

## Questions and Answers

### 'Smokeless' Tobacco

**Q** During the 1980 Olympic Games at Lake Placid, NY, television advertisements showed professional athletes recommending the use of so-called smokeless tobacco, whose manufacturer was noted to be an official Olympic sponsor. On March 30, 1980, the *Atlanta Journal and Constitution* carried an article headlined "A Little Plug for Chewing Tobacco," which extolled "America's most misunderstood indulgence." Is it true that using snuff or chewing tobacco is much less harmful than smoking cigarettes?

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**A** Snuff-dipping, the placing of a pinch of powdered, flavored tobacco in the cavity between gum and cheek and sucking on the "quid," is reported to be increasing among youths of Southern states, including grade-schoolers.<sup>1</sup> In addition, the US Department of Agriculture says there is a recent 6% increase in the consumption of chewing tobacco, the use of which involves a golf-ball size "chaw" that is held in the inner cheek area.<sup>2</sup>

Such a phenomenon comes at the heels of television and printed media advertising by the United States Tobacco Co that features the testimonials of well-known athletes and country-rock stars for various brands of snuff and by the P. Lorillard Co for its Beech-Nut chewing tobacco. Advertising research by the industry has resulted in these campaigns being directed at the youth market. The role models are portrayed as intelligent and "with-it," partly because they have switched to smokeless tobacco out of concern for their health.

However, based on the current medical evidence, their long-term health would be far better if they did not use tobacco at all. Because snuff still is not as widely used as other forms of tobacco and because it is not inhaled as smoke, it does not present as great a danger to health as cigarettes. But such a risk is purely relative, for snuff seems to be even more injurious to the oral cavity than cigarettes. Snuff can appreciably accelerate a litany of destructive changes, including gingival recession, tooth abrasion, and periodontal bone destruction.<sup>3</sup> Leukoplakia (also dubbed snuff-dipper's keratosis), a nonspecific white patch involving the nonkeratinized epithelium of the oral

mucosa, is most often attributed to the use of tobacco. Upwards of one in 20 cases of leukoplakia will undergo malignant transformation into an epidermoid carcinoma.<sup>2</sup> A nitrosamine, N-nitrosornicotine, which can be isolated from snuff, has been shown to be tumorigenic in experimental animals.<sup>4</sup>

The case against chewing tobacco may prove to be even more damning. In an analysis of 2,005 patients in India with oral, pharyngeal, and esophageal cancers (and an equal number of control subjects comparable in age, sex, and religion), Jayant et al<sup>5</sup> quantified the relative etiologic fraction—the proportion of cases of a disease attributable to a particular factor—from chewing and smoking tobacco for these cancers. Overall, chewing or smoking, or both, accounted for 70% of cancers of the oral cavity, 84% of cancers of the oropharynx, 75% of cancers of the hypopharynx and larynx, and 50% of cancers of the esophagus.

Chewing and smoking act synergistically in varying degrees, Jayant et al<sup>5</sup> noted. For instance, chewing alone has a sixfold higher risk of cancer of the oral cavity relative to the nonchewer, nonsmoker, while smoking alone has "only" a threefold increase. Both chewing and smoking increases the risk tenfold.

Despite the evidence attributing serious health problems to smokeless tobacco, Frankel<sup>6</sup> points out that there is no warning required on packages or advertisements for these products. Nor have professional health organizations, publishers, or broadcasting corporations taken any significant steps to counteract an advertising onslaught aimed at young people.

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4. Goldsmith DF, Winn DM: Hazards with snuff. *Lancet* 1:825, 1980.

5. Jayant K, Balakrishnan V, Sanghvi LD, et al: Quantification of the role of smoking and chewing tobacco in oral, pharyngeal, and oesophageal cancers. *Br J Cancer* 35:232-235, 1977.

6. Frankel HH: Another cowboy selling cancer. *West J Med* 130:270-271, 1979.