

FIRE-SAFE CIGARETTES: REDUCING THE HAZARDS OF SMOKING

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As the leading cause of fatal fires in the U.S., cigarettes are responsible for one-fourth of all fire deaths. In 2002 alone, lit tobacco products caused an estimated 14,450 residential fires; 520 deaths; 1,330 injuries; and \$371 million in residential property damage.¹ Each year, cigarette fires cost the nation more than \$6 billion in services and lost productivity.²

Although only 4 percent of all residential fires are reportedly caused by smoking materials, the fire fatality rate resulting from smoking is nearly four times higher than the overall residential fire rate, and injuries are more than twice as likely (see table, next page). Smoking fires typically occur in the early morning when victims are asleep and affect both smokers and nonsmokers alike, particularly children and the elderly. Upholstered furniture, trash, and bedding are the materials most frequently ignited by cigarettes, and these fires often occur in multifamily dwellings. Among the human factors that contribute to this problem, the majority of lit tobacco fires were caused when the smoker fell asleep.¹

Traditional cigarettes burn continuously even when unattended. A fire-safe cigarette is designed to extinguish itself when not actively smoked. On June 29, 2004, New York State enacted the world's first law requiring that cigarettes include

design alterations to make them fire safe. The law mandated that all cigarettes sold in the state meet the fire-safe cigarette standards established by the American Society for Testing and Materials. Under these standards, a cigarette can only be classified as fire safe if, when placed lit on a stack of test filler paper, it does not cause any weight loss of the stack (that is, it does not ignite the paper). When lit and left unattended, fire-safe cigarettes will not burn intensely for the amount of time necessary to ignite the majority of household fabrics. A standard cigarette, when not smoked, may smolder for up to two hours. This is more than the amount of time required for an upholstered chair, for example, to burst into flames. On the other hand, a fire-safe cigarette extinguishes itself in approximately five minutes. A common design employed by cigarette companies to reduce ignition potential is to use paper with specially designed rings along the cigarette that slow the

**2002 loss measure
for residential smoking fires**

Loss measure	All residential fires	Residential fires caused by smoking
\$ loss/fire	11,832	14,478
Injuries/1,000 fires	35.9	87.7
Fatalities/1,000 fires	6.5	25.1

Source: National Fire Protection Association

burning when they are not puffed.³ On October 1, 2005, a nationwide law in Canada mandated that all cigarettes sold must be fire safe. Similar legislation has recently been passed in Vermont and California.

A preliminary analysis of the effect of the New York cigarette law recently has been published.⁴ Although it is too soon to demonstrate any reduction of fires, death, and injuries caused by smoking as a result of the new law, it is gratifying to note that New York cigarette brand averaged 10 percent of full-length burns, as compared with 99.8 percent for California and Massachusetts brands. This reduced ignition propensity was achieved by cigarette paper banding. In addition, cigarette sales and prices were not affected by the New York standards. Importantly, after testing for over 20 toxic smoke constituents, there was no evidence of significant changes in toxicity with the new design.

In summary, mandating safer cigarettes can have an immediate impact on the morbidity and mortality stemming from cigarette fires. Physicians in states without such laws are encouraged to become advocates for this cigarette redesign at the state and national levels. To learn more about how to play an active role in the campaign, a downloadable advocacy kit is available on the Phoenix Society for Burn Survivors Web site at www.phoenix-society.org. Legislative updates are available from the Trauma Foundation Web site at www.firesafecig.org.

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