

Smokeless tobacco

Types of smokeless tobacco and use

Smokeless tobacco products are sucked, chewed or inhaled by the user, and not burned. Nicotine from prepared tobacco leaf may be absorbed through the lining of the mouth, or much less commonly, through the lining of the nose.^{1, 2} There are two main types of smokeless tobacco, chewing tobacco and snuff.³

- **Chewing tobacco** is available in several varieties, including loose leaf, plug tobacco (bricks) and twist chewing tobacco.⁴ In India, Pakistan, Bangladesh, Sri Lanka and other South Asian countries, tobacco is commonly chewed in combination with other substances, such as betel leaf ('paan'), areca nut and lime.^{1, 5}
- **Snuff** is finely cut powdered tobacco that is packaged moist or dry. Some people inhale dry snuff into the nose. Moist snuff is held between the cheek and gums or behind the upper or lower lip. It is available loose, in dissolvable lozenges or strips, or in small pouches similar to tea bags⁴. Moist snuff is used in North America and Northern Europe (e.g. Swedish snus).⁵ In some countries tobacco pastes or powders are applied to the gums and teeth.^{2, 5} In Sudan, toombak is made from a fermented ground powdered tobacco mixed with sodium carbonate.³

Smokeless tobacco products are often flavoured and sweetened to improve their taste, which adds to their appeal to the youth market.⁶ They are used throughout the world, but their availability is restricted in some countries, including Australia.⁵ A list of the different types of smokeless tobacco from different regions is available in the International Agency for Research on Cancer monograph on smokeless tobacco.⁵ In Australia, smokeless tobacco tends to be used by immigrants from countries where its use is common.⁷ Some Aboriginal and Torres Strait Islander communities chew native nicotine containing plants or commercial tobacco.⁸

Health effects of smokeless tobacco

The health risks of smokeless tobacco use are much lower than those from smoked tobacco.^{3, 9} However, current evidence does not indicate that any smokeless tobacco is safe to use.^{9, 10}

The type and size of disease risks from using smokeless tobacco vary across the different products, depending on their ingredients and how they were made.^{1, 9} Many products have not been studied for ingredients and health effects.^{3, 10}

Chewing tobacco and snuff contain at least 28 cancer-causing substances.⁵ Smokeless tobacco causes cancer of the mouth.^{5, 11} The highest risks for mouth cancer are from the tobacco-betel and other tobacco mixtures used in India, Pakistan and South Asia, and toombak from the Sudan.^{5, 11, 12} More than half of mouth cancers in India and Sudan are due to smokeless tobacco use.¹³ Smokeless tobacco use can lead to oral disease, including lesions in the mouth, tooth decay, and receding gums.^{5, 9, 14, 15}

Smokeless tobacco use causes cancer of the pancreas and oesophagus (food pipe).^{5, 9, 11} Use of smokeless tobacco during pregnancy may increase the risk for premature birth, preeclampsia and low birth weight.^{5, 9} Smokeless tobacco use by men may reduce semen volume and sperm count, and increase the number of abnormal sperm.⁵

Smokeless tobacco use causes short-term increases in blood pressure and heart rate.⁵ Evidence suggests that smokeless tobacco users probably have a small increase in the risk of dying from heart disease and stroke, but more research is needed.^{5, 16}

A Scandinavian smokeless tobacco product known as 'snus' appears to be less toxic than other smokeless tobacco products, probably due to differences in the way it is manufactured and stored. Snus has lower levels of substances that cause cancer, compared to other smokeless tobacco products.^{1, 17} Snus is far less harmful than smoking and also less harmful than other types of smokeless tobacco, particularly those used in India and Sudan.^{9, 17, 18} However, while snus use has not been shown to increase the risk for mouth cancer, it shares some of the other risks associated with smokeless tobacco use such as cancer of the pancreas and oesophagus, a small increased risk of death from heart attack and stroke, and problems during pregnancy.^{9, 16, 17}

Addiction and quitting

Smokeless tobacco contains nicotine and its use can lead to nicotine addiction.⁵ Absorption of nicotine from smokeless tobacco products is slower than that from cigarettes, but users have similar levels of nicotine in their blood.^{5, 9} However, some products from the United Kingdom, Africa and India can deliver very high levels of nicotine.^{1, 5, 19} Smokeless tobacco users show signs of nicotine addiction. They develop a compulsive pattern of use, and when they quit they experience cravings and other symptoms of nicotine withdrawal.^{5, 9} Symptoms of withdrawal include difficulty concentrating, urges to use smokeless tobacco, and feeling irritable, restless and hungry. However, unlike quitting cigarette smokers, few people report having depressed or negative moods. Most smokeless tobacco users have difficulty staying stopped.⁹

There are few studies on what helps smokeless tobacco users quit. Use of nicotine patches or gum and bupropion (Zyban) has not been shown to help people stop using smokeless tobacco. However, one study found that Varenicline (Champix) can help people stop.³ Dentists and hygienists may help their patients stop, especially if they show the damage that smokeless tobacco causes in their mouths. Telephone counselling may also help people stop using smokeless tobacco.³

Australian law on smokeless tobacco

During the 1980s moist snuff was marketed for a brief period in Australia in ready-to-use, teabag-like suckable pouches, of the kind popular in the USA. Smokeless tobacco was then banned in several states during the late 1980s, and federal legislation banned the manufacture, importation and commercial supply of the products in 1991.^{20, 21} However, an amendment to the *Customs (Prohibited Imports) Regulations (1956)* (Cth) in 2002 now allows up to 1.5kg of smokeless tobacco products to be imported for personal use.²² Smokeless tobacco cannot be sold by retailers in Australia.²³

Conclusion

- Smokeless tobacco contains nicotine and its use can lead to addiction.
- The health risks of smokeless tobacco are much lower than those for smoked tobacco. However, smokeless tobacco is not a safe alternative to cigarette smoking.
- Chewing tobacco and snuff contain at least 28 cancer-causing substances, and cause cancer of the mouth, pancreas and oesophagus. It is also linked to other health problems.

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