

## Protecting Nonsmokers from Environmental Tobacco Smoke

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The American public is now well aware of the health consequences of cigarette smoking.<sup>1</sup> Public awareness of the health consequences of exposure to environmental tobacco smoke (ETS), however, is less common. Major efforts designed to prevent exposure to ETS have been organized only in the past few years. This article reviews these efforts, which include legislative initiatives at the federal, state, and local levels, as well as attempts by tobacco companies to create products for smokers that are either "cleaner" or "smokeless."

The contribution of ETS to lung cancer, asthma, bronchitis, pneumonia, chronic middle ear disease, and sudden infant death syndrome (SIDS) is well established and no longer controversial.<sup>2,3</sup> Environmental tobacco smoke, the most important contaminant of indoor air, is composed of both "side-stream" smoke, directly contributed by the smoldering cigarette, and exhaled "mainstream" smoke.<sup>2,4</sup> Both sources of smoke contain more than 4000 different chemicals, including at least 40 carcinogens.<sup>5</sup> In 1992, the Environmental Protection Agency declared ETS as a group A (known human) carcinogen, in the same group as asbestos, vinyl chloride, and radon.<sup>4</sup> No threshold or no safe low level has been established for carcinogens.<sup>5</sup>

### Pervasiveness of Exposure

A recent article based on information collected during the Third National Health and Nutrition Examination Survey (NHANES III) reported that the US population was exposed to ETS on a widespread

basis.<sup>6</sup> The survey collected information from questionnaires and from serum samples that contained cotinine. Cotinine is a metabolite of nicotine that is used as a marker for exposure to tobacco smoke in the previous 48 hours. Questionnaire data showed that 43% of US children are exposed to ETS in the household; 37% of the non-tobacco-using adult population have household and workplace exposure.<sup>6</sup> The exposure to ETS is more widespread than estimated from questionnaire data. Serum cotinine data showed that 87.9% of the non-tobacco-using population had detectable levels of exposure to tobacco smoke.<sup>6</sup>

### Clean Air Legislation

In 1994, President Clinton signed legislation (20 USC 6081-6084) requiring that all federally funded schools, day-care centers, libraries, and health facilities for children be smoke-free. Federal funding is so pervasive that this legislation affects almost all educational facilities that provide a service for children under the age of 18.<sup>7</sup> In addition, another law (49 USC 41706) prohibits smoking on all airline flights of 6 hours' duration or less.<sup>7</sup> The Occupational Safety and Health Administration (OSHA) proposed regulations that would ban smoking in public places except in separately ventilated areas.<sup>8</sup> The period for public comment expired recently, and it is not clear how much effort the Clinton administration will place on the dissemination and implementation of this ban.<sup>9</sup>

The Centers for Disease Control and Prevention published a compendium of information about tobacco control efforts, as of December 1, 1995, in the states and Washington, DC.<sup>7</sup> The Table describes the results of clean indoor air restrictions, divided into three categories: state government worksites, private worksites, and restaurants. Information on smoking restrictions for day-care centers indicates that 12 states did not allow smoking or allowed

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smoking only in designated areas with separate ventilation, 9 did not allow smoking when children are on premises, 7 had designated smoking areas required or allowed, and 23 states had no restrictions.<sup>7</sup>

The above data suggest that some progress has been made in the effort to limit exposure of the nonsmoking public to ETS. Anything short of separate ventilation, however, precludes the possibility of eliminating continued exposure to ETS.<sup>4</sup> Many communities are also taking steps to strengthen the statewide smoke-free indoor air restrictions.

As the pressure from local communities mounts, the tobacco industry has shifted resources to combat local efforts for clean indoor laws by sponsoring statewide laws that preempt local efforts. As of December 1, 1995, 18 states had preemptive smoke-free indoor laws that did not allow communities to set their own stricter local standards.<sup>7</sup>

In New York State, for example, where New York City and adjacent counties enacted stronger clean indoor laws than the state, both legislative chambers have proposals that would revoke these laws.<sup>10</sup> Tobacco industry tactics often involve direct contributions to campaign funds for elected officials and sponsorship of local community events.<sup>10,11</sup>

### Marketing to the Health Conscious: Eclipse Cigarette

For over 40 years, the marketing schemes of tobacco companies have included efforts to dissuade health-conscious smokers from quitting by offering "cleaner" products. In the 1950s, the industry promoted filtered cigarettes; in the 1970s, low-tar cigarettes. Recently they began promoting "smokeless" cigarettes.<sup>12,13</sup> On April 30, 1996, a *Wall Street Journal* story announced that R.J. Reynolds Tobacco Co had started the final marketing testing of Eclipse cigarettes in Chattanooga, Tennessee.<sup>12</sup> This cigarette heats but does not burn tobacco and delivers nicotine to the smoker in a vapor phase.<sup>13</sup> Because there is no burning of tobacco, there is less sidestream smoke and less tar.<sup>13</sup> The information provided by

TABLE

**Number of States Plus Washington, DC, with Smoke-free Indoor Air Restrictions, by Type of Public Place as of December 1, 1995**

Type of Public Place	No Smoking Allowed	Designated Area with Separate Ventilation	Designated Smoking Area Required or Allowed	No Restrictions
State government worksite	7	2	32	10
Private worksite	0	1	20	30
Restaurant	2	1	28	20

Source: Centers for Disease Control and Prevention.<sup>7</sup>

the tobacco company makes it clear that Eclipse may be a "cleaner" but not a "safer" cigarette.<sup>12</sup>

### Preventing ETS Exposure by Helping Smokers Quit

The best protection from ETS exposure for non-smokers will not result from legislative efforts or the schemes of tobacco companies. Children and non-smoker adults living in households with active smokers are most significantly exposed to ETS in the home, where public efforts are less likely to have an impact. Therefore, the most effective efforts to control ETS exposure will be those directed at helping smokers quit smoking.

Through counseling individual patients to stop smoking, the family physician plays a significant role in preventing ETS exposure. A private sector panel convened by the Agency for Health Care Policy and Research (AHCPR) recently released a smoking cessation guideline.<sup>1</sup> Evidence reviewed by this panel provides support for the effectiveness of interventions available in the offices of most family physicians.

The guideline urges clinicians to set up routines in their offices to ask all patients during every visit whether they smoke and to urge all smokers to quit. For smokers ready to quit, clinicians are urged to (1) help the smoker set a quit date, (2) offer support, encouragement, and motivation, (3) prescribe nicotine replacement therapy, which doubles the effect of any intervention, and (4) offer specific, practical advice about how to deal with other smokers and with situations that could lead to relapse.

The guideline also encourages health care system administrators, health insurers, and purchasers of health insurance to reimburse clinicians and patients for smoking cessation treatments including counseling and medications. The guideline is available in a pocket-sized summary that clinicians can carry with them when counseling patients. Single copies are available free from the AHCPR Clearinghouse (phone 1-800-358-9295 in the United States).

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