

**ARTICLE TITLE AND  
BIBLIOGRAPHIC  
INFORMATION**

Smokeless tobacco use among men  
in the United States, 2000 and 2005.

Rodu B, Cole P.

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**REVIEWER**

Scott L. Tomar, DMD, DrPH

**PURPOSE/QUESTION**

The purpose of the study was to  
describe and compare smokeless  
tobacco use among US men in 2000  
and 2005.

**SOURCE OF FUNDING**

Tobacco industry

**TYPE OF STUDY/DESIGN**

Cross-sectional study

**LEVEL OF EVIDENCE**

Level 3: Other evidence

**STRENGTH OF  
RECOMMENDATION GRADE**

Not applicable

**The Prevalence of Smokeless Tobacco use  
Remained Low and Unchanged Among US  
Men in 2000–2005 While Smoking Declined****SUMMARY****Subjects**

This study used data from public use data files from 2 US nationally representative surveys of persons aged 18 years or older: the 2000 and 2005 National Health Interview Surveys (NHIS). Analysis was limited to males. Sample sizes were not reported.

**Key Risk/Study Factor**

Not applicable

**Main Outcome Measure**

The primary outcome measure was the prevalence of current smokeless tobacco use among men in each of the 2 surveys, including use of snuff or chewing tobacco. The study also reported the prevalence of cigarette smoking among men in 2000 and 2005. The distribution of smokeless tobacco use status was cross-tabulated with smoking status, and sociodemographic characteristics of current smokeless tobacco users were compared with those of men who had never used tobacco.

**Main Results**

The prevalence of current use of smokeless tobacco among US men in 2000 was 4.4% (95% confidence interval [CI]: 4.0%, 4.7%), which remained about the same in 2005 (4.3%; 95% CI: 3.8%, 4.8%). There also were no significant changes in smokeless tobacco use by smoking status. Current cigarette smoking among men declined from 25.7% (95% CI: 24.8%, 26.6%) in 2000 to 23.8% (95% CI: 22.9%, 24.8%) in 2005, whereas the proportion of men who never used either smokeless tobacco or cigarettes increased during that time period from 45.2% (95% CI: 44.2%, 46.2%) to 48.0% (95% CI: 46.9%, 49.2%). In 2005, about 32% of current smokeless tobacco users also were current smokers. The proportion of smokeless tobacco users whose only form of smokeless tobacco used was chewing tobacco declined from 44% to 33% from 2000 to 2005, whereas the proportion composed of exclusive snuff users increased from 43% to 51%. There was no statistically significant change in the proportion of smokeless tobacco users who used both chewing and snuff (13% to 16%).

Compared with US men who never used tobacco, current male smokeless tobacco users in 2005 had lower levels of education and income and were more likely to live in the Midwest or South and not reside in metropolitan areas.

In the 2000 NHIS, former smokers were asked what method they had used to completely quit smoking. Data were not presented on the proportion of all former smokers who switched to smokeless tobacco as a smoking cessation strategy. However, among former smokers who were current smokeless tobacco users at the time of the survey, 39% reported quitting “cold turkey,” 56% reported using nicotine replacement therapy or other methods such as

reducing the number of cigarettes smoked, and 5% reported using smokeless tobacco as their method for quitting smoking.

## Conclusions

Cigarette smoking declined among US men during the first 5 years of the 21st century, but the prevalence of smokeless tobacco was low and stable. A relatively large proportion of male current smokeless tobacco users were also current smokers. The authors concluded that the findings from this study can inform health and policy experts about how smokeless tobacco can serve as a “less hazardous cigarette substitute for inveterate smokers.”

## COMMENTARY AND ANALYSIS

Although much of the discussion section of this article revolved around the use of smokeless tobacco as a tobacco harm reduction strategy for “inveterate smokers,” the data presented in this study provide little evidence that smokeless tobacco is effective, popular, or necessary for smoking cessation or reducing smoking initiation in the United States. To the contrary, the data indicate that smoking cessation increased and smoking initiation decreased among men between 2000 and 2005. Smokeless tobacco use apparently played virtually no role in the decline in smoking in the United States because its use remained low and unchanged during that time. Even among former smokers who were current smokeless tobacco users, just 5% reported that smokeless tobacco use was the strategy that helped them to quit cigarettes.

Although there is no information in this study on why dual product users may be using smokeless tobacco in addition to cigarettes, nearly one-third of current smokeless tobacco users also smoked. Although it is possible that some of that dual use includes smokers who are trying to quit by taking up smokeless tobacco, there is evidence that dual use is associated with very high levels of nicotine addiction and poor success rates in tobacco cessation.<sup>1-3</sup> Just one randomized clinical trial has been published on smokeless tobacco use for smoking cessation, and it found no efficacy at 6 months.<sup>4</sup>

The authors devote extensive space in the article’s discussion section about smokers’ lack of adequate understanding of the differences in health risks between smokeless tobacco and cigarettes, contending that many would switch if they knew those differences. Few in the scientific community would dispute that exclusive use of US forms of smokeless tobacco would convey lower risk for death and disease than would exclusive cigarette smoking. However, the harms associated with a product are a function not just of the product itself but of how it is used. A product that prolongs and even increases nicotine addiction and enables smokers to continue as smokers when faced with ever-expanding clean indoor air laws would increase harm, not decrease it. Similarly, if aggressive industry

marketing of smokeless tobacco products recruits novice tobacco users to decades of addiction, it would increase societal harm, not decrease it.

This study suggests that many US men who used chewing tobacco switched to snuff in the first 5 years of this century. That is not a positive public health trend: compared with typical loose-leaf tobacco products, typical moist snuff products in the United States contain higher levels of tobacco-specific *N*-nitrosamines, a class of established human carcinogens.<sup>5</sup> In addition, moist snuff use is associated with more profound nicotine addiction and poorer cessation rates than chewing tobacco use.<sup>6</sup> This trend of declining chewing tobacco consumption and increasing snuff consumption directly mirrors the advertising and promotion expenditures by smokeless tobacco manufacturers. Industry spending to promote chewing tobacco remained flat at about \$13.8 million in 2000 and 2005.<sup>7</sup> In contrast, the industry spent \$207.8 million to advertise and promote moist snuff in 2000, a figure that increased to \$210.4 million in 2005.

To some extent, the data reported in this study may already be outdated because the tobacco landscape has changed dramatically since those surveys were conducted. For decades, the US smokeless tobacco market was dominated by a small number of companies that sold only smokeless tobacco and had no financial interest in selling cigarettes. That situation changed with the acquisitions of the Conwood Company in 2006 by Reynolds American, Inc.<sup>8</sup> and the United States Smokeless Tobacco Company in 2008 by Altria Group, the parent company for Philip Morris USA.<sup>9</sup> Those cigarette companies have also introduced new smokeless tobacco products sold under cigarette brand names such as Marlboro and Camel. Other US cigarette companies also entered the smokeless tobacco market in the past few years, so that in 2010 virtually the entire US snuff market is controlled by companies whose primary products are cigarettes. It is increasingly evident that these companies’ primary intent is to promote use of snuff in addition to, not instead of, cigarettes among its current customers—largely to help maintain smokers’ addiction when faced with smoke-free work environments.<sup>10-13</sup> The “inveterate smokers” that Rodu and Cole envision as the beneficiaries of such tobacco industry marketing strategies are more likely to become profoundly addicted to 2 forms of tobacco use than to quit smoking by using snuff.

Readers should be aware that tobacco companies provided the funds that established Dr Rodu’s endowed faculty Chair in Tobacco Harm Reduction Research<sup>14</sup> and support virtually all of Dr Rodu’s research.<sup>15</sup> Such obvious conflicts of interest may influence the data interpretations and advocacy efforts of Dr Rodu.

## REFERENCES

1. Hatsukami DK, Severson HH. Oral spit tobacco: addiction, prevention and treatment. *Nicotine Tob Res* 1999;1(1):21-44.

2. Wetter DW, McClure JB, de Moor C, Cofta-Gunn L, Cummings S, Cinciripini PM. Concomitant use of cigarettes and smokeless tobacco: prevalence, correlates, and predictors of tobacco cessation. *Prev Med* 2002;34(6):638-48.
3. Tomar SL, Alpert HR, Connolly GN. Patterns of dual use of cigarettes and smokeless tobacco among US males: findings from national surveys. *Tob Control* 2010;19(2):104-9.
4. Tønnesen P, Mikkelsen K, Bremann L. Smoking cessation with smokeless tobacco and group therapy: an open, randomized, controlled trial. *Nicotine Tob Res* 2008;10(8):1365-72.
5. International Agency for Research on Cancer. Smokeless tobacco and some tobacco-specific N-Nitrosamines. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 89. Lyon, France: International Agency for Research on Cancer; 2007.
6. Walsh MM, Hilton JF, Masouedis CM, Gee L, Chesney MA, Ernster VL. Smokeless tobacco cessation intervention for college athletes: results after 1 year. *Am J Public Health* 1999;89(2):228-34.
7. Federal Trade Commission. Smokeless tobacco report for the year 2006. Washington, DC: Federal Trade Commission; 2009. Available at: <http://www.ftc.gov/os/2009/08/090812smokelesstobaccoreport.pdf>. Accessed January 17, 2010.
8. Reynolds American. Reynolds American completes acquisition of Conwood [press release]. 2006. Available at: <http://www.prnewswire.com/news-releases/reynolds-american-completes-acquisition-of-conwood-56588657.html>. Accessed June 11, 2010.
9. Altria Group Inc. Altria Group, Inc. Agrees to Acquire UST Inc., World's Leading Moist Smokeless Tobacco Manufacturer, for \$69.50 per Share in Cash [press release]. 2008. Available at: [http://www.altria.com/media/02\\_00\\_NewsDetail.asp?reqid=1194435](http://www.altria.com/media/02_00_NewsDetail.asp?reqid=1194435). Accessed January 17, 2010.
10. Carpenter CM, Connolly GN, Ayo-Yusuf OA, Wayne GF. Developing smokeless tobacco products for smokers: an examination of tobacco industry documents. *Tob Control* 2009;18(1):54-9.
11. Mejia AB, Ling PM. Tobacco industry consumer research on smokeless tobacco users and product development. *Am J Public Health* 2010;100(1):78-87.
12. Herzog B. Industry in-depth. Tobacco. New York: Citigroup; 2007.
13. Beirne M. Philip Morris expands smokeless tobacco line. June 11, 2007. [Brandweek.com](http://www.brandweek.com/bw/news/recent_display.jsp?vnu_content_id=1003597188). Available at: [http://www.brandweek.com/bw/news/recent\\_display.jsp?vnu\\_content\\_id=1003597188](http://www.brandweek.com/bw/news/recent_display.jsp?vnu_content_id=1003597188). Accessed January 17, 2010.
14. University of Louisville. Researcher searches for alternatives to smoking. U of L Today February 9, 2006. Available at: <http://php.louisville.edu/news/news.php?news=521>. Accessed January 17, 2010.
15. The Courier-Journal. Donations to the University of Louisville, 2004-2009: Tobacco Harm Reduction Fund. Available at: <http://datacenter.courier-journal.com/uofldonors/recipient/tobacco-harm-reduction-fund>. Accessed January 17, 2010.

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