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Changing Habits
Should Snuff Be Used as a Tool To Quit Smoking?

Smokeless Tobacco Is Safer Than Cigarettes but Poses Its Own Health Risks

The Lure of Swedish 'Snus'

By **KEVIN HELLIKER**
September 16, 2006; Page A1

(See Corrections & Amplifications item below.)

For four decades, Pam Harlan sought to quit smoking. She tried cessation therapy and nicotine-replacement products such as the patch. She coughed in the morning, felt chest pain, watched her mother die of lung cancer -- and continued lighting up.

Then she tried smokeless tobacco. Instead of the usual wad of snuff, however, she popped a small pellet of tobacco that dissolves like a cough drop. The pellet packs as much nicotine as a cigarette. By popping about 15 pellets a day, Ms. Harlan, a 56-year-old nurse at the University of Louisville School of Medicine, has stayed off cigarettes since Sept. 19, 2005.

For decades, public-health officials have been warning people about the dangers of smokeless tobacco. Now there is debate over whether smokers ought to be informed about smokeless tobacco as a way to quit smoking.

A growing body of research -- some of it funded by smokeless tobacco purveyors -- shows that smokeless tobacco is much less harmful than cigarettes. The reduced risk is most dramatic for varieties of smokeless tobacco that are low in nitrosamines, as the primary carcinogens in smokeless tobacco are called. A panel of medical experts funded by the National Cancer Institute studied low-nitrosamine smokeless tobacco and concluded that it posed at least a 90% reduction in health risks compared with smoking, according to a 2004 report in the journal *Cancer Epidemiology, Biomarkers & Prevention*. A 2002 statement from Britain's Royal College of Physicians, which sets standards in the U.K., called smokeless tobacco "10 to 1,000 times less hazardous than smoking, depending on the product."

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There is also evidence that smokeless tobacco can be used as a tool for quitting smoking. In Sweden, where the smoking rate among men has fallen to the lowest in the industrialized world, many smokers have switched to smokeless tobacco.

This poses a dilemma for health officials: Would publicizing the lower risks of smokeless tobacco convert smokers -- or merely create a new problem, by increasing usage of smokeless? Adding a sense of urgency to the debate: Major cigarette companies, facing flat or declining sales, now see smokeless tobacco as a way to boost business.

Nobody is suggesting that use of smokeless tobacco is preferable to quitting tobacco altogether, or to quitting it with the use of nicotine products such as the gum or the patch. But some believe that smokeless tobacco could serve as a last-ditch alternative for those who can't otherwise quit. After falling for decades, the number of Americans who smoke is stuck at about 45 million. More than 400,000 Americans die each year of smoking-related disease, making cigarettes the No. 1 cause of preventable death in the U.S.

Surveys show that most smokers want to quit and about 40% each year make a serious effort to do so. But even with the help of counseling or nicotine-replacement products, the vast majority of quitting attempts fail. Of those who fail, half will die of smoking-related disease, say public-health officials.

Some say smokers should know about the reduced risks of smokeless tobacco. "Smokers have a right to be informed of significant harm reduction options," Lynn T. Kozlowski, chairman of behavioral health at State University of New York at Buffalo, argued in a 2001 commentary in *Nicotine and Tobacco Research*. Dr. Kozlowski, who receives no money from the tobacco industry, years ago helped uncover the fact that light cigarettes aren't necessarily less harmful.

But others counter that the state of California -- without any help from smokeless tobacco -- has lowered its smoking rate to nearly the same low rate found in Swedish men, by using public-health initiatives. They worry that declaring smokeless to be safer could encourage teenagers and others to start using it. "Smokeless tobacco products are neither a safe substitute for smoking nor an effective method of quitting smoking," says David Sampson, spokesman for the American Cancer Society.

A National Cancer Institute-funded report, published this year in the journal *Addictive Behaviors*, studied the likely outcome of an official policy offering a regulated low-nitrosamine smokeless product to smokers. It concluded such a policy would increase use of smokeless tobacco but bring about a reduction in smoking. "This reduction would likely yield substantial health benefits," the report said, while expressing concern about possible unintended consequences.



Brad Rodu

The vast majority of smokeless tobacco sales come from so-called moist snuff, which users place between their lip and gum. Switching from cigarettes to virtually any moist snuff on the U.S. market would bring about a reduction in risk for cancer and heart disease, by eliminating the dangers of smoke. But smokeless brands vary widely in the amount of nitrosamines they contain, and those with the lowest levels -- and hence the lowest risks -- are the least available. The kind used in Sweden, which is low in nitrosamines, can be purchased only online and in a few retail stores in the U.S.

Ms. Harlan, the nurse who uses the smokeless pellets, learned about them from Brad Rodu, director of the University of Louisville's tobacco harm-reduction research program. The program is funded mostly by U.S. Smokeless Tobacco Co., maker of such American brands as Copenhagen and Skoal, and Swedish Match AB, a maker of Swedish smokeless tobacco products.

Swedish Match says it believes its products pose lower risks than do cigarettes. A spokesman for U.S.

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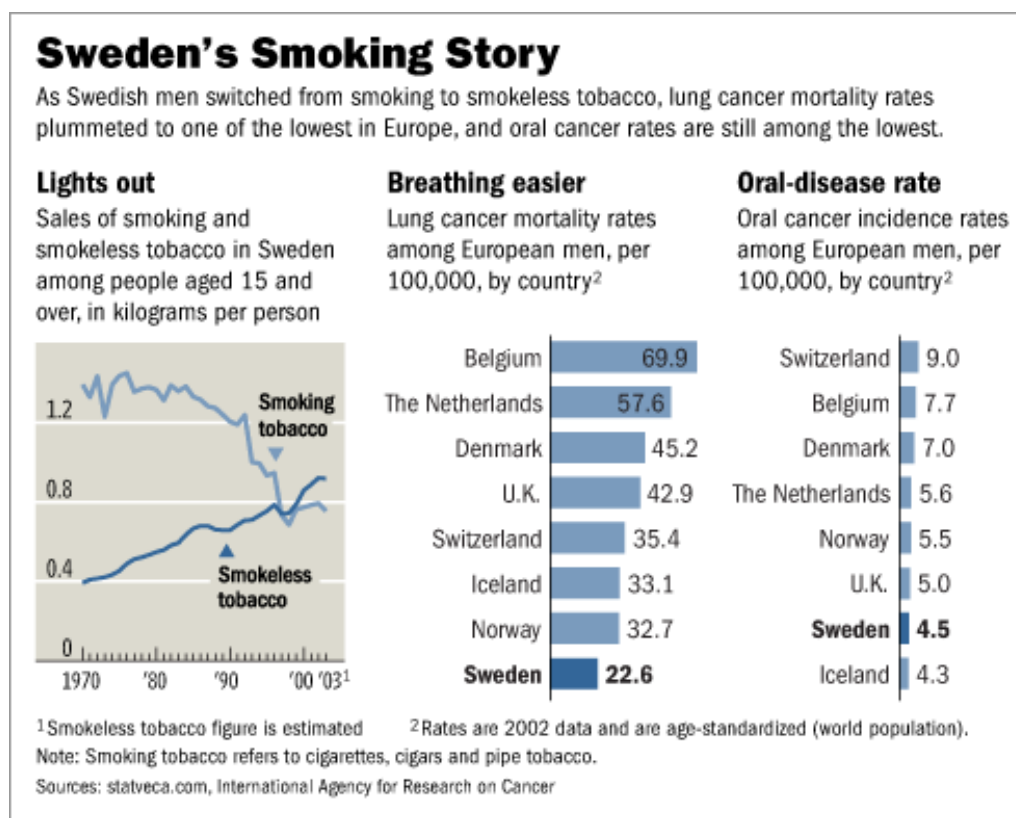
Smokeless says "we do believe the public has a right to full and complete information about smokeless tobacco," but the company doesn't make health claims about its products.

"Smokeless products aren't without risk, and I'm happy that my [grown] children don't use them," says Dr. Rodu, a dentist who is board-certified in oral pathology and a University of Louisville professor of medicine who has published 21 peer-reviewed articles on the risks of smokeless tobacco versus cigarettes. "But smokeless tobacco is 98% safer than combustible tobacco, and it is a healthier option for smokers who can't quit."

Industry Funding

A lot of the research on health effects of smokeless tobacco has been funded by the tobacco industry, in grants to researchers such as Louisville's Dr. Rodu. Dr. Rodu says he began accepting industry research money in 1999 only after his requests for government and public-health-agency grants were repeatedly turned down. Before then, he published extensively on the reduced harm of smokeless tobacco using only university research funds.

The smokeless-tobacco industry has recently expanded to include cigarette giants Philip Morris, [Reynolds American Inc.](#) and [British American Tobacco PLC](#). They have either acquired smokeless purveyors or introduced their own products. They are publicizing new smokeless products, some of which carry the same names as their cigarettes, such as Lucky Strike and Camel.



Philip Morris spokeswoman Peggy Roberts says the company makes no health claims about its new smokeless product, called Taboka. "Smokeless tobacco causes serious diseases and is addictive," she says.

The U.S. smokeless market now exceeds \$3 billion a year, compared to the \$70 billion market for cigarettes. Only about 2% of Americans use smokeless tobacco, compared with about 22% who

smoke. But usage is higher among teens. About 7.5% of 12th graders said in a survey last year that they had used snuff in the last month, compared with 23% who reported smoking.

Makers of smokeless tobacco don't advertise that it may help with quitting smoking. That kind of claim could prompt the Food and Drug Administration to begin regulating smokeless tobacco as a medical product. Both Swedish Match and U.S. Smokeless say they have held conversations with the FDA, and Swedish Match says it is open to the idea of clinical trials. Michael Bazinet, a spokesman for U.S. Smokeless Tobacco, says, "We would not oppose regulation if it would take into account the differences between smokeless tobacco and cigarettes, including risk."

Some public-health officials say that the industry is scoring marketing points merely by sponsoring studies showing smokeless tobacco to be less harmful, because such studies attract attention. "It's an industry-sponsored marketing campaign," says Michael Thun, vice president of epidemiology for the American Cancer Society.

"The relative risks for use of [smokeless products] are lower, but that's not the point," says Dr. Thun. He argues that if those lower risks were touted, "the total number of tobacco users could go up."

A century ago, smokeless was the dominant form of tobacco consumption, as evidenced by the antique spittoons that can still be found in taverns and government buildings. Then the manufactured cigarette emerged and became a fashion necessity among celebrities and the well-to-do. As smoking flourished, smokeless tobacco languished, relegated to rural America, athletes and those too poor to afford cigarettes.

The U.S. public-health community's campaign against smokeless tobacco dates to the 1980s, starting with a landmark *New England Journal of Medicine* study showing that women who used snuff had a risk of mouth cancer four times as great as non-users. That risk is less than the risk from cigarettes. Subjects of that study primarily consumed powdered snuff, a rarely used variety. Subsequent research and epidemiological data have since suggested that moist snuff, the more popular kind, can pose a lower risk of oral cancer.

Such distinctions received little attention, especially after a 19-year-old Oklahoma track star named Sean Marsee died of mouth cancer in 1984. His case became a powerful example for those warning of the dangers of snuff. Photographs of his final days -- when his face was horribly disfigured -- appeared widely in media exposés about smokeless tobacco. His mother sued U.S. Smokeless Tobacco, charging its snuff had caused his cancer.

Before his diagnosis, Mr. Marsee had used snuff for about six years. A study, published in a 1992 federal government report, of 116 snuff users with oral cancer found that they had used it an average of 55 years before being diagnosed at an average age of 78. Mouth cancer also randomly strikes some young people, whether or not they use tobacco. In 1986, a federal jury ruled against the mother of Sean Marsee.

Medical officials at the time were still smarting over their predecessors' foot-dragging over the dangers of smoking. The surgeon general didn't issue a warning about the dangers of smoking until 1964, even though research articles linking smoking to lung cancer and other diseases had appeared in prominent medical journals at least as early as 1938.

In 1986, health officials persuaded Congress to require that one of three warnings be placed on each smokeless-tobacco package sold in the U.S. One warning says the product may cause mouth cancer. Another says that it may cause gum disease or tooth loss. The third says that the product isn't a safe alternative to cigarettes.

Since then, research has shown that snuff is safer than cigarettes. But the public often equates the two. Surveys of thousands of smokers by the Roswell Park Cancer Institute of Buffalo, N.Y., a research center not funded by the tobacco industry, have consistently shown that about 90% of smokers wrongly believe that smokeless tobacco is just as likely as cigarettes to cause cancer.

Smokeless tobacco has serious medical risks. It can raise blood pressure and contribute to the development of cardiovascular disease and cancer. Even advocates of smokeless as a smoking-cessation aid warn against it. Smokeless tobacco is also addictive, and kicking this habit is no easier than quitting cigarettes. "Using smokeless tobacco is dumb," says Dr. Kozlowski, the researcher who helped debunk the idea of a "safer" cigarette. "Using cigarettes is dumber."

The popular image of the smokeless tobacco user is that of the baseball player with a thick wad of snuff, spitting a stream of juice onto the playing field. That type, called chewing tobacco, accounts for a small percentage of smokeless sales.

Dissolving Pellets

Some smokeless tobacco sold in the U.S. comes in tiny packets that are held in the mouth. One variety, called Ariva, sold by Chester, Va.-based Star Scientific Inc., consists of tobacco pellets that dissolve. The company says the pellets are meant for "adult smokers" who find themselves in situations where they can't smoke or choose not to. The company says it makes no health claims about Ariva.

The theory behind snuff as a smoking-cessation aid is that cigarette users are addicted not to smoke but to the nicotine it delivers. The health profession's embrace of nicotine gum, lozenges and patches underscores a widespread view among medical experts that nicotine is less harmful than the carcinogens in tobacco.

A nation with a male smoking rate of about 55% in the 1960s, Sweden, like much of the Western world, launched a public-health campaign against cigarettes. At the same time, Swedish men initiated a resurgence of use of moist snuff, or snus, as they call it. This trend received no encouragement from government or medical authorities. In fact, anti-tobacco activists in Sweden opposed it, says Karl Fagerstrom, a Swedish nicotine-addiction expert.

More Swedish men use smokeless tobacco than smoke, including many former smokers. "Most Swedish men didn't like snus as well [as cigarettes], but they knew smoking was bad for them, and snus satisfied their nicotine craving," says Dr. Fagerstrom.

Now, the rate of snus use among Swedish men is about 23%; the rate of smoking is about 14%, the lowest in the industrialized world. Not every snus user is a former smoker, of course. And some who become addicted to nicotine using snus go on to become smokers. But several studies have shown that use of snus reduces the likelihood of starting smoking and enhances the odds of quitting.

"Use of snus in Sweden is associated with a reduced risk of becoming a daily smoker and an increased likelihood of stopping smoking," concluded a study published this year in the journal *Tobacco Control*. Its two authors -- an American nicotine specialist named Jonathan Foulds and a Swedish specialist named Lars Ramstrom -- received no funding from tobacco companies.

Swedish men boast the lowest death rate from lung cancer in Europe. By contrast, Swedish women, who smoke at rates nearly commensurate with the rest of Europe, have one of the continent's highest lung-cancer rates. Research in Sweden has found no association between snus consumption and oral cancer. Some epidemiologists believe that one study in Sweden -- which concluded that no risk existed -- does show an increased mouth-cancer risk for snus users.

Based on the Swedish research, the European Union in 1999 relaxed its requirement for a warning about cancer on snus packages. Sweden is the only country in Europe where smokeless tobacco is allowed to be purchased. In the early 1990s, the EU banned the product, seeking to avoid the creation of another tobacco problem.

A 2003 analysis of smokeless products, conducted by the Swedish National Food Administration, found Swedish Match products to contain about 2.1 parts per million of nitrosamines. Star Scientific's Ariva contained less than one part. Meanwhile, of five U.S. Smokeless Tobacco's moist-snuff products analyzed, only two fell below five parts per million: Skoal Wintergreen and Copenhagen pouches. U.S. Smokeless says that while the company doesn't discuss health claims about its product, it has been reducing its nitrosamine levels.

Some smokers in the U.S. are making the switch. Charles Mayfield smoked a pack a day for 10 years and failed several times to quit, despite his better-than-average understanding of the devastation smoking causes: Dr. Mayfield is a physician. "I could feel the effects it was having on me," says Dr. Mayfield, a 43-year-old pathologist in Pensacola, Fla.

Dr. Rodu, the Louisville researcher who was then a colleague, suggested Dr. Mayfield switch to snuff. "I thought, 'Man, that's crazy,'" says Dr. Mayfield. "For one thing, I thought it was just as dangerous in terms of oral cancer." But upon studying the research, he learned cigarettes are a greater cause of oral cancer than is snuff. He switched and hasn't smoked a cigarette in 12 years. He continues using snuff.

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Corrections & Amplifications:

A 2003 analysis of smokeless tobacco products found that two U.S. Smokeless Tobacco Co. moist-snuff brands contained fewer than five parts per million of nitrosamines, the primary carcinogen in smokeless tobacco. The article above misstated the ratio as parts per billion. In addition, smokeless-user Pam Harlan smoked her last cigarette on Sept. 19, 2005. The article incorrectly gave the date as Sept. 19, 1995.

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