



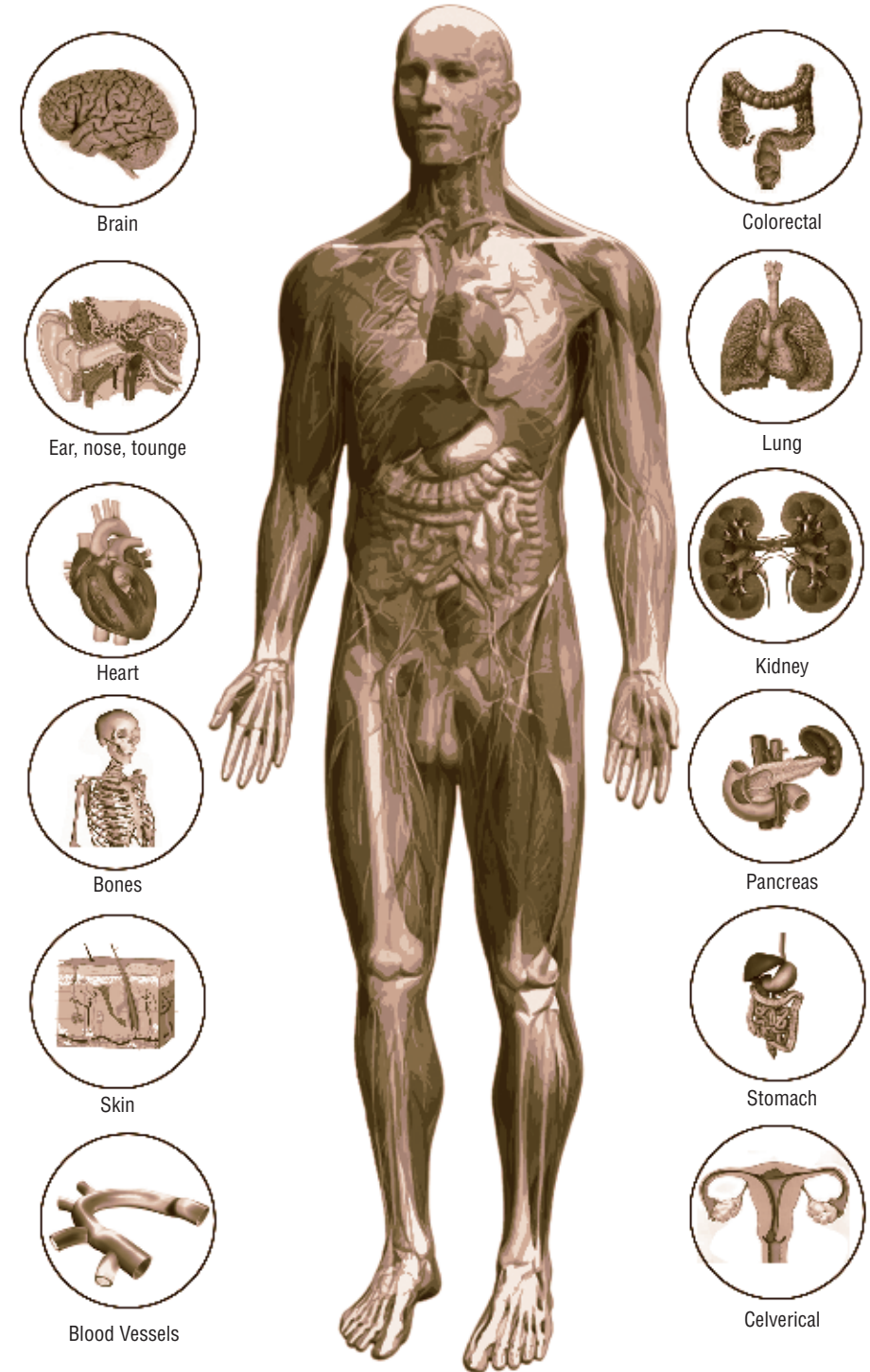
# Burden of tobacco use

Tobacco use has been recognized as a major risk factor and cause of a host of diseases for over four decades. Nevertheless, a large number of scientific and epidemiological evidences and WHO's recommendations have not been able to generate enough awareness to shake the global community, especially in the developing countries. According to the latest available official survey, over 200 million Indians constantly expose themselves to the tobacco menace in various ways. India's tobacco problem is more complex than probably any other country in the world, because a large proportion of the population also consumes smokeless tobacco in varied forms. There is a variety of smokeless tobacco available across the country, widely used by men and women, with a large consequential burden related to it.

The effects of tobacco use can be understood better as follows:

## a. Effects of tobacco smoking

BODY SYSTEM OR ORGAN	ESTABLISHMENT OR SUSPECTED ADVERSE HEALTH EFFECT OF CIGARETTE SMOKING
All organs and systems	Lung cancer
	Infections Lung cancer
	Esophageal cancer
	Laryngeal cancer
	Oral cancer
	Bladder cancer
	Kidney cancer
	Stomach cancer
	Pancreatic cancer
	Cervical cancer
	Colorectal cancer
	Liver cancer
	Cancers of the lip, mouth, throat and larynx
	Heart
Angina pectoris	
Heart attack	
Increased risk of repeat heart attack	
Arrhythmia	
Aortic aneurysm	
Cardiomyopathy	
Blood vessels	Peripheral vascular disease
	Thromboangitis obliterans (Burger's disease)





Teeth, mouth and throat	<ul style="list-style-type: none"> <li>— Plaque</li> <li>— Loose teeth</li> <li>— Root-surface decay</li> <li>— Gum disease (gingivitis)</li> <li>— Sore throat</li> <li>— Impaired sense of taste</li> <li>— Bad breath</li> </ul>
Bones	<ul style="list-style-type: none"> <li>— Disc degeneration</li> <li>— Osteoporosis</li> <li>— Osteoarthritis</li> <li>— Less successful back surgery</li> <li>— Delayed fracture healing</li> <li>— Musculoskeletal injury</li> </ul>
Reproduction	<ul style="list-style-type: none"> <li>— Infertility</li> <li>— Impotence</li> <li>— Decreased sperm motility and density</li> <li>— Miscarriage</li> <li>— Earlier menopause</li> </ul>
The unborn child	<ul style="list-style-type: none"> <li>— Fetal growth retardation</li> <li>— Prematurity</li> <li>— Stillbirth</li> <li>— Enhanced transmission of HIV to fetus</li> <li>— Birth defects</li> <li>— Intellectual impairment</li> <li>— Sudden infant death syndrome</li> </ul>
Brain	<ul style="list-style-type: none"> <li>— Transient ischemic attack</li> <li>— Stroke</li> <li>— Worsened multiple sclerosis</li> </ul>
Others	<ul style="list-style-type: none"> <li>— Cataracts</li> <li>— Muscular degeneration</li> <li>— Snoring</li> <li>— Stomach and duodenal ulcers</li> <li>— Impaired immunity</li> </ul>

Apart from these there are other diseases, which are lesser known to people, for example,

**Ears**

- Ear infections
- Hearing loss

**Nose**

- Impaired sense of smell
- Cancer of nasal cavities and paranasal sinuses

**Hair**

- Odour and discolouration

**Eyes**

- Stinging, excessive tearing and blinking
- Blindness (muscular degeneration)

**Hands**

- Poor circulation (cold fingers): peripheral vascular disease
- Tar-stained fingers

**Wounds and surgery**

- Impaired wound healing
- Poor post-surgical recovery

**Diabetes**

- Non-insulin dependent diabetes mellitus (Type 2, adult-onset)

**Legs and feet**

- Increased leg pain and gangrene: peripheral vascular disease
- Buerger's Disease

## b. Effects of Smokeless Tobacco Use

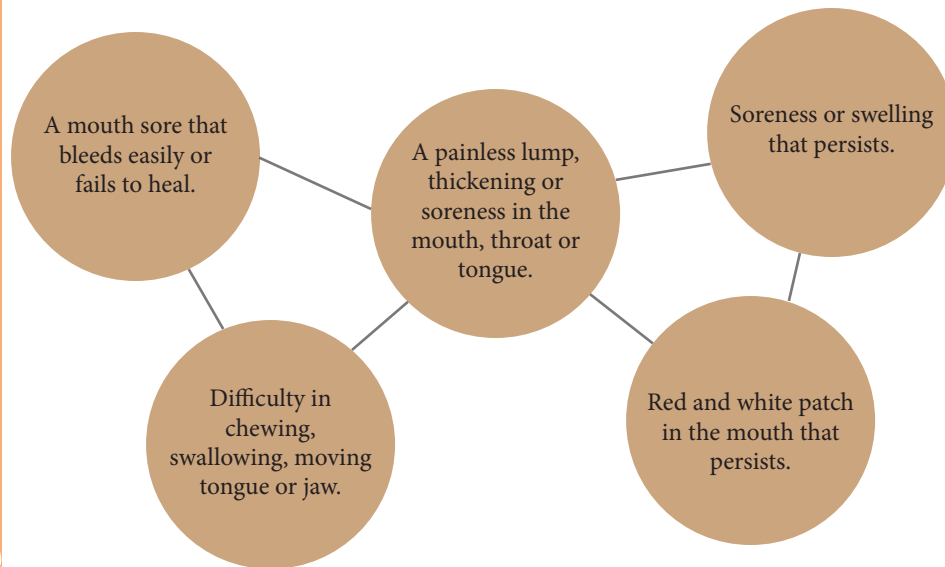
Use of smokeless tobacco is very common in South Asia. In India, tobacco chewing is picked up as a traditional habit in most of the rural areas. There are various forms of smokeless tobacco widely used, namely Paan (betel quid with tobacco), Paan masala, tobacco, areca nut and slaked lime preparations, thutka, mishri, gul, bazaar, tobacco water, nicotine chewing gum, supari, meetha mewa. Use of smokeless tobacco is common more among women and children. Unaware of the ill effects of smokeless tobacco, women in most of the rural areas use tobacco to freshen their breath in the morning, get rid of morning sickness when pregnant and ease labour pains during delivery. The risks associated with smokeless tobacco use can be very serious and are as follows:



- Smokeless tobacco is highly dangerous because it causes a variety of cancers, especially of the oral kind.
- India has the highest number of oral cancer in the world and smokeless tobacco use may increase the risk of oral cancer four times.
- 18 to 20 percent of cancers in India are oral cancer induced by tobacco.
- Smokeless tobacco contains dangerous chemicals that contain similar or higher levels of nicotine than smoking tobacco which result in addiction leading to death. It is directly absorbed in the blood stream and leads to addiction.

- Smokeless tobacco users, specially those consuming snuff for a long time can develop cancer of the lip, tongue, floor of the mouth, cheek and gum.

**Warning Signs :** The following warning signs may be the preliminary indicators of tobacco-use related oral cancer:



Smokeless tobacco products are easily available at a reasonable price in sachets and most popular among youths and children. There are about 1000 gutka and paan masala manufacturing factories across India and they target the adolescent group as future customers.

Smokeless tobacco is a growing addiction among the youth in India. If not effectively controlled, it will soon become an epidemic and a major cause of death and disability among them.

## c. Effects of Tobacco use among Women

Although, the prevalence of smoking among women in most of the states of India is fairly low, but it is on the increase especially in urban areas. In rural areas, use of smokeless tobacco is quite common. Tobacco companies produce a range of brands marketed specially for women and promote cigarettes using seductive but false images of vanity, slimness, emancipation and sophistication. Similarly smokeless tobacco is advertised in ways which attract women and children.



- The health risks to women smokers are no different from those for men with the additional burden of risks associated with reproduction.
- Tobacco use during pregnancy may lead to premature birth or spontaneous abortion, even still births.
- Women who use tobacco also give birth to low birth weight babies who are at a higher risk of many health problems.
- Women smokers/tobacco users are less fertile and may become sterile as active and passive smoking is associated with delayed conception.
- Women tobacco users have complications of pregnancy like bleeding during pregnancy, premature detachment of the placenta and premature rupture of the membranes.
- Younger girls who use tobacco often have difficulties with their menstrual cycles like (absence of menstrual period), pain, pre menstrual tension, irregularity and amenorrhoea.
- An increased risk of breast cancer is associated with long term passive smoke exposure.



- Menopause tends to be 2-3 years earlier in tobacco users.
- Women smokers who are on oral contraceptives have a higher risk of heart attacks, stroke and cerebral hemorrhage. The risk is highest in the older age group.
- The risk of sudden infant death syndrome (SID) is nearly double if mothers smoke 20 or more cigarettes a day.
- Women smokers have difficulties in breastfeed their newborns.
- A major threat faced by Indian women also is second- hand smoke exhaled by their spouses or family members. This violates the rights of women.

## d. Impact of Tobacco Use on Children

In India there are five million children smokers with 55,000 children starting regular tobacco use every year. 80% of smokers reported to have their first cigarette at the age of 8 years to 13 years. Children are also most vulnerable to second hand smoking. In lower and middle income countries where cigarettes may have higher tar content, and where living space is smaller or more crowded, children are more exposed to the dense smoke. Direct damaging health effects of mother's smoking on fetus and on children have already been discussed earlier in this chapter. The children of parents who smoke are more likely to become smokers themselves and as adults they repeat the same pattern. Children get affected the most by tobacco and their rights are violated in ways more than one. Children also start the use of tobacco due to peer pressure. It is more likely that the children, who start tobacco use early, continue to use throughout their lives and hence, the risks of developing tobacco related diseases are high.



**Compared to non-smoking children, children who smoke even a few cigarettes a week suffer more frequently from:**

- Colds and coughs with phlegm, gasping, wheezing
- Ear infection
- Six times more likely to suffer a sub-archnoid brain haemorrhage
- Less fit athletically – partly an effect of lung functioning
- Risk of heart attack is more
- Risk of lung cancer

**Smoking around children results in:**

- Sudden infant death syndrome (SIDs)
- Lung problem
- Ear infection
- Severe asthma
- Reduced rate of being growth
- Bronchitis
- Pneumonia

## e. Second-hand Smoking and its Impact

Based on hundred of intensive and extensive research studies conducted for about four decades, there is scientific consensus that passive smoking causes serious and fatal diseases, such as heart diseases, lung cancer, asthma and others. Recent Research indicates that second hand smoking can also give rise to other potentially fatal diseases. New scientific evidence on the adverse effects of second hand smoke continues to accumulate. Based on this overwhelming body of conclusive evidence, WHO policy recommendations are made on how to protect people from the harmful effects of second hand smoke.



when mummy smokes one stick, I smoke three



daddy lets me smoke

**Effects of second hand smoking on adults**

- Lung cancer
- Ischemic heart diseases
- Risk of stroke, angina
- Chronic respiratory diseases
- Asthma
- Worsening of pre existing chest problems
- Decreased lung functioning
- Eye and nasal irritation
- Headache
- Sore throat
- Dizziness
- Nausea
- Cough
- Respiratory Problems

**Effects on pregnancy Born prematurely**

- Low birth weight
- Risk of early infant death
- Still birth
- Miscarriage
- Congenital abnormalities
- Sudden Infant Death Syndrome (SIDS)
- Chronic cough, wheezing, bronchial diseases and Breathlessness
- Asthma
- Middle ear disease
- Decreased Lung Functioning

**f. Green Tobacco Sickness**

Tobacco related illnesses are not only caused by smoking or chewing tobacco. Those who are engaged in harvesting and curing tobacco frequently reported to suffer from poor health. Nicotine absorbed through skin during harvesting of the wet tobacco leaves cause Green Tobacco Sickness. Green Tobacco sickness is a disease in the skin which is developed due to prolonged and direct contact with tobacco plants. It is common among the tobacco cultivators and there is global evidence of green tobacco sickness among the tobacco workers



who works in fields. It is an acute form of nicotine toxicity, which is caused due to hours of continuous exposure to green tobacco leaves. The illness is characterized by headache, nausea, vomiting, giddiness, loss of appetite, fatigue, weakness and fluctuations in blood pressure and irregular heart beat. Although green tobacco sickness does not directly cause death or prolong morbidity, however it causes discomfort and often workers may not be able to work in severe symptomatic conditions.

In India, many children work full time or part-time in tobacco fields and tobacco product manufacturing like rolling bidis. These children always have the risk of green tobacco sickness, dermatitis and many other skin diseases. The prevalence of green tobacco sickness among the tobacco harvesters in some parts of India was studied at Central Tobacco Research Institute, Andhra Pradesh, and in some parts where tobacco is mainly cultivated for making beedis, snuff and chewing tobacco. Headache, giddiness, abdominal pain, vomiting and nausea were the common symptoms observed among most of the tobacco workers.

**g. Tobacco and Poverty**

There are three ways by which tobacco use can effect the household economy—i) loss of money on buying tobacco, ii) loss of income through illness and premature death, and iii) health care costs, hospitalization, surgery, medicine, etc., induced by tobacco related diseases. It is a vicious cycle.





Various studies conducted by PATH Canada and other organizations have tried to understand the connection between tobacco use and poverty. Tobacco use is an economic burden faced by most of the lower income group of people which is one of the most important contributing factors to their overall misery. Tobacco use, not only causes a daily drain on their scarce resources, but also lessens their ability to invest for their future well being, thus keeping the family members of the tobacco users in poverty. Despite the low source of income, people tend to spend a large proportion of their income

each day on tobacco products and comparatively little on nutrition and other basic needs of life. Tobacco users spend vast amounts of money on their tobacco addictions that could have otherwise spent in productive economic activity or in meeting basic household needs which leads to a number of related problems. For instance, the money spent on each day on a packet of cigarette, bidis or any other tobacco products can be used to buy fresh fruits, vegetables, milk or can be a day's consumption of good quality rice or wheat for the entire family.

*"Smoking makes the poor poorer, it takes away not just health but wealth"*,  
Dr. Bill O'Neil, secretary of British Medical Association, Scotland.

Households suffer great economic losses due to high health care costs and loss of productivity due to tobacco related illnesses and premature deaths. In addition, a household member smoking exposes all members of the family to the hazards of second-hand tobacco smoke. A regular tobacco user not only wastes a substantial amount of his income in tobacco products, but is very likely to suffer significant loss of income in treating illness. Ill-health can further trigger poverty. Smokers not only suffer from a host of diseases but also their family members suffer in various manner by spending valuable time and scarce resources caring for their sick relatives. In poverty-stricken households, where income is spent on tobacco addiction, families have been observed to suffer from

malnutrition. Tobacco kills one fourth of the smokers during their productive years, depriving their dependent family members from all the necessities of life.

In 1999, the Indian Council of Medical Research (ICMR) estimated the cost of three major tobacco related diseases (Cancer, heart disease and chronic obstructive lung disease) to be 270 billion rupees (US\$5.8 billion), way above the revenue of 70 billion rupees (about \$1.5 billion) that the government collects from tobacco sales. Therefore, the direct and indirect costs of tobacco use are immense. Tobacco use can negatively affect a developing country's economic balance. Health care costs and lost productivity due to illnesses and early deaths are matters of great concern. People from lower socio-economic background are usually more likely to use tobacco and the least able to afford the treatment cost of tobacco-related diseases. Their expenditure on tobacco instead of on items necessary for survival represents a serious threat to their family well-being. Tobacco users should realize that money spent on tobacco is the money which could have been invested in income-generating activities or saving schemes.

*"Smoking makes the poor poorer, it takes away not just health but wealth"*

