Committee on Substance Abuse

Hazards of Clove Cigarettes

In recent years, the development of a dangerous fad in which young people use clove cigarettes as an alternative to conventional cigarettes has occurred in several areas of the United States and Canada. Many users have the mistaken belief that clove cigarettes are an herbal, "natural," nontobacco alternative. Others are attracted to their use because of the association of clove cigarettes with the image of surfing, New Wave music, and the search for "exotic" and unusual experiences.

More than 170 million clove cigarettes were sold at the height of their popularity in 1984, and sales were still averaging more than 40 million per year in 1985, 1986, and 1987. This is even more remarkable when one considers that a significant portion of the consumers are under the legal age of purchase and that these sales have been achieved without the assistance of overt advertising. Indeed, a recent report of California youth in the 10th grade showed that 23% had tried clove cigarettes at least once. Furthermore, one third of those, approximately 8.5%, had used them at least once per month.

Clove cigarettes are imported from Southeast Asia, principally from Indonesia, and are composed of approximately one third shredded cloves and two thirds tobacco. The type of tobacco in a clove cigarette delivers approximately twice as much tars, nicotine, and carbon monoxide as does tobacco in ordinary American cigarettes.

In addition, substantial amounts of eugenol, an anesthetic agent, are found in cloves and in the smoke of clove cigarettes. The typical clove cigarette smoker inhales approximately 7 mg of eugenol per clove cigarette. The extent of the body's absorption of eugenol into the lungs, the distribution of eugenol in the body, and the short- and long-term health consequences of eugenol generally are unknown at this time. Furthermore, the common smoking technique of "toking" (deep inhalation and prolonged retention of the smoke in the respiratory tract) may allow for more contact and absorption of all of the ingredients of the clove cigarette.

In 1984 and 1985, the US Centers for Disease Control received 11 case reports of acute respiratory system injury in adolescents and young adults, including two deaths that occurred in close temporal association with smoking clove cigarettes. The acute pulmonary effects included hemoptysis, bronchospasm, hemorrhagic and nonhemorrhagic pulmonary edema, pleural effusion, respiratory insufficiency, respiratory infection, and aspiration of foreign material.

The precise role of the eugenol versus the potent effects of tobacco is unknown. However, the reported cases may represent only those who are most sensitive to clove cigarette constituents. Many other young people report similar but less significant symptoms.

The hazards of chronic long-term use of clove cigarettes are unknown because they have not been studied systematically during a long period of time. However, it is reasonable and prudent to assume that they are, at the very least, just as dangerous and harmful as unfiltered tobacco cigarettes. In addition, the long-term dangers from the inhalation of eugenol and other chemicals in the cloves are simply not known, but they do represent a potential further risk.

Another area of concern is the possible association of clove cigarette smoking and subsequent marijuana use. Clove cigarettes should be suspected as a gateway drug because of their properties and the manner in which they are smoked. Because the eugenol in the clove cigarette acts as a topical anesthetic to the posterior oropharynx, it reduces the noxious elements of smoking. Thus, it may facilitate the learning of smoking techniques, both regular inhalation and the deep inhalation toking technique used in marijuana smoking. In addition,
the aroma and mystique of the use of clove cigarettes have made them very popular among those nondrug-using adolescents who are seeking to be accepted by and participate in the experiences of a drug-using peer group.3,4

CONCLUSIONS AND RECOMMENDATIONS

1. The American Academy of Pediatrics (AAP) alerts pediatricians to the possible use of clove cigarettes by young people in their practices and to the health consequences of such use.
2. Clove cigarettes are tobacco products and have the same potential for producing all of the pathologic effects associated with tobacco smoking.
3. Clove cigarettes are without health benefits, and the health risks of smoking them, in addition to those caused by tobacco, include lung injury in susceptible individuals, bronchospasm in those with a history of asthma or other respiratory diseases, hemoptysis, and the potential for pulmonary aspiration.
4. In keeping with the goal of a tobacco-free society by the year 2000, the AAP urges its members to maintain awareness and to educate their patients and their families about the hazards of clove cigarettes.

COMMITTEE ON SUBSTANCE ABUSE, 1990 to 1991
Albert W. Pruitt, MD, Chairman
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*Pediatrics* 1991;88;395

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