

Preface

*from the Surgeon General,
U.S. Department of Health and Human Services*

Twenty years ago when Dr. C. Everett Koop released the Surgeon General's report, *The Health Consequences of Involuntary Smoking*, it was the first Surgeon General's report to conclude that involuntary exposure of nonsmokers to tobacco smoke causes disease. The topic of involuntary exposure of nonsmokers to secondhand smoke was first considered in Surgeon General Jesse Steinfeld's 1972 report, and by 1986, the causal linkage between inhaling secondhand smoke and the risk for lung cancer was clear. By then, there was also abundant evidence of adverse effects of smoking by parents on their children.

Today, massive and conclusive scientific evidence documents adverse effects of involuntary smoking on children and adults, including cancer and cardiovascular diseases in adults, and adverse respiratory effects in both children and adults. This 2006 report of the Surgeon General updates the 1986 report, *The Health Consequences of Involuntary Smoking*, and provides a detailed review of the epidemiologic evidence on the health effects of involuntary exposure to tobacco smoke. This new report also uses the revised standard language of causality that was applied in the 2004 Surgeon General's report, *The Health Consequences of Smoking*.

Secondhand smoke is similar to the mainstream smoke inhaled by the smoker in that it is a complex mixture containing many chemicals (including formaldehyde, cyanide, carbon monoxide, ammonia, and nicotine), many of which are known carcinogens. Exposure to secondhand smoke causes excess deaths in the U.S. population from lung cancer and cardiac related illnesses. Fortunately, exposures of adults are declining as smoking becomes increasingly restricted in workplaces and public places. Unfortunately, children continue to be exposed in their homes by the smoking of their parents and other adults. This exposure leads to unnecessary cases of bronchitis, pneumonia and worsened asthma. Among children younger than 18 years of age, an estimated 22 percent are exposed to secondhand smoke in their homes, with estimates ranging from 11.7 percent in Utah to 34.2 percent in Kentucky.

As this report documents, exposure to secondhand smoke remains an alarming public health hazard. Approximately 60 percent of nonsmokers in the United States have biologic evidence of exposure to secondhand smoke. Yet compared with data reviewed in the 1986 report, I am encouraged by the progress that has been made in reducing involuntary exposure in many workplaces, restaurants, and other public places. These changes are most likely the major contributing factors to the more than 75 percent reduction in serum cotinine levels that researchers have observed from 1988 to 1991. However, more than 126 million nonsmokers are still exposed. We now have substantial evidence on the efficacy of different approaches to control exposure to secondhand smoke. Restrictions on smoking can control exposures effectively, but technical approaches involving air cleaning or a greater exchange of indoor with outdoor air cannot. Consequently, nonsmokers need protection through the restriction of smoking in public places and workplaces and by a voluntary adherence to policies at home, particularly to eliminate exposures of children. Since the release of the 1986 Surgeon General's report, the public's attitude and social norms toward secondhand smoke exposure have changed significantly—a direct result of the growing body of scientific evidence on the health effects of exposure to secondhand smoke that is summarized in this report.

Finally, clinicians should routinely ask about secondhand smoke exposure, particularly in susceptible groups or when a child has had an illness caused by secondhand smoke, such as pneumonia. Because of the high levels of exposure among young children, their exposure should be considered a significant pediatric issue. Additionally, exposure to secondhand smoke poses significant risks for people with lung and heart disease. The large body of evidence documenting that secondhand smoke exposures produce substantial and immediate effects on the cardiovascular system indicates that even brief exposures could pose significant acute risks to older adults or to others at high risk for cardiovascular disease. Those caring for relatives with heart disease should be advised not to smoke in the presence of the sick relative.

An environment free of involuntary exposure to secondhand smoke should remain an important national priority in order to reach the *Healthy People 2010* objectives.

Richard Carmona, M.D., M.P.H., F.A.C.S.
Surgeon General