

✓ Do not trivialize nicotine addiction is the advice from five Swedish physicians and scientists. As long as the knowledge of the health effects of long term use of Swedish moist oral snuff – snus – is limited, nicotine replacement therapy should be the smoking cessation aid of choice. Research on snus should be strengthened and, most importantly, cessation support should be increased.



Lasse Allard – Pressens bild

## Who benefits from increased use of snus?

Swedish snus is increasingly portrayed as a blessing for public health. It is being presented as an explanation of the low smoking prevalence in Sweden, one of the lowest in the world. Snus is described as a harmless alternative to smoking, and a smoking cessation aid comparable to nicotine replacement therapies such as nicotine gums, patches and sprays.

This is the image that Swedish Match, the main snus manufacturer, wants to convey when the company in court challenges the European Union snus sales ban, and also seeks to increase acceptance and market shares for its snus products in the rest of the world.

Support for snus has also been provided by media which have sometimes uncritically conveyed the manufacturer's viewpoint. Recently, some scientists have argued on behalf of snus as the lesser of two evils for those who are heavily addicted to nicotine.

We realize that, in some cases, snus can be an alternative for a small group of heavily addicted smokers. But from that realization, it is a long way to uncritical encouragement of snus as a solution of a public health problem. Instead, the medi-

cal profession should accept its responsibility to become actively involved in the development and establishment of professional smoking cessation programs worthy of the name.

As late as the early 1970s, scepticism still remained regarding an association between smoking and cardiovascular disease. Now we know with certainty that smoking has severe effects on the cardiovascular system.

With regard to smokeless tobacco, research is still at an early stage. We know that snus, unlike cigarette smoke, does not cause lung disease. We also know that it has not been possible to establish a link between the use of Swedish snus and a the risk of oral cancer. But there are many important and worrying knowledge gaps that need to be filled.

**R**egular snus use is associated with exposure to high concentrations of nicotine resulting in an increase in pulse and blood pressure. This may lead to heart rhythm disturbances, and increase the risk of sudden heart arrest. One Swedish study did not find an increased risk of acute heart attack among users of snus, while another study reported an increased mortality among users of all ages, compared with those who did not use tobacco in any form. Among patients with cardiovascular disease, nicotine places an additional burden on the circulatory system.

We must learn more about possible metabolic effects of snus use. There is some evidence that both smokers and snus users are at an increased risk of developing adult diabetes. There is also a need to assess the risks of surgical complications, such as delayed healing, as well as effects on the immune system, potency and fertility.

Another important area for further research relates to effects of nicotine on the developing fetus. Recent Swedish-French findings indicate that nicotine exposure in utero can influence fetal receptors regulating breathing, and increase the risk of sudden infant death syndrome.

In short, the current state of knowledge is reminiscent of the uncertainty surrounding the link between smoking and heart disease thirty years ago.

The attempts of the tobacco industry to dismiss the possible health risks associated with snus use should be challenged with facts. The same applies to some myths and statements, for example:

**Myth: Snus use is essential to reduce the prevalence of smoking in a population.**

**Facts:** Australia, California and Massachusetts in the USA, and some provinces of Canada now have levels of smoking prevalence as low as, or lower, than Sweden – without the use of snus. Australia prohibited the sale of smokeless tobacco in 1992. What these regions have in common is a high level of general awareness regarding the harmful effects of smoking, and heavy investments in tobacco control measures. The trend for Swedish women's smoking habits also refutes the myth that snus use is a necessary component to reduce smoking. Between 1977 and 2000, the proportion of daily smokers among young Swedish women – among whom snus use is uncommon – declined from 47 to 19 percent.

**Myth: A majority of Swedes use snus as a smoking cessation aid**

**Facts:** Several studies conducted in recent years show that three of four Swedish men who quit smoking did so without the help of snus. Snus is an established and easily accessible product in Sweden. It is also inexpensive in comparison with nicotine replacement therapy products.

The prevalence of male snus users has remained at 18-20 percent for several decades. While snus has probably played a role for some men who have tried to quit smoking, it is an oversimplification that snus use can explain the low proportion of smokers in Sweden.

**Myth: Snus is an effective smoking cessation aid.**

**Facts:** There are no controlled studies which demonstrate the effectiveness of snus as a smoking cessation aid. The results of one survey indicate that two-thirds of the men who try to quit smoking with the help of snus continue to use snus long-term. In addition, one-third of all snus users are also smokers, so-called mixed users. It is not unusual that smoking cessation attempts using snus lead to the alternating use of snus and cigarettes. This can be explained by the high nicotine exposure associated with daily snus use. The addiction is at least as powerful as that associated with smoking. Up to one-half of snus users state that they want to quit the habit. Most of them are middle-aged who have started to suffer from their addiction to snus.

**Myth: Snus is the solution of a public-health problem.**

**Facts:** Swedish Match states that, if the European Union's snus ban is lifted, over 100 million cigarette smokers would switch to snus, leading to improvements in public health. We agree that public health is the central issue here. Based on current knowledge, however, it is not possible to predict the net effect of a switch from smoking to snus, especially given the recruitment of non-smoking young new snus consumers that is likely to result from a lifting of the ban.

The tobacco industry's motives are as obvious as its lack of credibility in public health matters. The industry's main objective is to ensure future profits by maintaining the sales volume of its products, which requires that the level of nicotine addiction in society remains constant or, preferably, increases.

There is an obvious parallel between the present industry arguments and those accompanying the introduction of "light" cigarettes during the 1970s. Instead of giving up cigarettes, smokers were lured into switching to products that were presented as less harmful to health. Now, decades later, it is clear that they were not less harmful. We must learn from this lesson.

Given the current state of knowledge, the promotion of snus must be regarded as a leap into the unknown – a large-scale experiment with human health without the planning, control or follow-up that characterizes scientific research.

The uncertainty of long-term health effects means that it is unwise for the health-care system to recommend snus as a smoking cessation aid – not least because it can result in the prolongation of nicotine addiction.

Nicotine-replacement products have at least two important advantages: compared with snus, these are pure products; and they are perceived as temporary aid to end nicotine addiction.

Also, if snus is actively promoted by the medical profession, the effect would be to legitimize and trivialize nicotine addiction, leading to an increased risk that greater numbers would be trapped in chronic addiction. The Swedish experience is that at least forty percent of snus users are never smokers.

To reduce the prevalence of smoking, comprehensive long-term tobacco control programs are needed, and should include components such as education, opinion-building, preventive measures directed towards children and youth, accessible and professional smoking cessation programs including cessation aids, and legislation. Large-scale investments in broad tobacco control programs have proven to be highly successful in California and Massachusetts.

In conclusion: The often repeated assertion that the low prevalence of smoking in Sweden can be explained by a national tradition of snus use is unconfirmed. The Swedish success story is more likely a result from a number of factors where public education and greater general awareness of smoking's harmful effects have played decisive roles. It is quite possible to reduce the frequency of smoking without replacing every cigarette with a dip of snus.

**T**he idea of “the lesser of two evils“ is appealing on the surface, but it is important to critically scrutinize the arguments used to support this notion. We obviously do not argue for a ban on the marketing of snus in Sweden, nor do we think that it is realistic or meaningful to prohibit the sale of cigarettes. However, we doubt that it is in the interest of the residents of the European Union that the snus ban were to be lifted.

The motives of snus manufacturers must also be carefully scrutinized. That Swedish Match wishes to recruit new, young snus consumers is illustrated by the company’s recent sharp increase in advertising for snus in youth publications in the United States. Also, the fact that a foreign cigarette manufacturer recently acquired a newly-started Swedish snus company is more likely to reflect a desire to share in anticipated profits, than a wish to promote public health.

**It is our view that:**

- ❶ The precautionary principle shall apply as long as the knowledge base remains weak.
- ❷ Research on snus should be strengthened in order to clarify the long-term health effects. This is a Swedish responsibility to the European Union.
- ❸ There should be increased investments in a tobacco control programs in general, and tobacco cessation efforts in particular. This is the most cost-effective opportunity available to the health-care system.
- ❹ Traditional nicotine replacement therapies are preferable to snus as a complement to smoking cessation advice and support, and should therefore be accessible and affordable.

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