from homicide or child abuse.<sup>6</sup>

An estimated 1.67 million physician visits for coughing each year in the United States are due to involuntary smoking.<sup>7</sup>

1.800.ACS.2345  
www.cancer.org



<sup>1</sup> US Environmental Protection Agency. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders*. Washington, DC: US Environmental Protection Agency, Office of Health and Environmental Assessment, Office of Research and Development, 1992.

<sup>2</sup> "Tobacco Control." 2001. American Lung Association. 14 Dec. 2001.  
<[http://www.alaw.org/tobacco\\_control/](http://www.alaw.org/tobacco_control/)>

<sup>3</sup> Committee on Environmental Hazards. "Involuntary Smoking – A Hazard to Children." *Pediatrics* Vol 77 1986. Reconfirmed 1991.

<sup>4</sup> "ETS: The Basics." 15 Oct. 2001. Canadian Council on Tobacco Control. 14 Dec. 2001.  
<<http://www.ncth.ca/NCTHweb.nsf/16a7a46a13d27dd4852569ac007ec6f9/fd46b42710a36bd685256a2300430be2?OpenDocument#What%20is%20Environmental%20Tobacco%20Smo>>

<sup>5</sup> Repace J. "Risk Management and Passive Smoking at Work and at Home." *St. Louis University Public Law Review* 1994; 13(2): 763-785.

<sup>6</sup> DiFranza J, Lew R. "Effect of Maternal Cigarette Smoking on Pregnancy Complications and Sudden Infant Death Syndrome." *Journal of Family Practice* 1995; 40: 385-394.

<sup>7</sup> DiFranza J, Lew R. "Morbidity and Mortality in Children Associated With the Use of Tobacco Products by Other People." *Pediatrics* Vol 97 1995; 560-568.