



Tobacco and Betel Nut Chewing

Tobacco

How big a problem is smoking?

- ✦ There are approximately 1100 million smokers in the world (of these, 800 million are in developing countries).
- ✦ About one-third of the global population aged 15 years and over smoke.
- ✦ Cigarette consumption in developed countries has been gradually falling, while in developing countries it has been increasing.

What is in tobacco?

Tobacco, and hence cigarette smoke, contains a mixture of dangerous chemicals. Cigarettes contain around 600 ingredients, and combined with the substances found in tobacco, result in the average cigarette containing around 4000 chemicals, of which 43 are known carcinogens (they cause cancer).

Nicotine is the main chemical that acts on the brain to give the 'pleasurable' effect. When nicotine burns, it turns brown and gives off the characteristic tobacco smell. Nicotine is one of the most frequently used addictive drugs in the world. A person who is addicted to a substance is compelled to seek it out despite negative consequences. The nicotine is released from cigarettes, cigars and from chewing tobacco.

The WHO International Classification of Diseases classifies dependence on tobacco as a behavioural disorder.

Environmental tobacco smoke (ETS) contains essentially all of the same carcinogens and toxic agents that are inhaled by the smoker.

Low-tar cigarettes have not been found to be any less dangerous than other cigarettes.



'Tobacco is a greater cause of death and disability than any single disease'

- ✦ Tobacco is a known or probable cause of about 25 diseases.
- ✦ Tobacco is **the** most important cause of lung cancer.
- ✦ Long-term smokers have a 50 per cent chance of dying from the effects of tobacco.
- ✦ Tobacco is estimated to be responsible for three and a half million deaths worldwide per year – about seven per cent of all deaths.

Cancer

Smoking is the main cause of lung cancer.

- ☞ Men who smoke are 22 times more likely to die from lung cancer than non-smokers.
- ☞ Women who smoke are 12 times more likely to die from lung cancer.
- ☞ Other cancers are also affected by cigarette smoke, including throat, breast and bowel cancer.
- ☞ People who chew tobacco have very high rates of mouth cancers.

Cardiovascular disease

- ☞ Smoking triples the risk of dying from heart disease among middle-aged men and women.
- ☞ Smoking also increases the risk of death from stroke, aneurysms, high blood pressure, and other cardiovascular illnesses.

Respiratory diseases

- ☞ Smoking increases the risk of dying from pneumonia, chronic bronchitis, or emphysema (possibly by up to ten times).

Diabetes

- ☞ It has been suggested that smoking increases risk of developing diabetes (by three times).

Pregnancy

- ☞ Maternal smoking is associated with a higher risk of miscarriage, lower birth weight of babies, and inhibited child development.

Breastfeeding

- ☞ A mother who smokes can also pass nicotine onto her baby through her breast milk.

Mouth

- ☞ Smoking cigarettes stains teeth.
- ☞ Chewing tobacco (on its own or in betel chews) increases the risk of gum disease and oral cancers.

Second-hand smoke:

Never-smoking spouses/partners of smokers have more than a 20 per cent increased chance of death from coronary heart disease (compared to non-smokers living with non-smokers).



Children of smokers have increased risks of sudden infant death syndrome; respiratory illnesses, including bronchitis, colds, and pneumonia; middle-ear infections; and cancers.

Stopping smoking

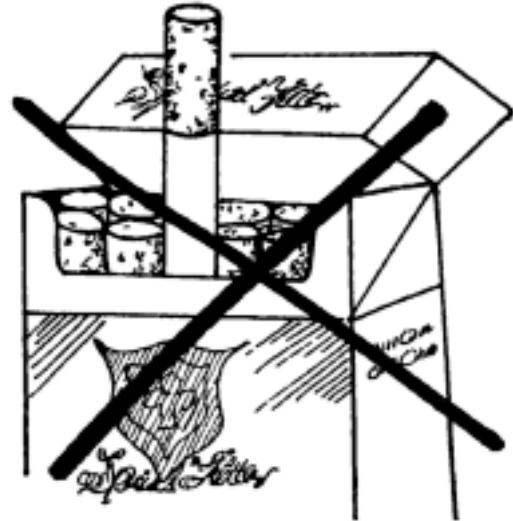
The addictive properties of cigarettes make smoking very difficult to give up. Throughout the world, companies recognise this issue and promote nicotine patches, counselling, hypnotherapy, and other methods – all in an attempt to wean the smoker away from the addictive nicotine. Long-term support is needed to assist smokers who choose to try and stop smoking.

Stopping smoking benefits health substantially and dramatically reduces the risk of getting most diseases related to smoking. However, for the long-term smokers, the earlier they stop the better.

- ☞ One year after quitting, the risk of coronary heart disease (CHD) decreases by 50 per cent, and within 15 years (of continued non-smoking), the relative risk of an ex-smoker dying from CHD approaches that of a long-time non-smoker.
- ☞ The relative risk of developing lung cancer, chronic obstructive lung diseases, and stroke also decreases, but more slowly.

Country or international strategies that can be used to reduce tobacco use

- ⚡ Educate people about the dangers and other consequences of tobacco – not only to prevent people from starting smoking but also to help smokers to give up.
- ⚡ Set up smoke-free environments in workplaces, schools and other public places.
- ⚡ Increase taxes on tobacco (evidence suggests this does reduce overall sales).
- ⚡ Ban advertising by tobacco firms (especially in places where children are exposed to it).



Financial impacts of tobacco

While prices of tobacco and cigarettes vary markedly around the world, for an addict, the consequences of the price of tobacco on available funds can be significant. This can result in parents preferring to buy cigarettes rather than

healthy food for their family, or young people spending money on cigarettes instead of lunch at school.

Increasing tobacco prices generally does decrease sales (as the price goes up, people buy less).

Betel Nut Chewing

In some countries in the Pacific, chewing betel nut has become common.

In general, a betel nut chew consists of three parts:

- ✦ the kernel of the Areca nut (which is the component that contains the stimulant);
- ✦ the green leaves of the piper betel plant (which has a spicy flavour); and
- ✦ lime powder made from shell, coral rock or sea coral.

The leaves are used to form a pouch for the other items. Tobacco or pieces of cigarette are also commonly added. The pouch is put in the mouth and chewed for long periods of time. The betel chew causes more saliva to be produced than usual, and so the user is forced to spit this out frequently. The betel nut stains the mouth and teeth (including saliva) a red colour. The chew releases chemicals including nicotine.

Does betel chewing cause cancer?

Cancer of the tongue is common in all areas of the world where betel-nut chewing is practised. This would suggest an association between cancer of the tongue and chewing betel nut. Oral cancer is a significant health problem in countries in the Pacific where chewing betel nut is common: Papua New Guinea, Solomon Islands, Palau and Guam. (Excessive alcohol intake and smoking also increase the rates of oral cancers.)

The betel chew consists of a number of different ingredients and research is still needed to find out exactly which parts cause the problem.

Research has shown the following:

- ✦ Nitrosamines (substances that cause cancer) have been found in the mouths of betel chewers when tobacco was included and when not included.



- ✦ Oral cancer rates are higher in people who add tobacco to their chew than in those who don't (but oral cancer still occurs among those who do not include tobacco).
- ✦ The lime 'attacks' compounds in the betel nut, causing the production of oxidants (substances that cause cancer). The lime also causes uncontrolled cell growth (again a risk for cancer).

It would seem, from evidence so far, that the worst combination (the one most likely to cause oral cancer) is tobacco, lime and betel. Without tobacco, the chew is slightly less dangerous, and less dangerous still is a chew without tobacco or lime.

Note: Chewing betel nut also causes periodontal disease (disease of the gums). It is thought that the lime is responsible mainly for this effect.