

Impact of tobacco on human health

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Abstract

The health effects of tobacco are the effects that use of tobacco has on human health, and concern about health effects of tobacco has a long history. Research has focused primarily on cigarette tobacco smoking. In 1950, Richard Doll published research in the *British Medical Journal* showing a close link between smoking and lung cancer. Four years later, in 1954, the British Doctors Study, a study of some 40,000 doctors over 20 years, confirmed the suggestion, based on which the government issued advice that smoking and lung cancer rates were related.

Tobacco use is the single greatest cause of preventable death globally. As many as half of people who use tobacco die from the results of this use. The World Health Organization (WHO) estimates that each year tobacco causes about 6 million deaths (about 10% of all deaths) with 600,000 of these occurring in non-smokers due to second hand smoke. In the 20th century tobacco is estimated to have caused 100 million deaths. Similarly, the United States Centers for Disease Control and Prevention describes tobacco use as "the single most important preventable risk to human health in developed countries and an important cause of premature death worldwide."

Keywords: Tobacco, Health, Human, Impact

1. Introduction

Tobacco is a product prepared from the leaves of the tobacco plant by curing them. The plant is part of the genus *Nicotiana* and of the Solanaceae (nightshade) family. While more than 70 species of tobacco are known, the chief commercial crop is *N. tabacum*. The more potent variant *N. rustica* is also used around the world.

Tobacco contains the alkaloid nicotine, which is a stimulant. Dried tobacco leaves are mainly used for smoking in

cigarettes, cigars, pipe tobacco, and flavored shisha tobacco. They can be also consumed as snuff, chewing tobacco, dipping tobacco and snus.

Tobacco use is a risk factor for many diseases, especially those affecting the heart, liver, and lungs, as well as many cancers. In 2008, the World Health Organization named tobacco as the world's single greatest cause of preventable death



Fig 1

1.1 Brain

- Nicotine, the drug that makes tobacco addictive, goes to your brain very quickly.
- Nicotine makes you feel good when you are smoking, but it can make you anxious, nervous, moody, and depressed after you smoke.
- Using tobacco can cause headaches and dizziness.

1.2 Mouth

- Tobacco stains your teeth and gives you bad breath.
- Tobacco ruins some of your taste buds, so you won't be able to taste your favorite foods as well.
- Tobacco causes bleeding gums (gum disease) and cancers of the mouth and throat.

1.3 Heart

- Smoking increases your heart rate and blood pressure and causes heart disease and heart attacks.
- If you try to do activities like exercise or play sports, your heart has to work harder to keep up.

1.4 Lungs

- Smokers have trouble breathing because smoking damages the lungs.
- If you have asthma, you can have more frequent and more serious attacks.
- Smoking causes a lot of coughing with phlegm (mucous).
- Tobacco can cause emphysema (lung disease) and lung cancer.

1.5 Skin

- Smoking causes dry, yellow skin and wrinkles.
- The smell sticks to your skin.

1.6 Muscles

- Less blood and oxygen flows to your muscles, which causes them to hurt more when you exercise or play sports.
- Tobacco smoke is enormously harmful to your health. There's no safe way to smoke. Replacing your cigarette with a cigar, pipe, or hookah won't help you avoid the health risks associated with tobacco products.
- Cigarettes contain about 600 ingredients. When they burn, they generate more than 7,000 chemicals, according to the American Lung Association. Many of those chemicals are poisonous and at least 69 of them can cause cancer. Many of the same ingredients are found in cigars and in tobacco used in pipes and hookahs. According to the National Cancer Institute, cigars have a higher level of carcinogens, toxins, and tar than cigarettes.
- When using a hookah pipe, you're likely to inhale more smoke than you would from a cigarette. Hookah smoke has many toxic compounds and exposes you to more carbon monoxide than cigarettes do. Hookahs also produce more secondhand smoke.
- In the United States, the mortality rate for smokers is three times that of people who never smoked, according to the Centers for Disease Control and Prevention. It's one of the leading causes of preventable death.
- **Central Nervous System**

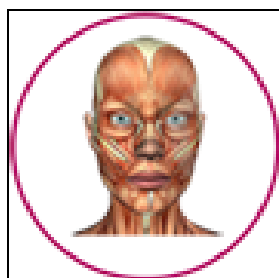
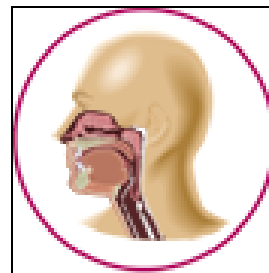


Fig 2

- One of the ingredients in tobacco is a mood-altering drug called nicotine. Nicotine reaches your brain in mere seconds. It's a central nervous system stimulant, so it makes you feel more energized for a little while. As that

effect subsides, you feel tired and crave more. Nicotine is habit forming.

- Smoking increases risk of macular degeneration, cataracts, and poor eyesight. It can also weaken your sense of taste and sense of smell, so food may become less enjoyable.
- Your body has a stress hormone called corticosterone, which lowers the effects of nicotine. If you're under a lot of stress, you'll need more nicotine to get the same effect.
- Physical withdrawal from smoking can impair your cognitive functioning and make you feel anxious, irritated, and depressed. Withdrawal can also cause headaches and sleep problems.
- **Respiratory System**



- When you inhale smoke, you're taking in substances that can damage your lungs. Over time, your lungs lose their ability to filter harmful chemicals. Coughing can't clear out the toxins sufficiently, so these toxins get trapped in the lungs. Smokers have a higher risk of respiratory infections, colds, and flu.
- In a condition called emphysema, the air sacs in your lungs are destroyed. In chronic bronchitis, the lining of the tubes of the lungs becomes inflamed. Over time, smokers are at increased risk of developing these forms of chronic obstructive pulmonary disease (COPD). Long-term smokers are also at increased risk of lung cancer.
- Withdrawal from tobacco products can cause temporary congestion and respiratory pain as your lungs begin to clear out.
- Children whose parents smoke are more prone to coughing, wheezing, and asthma attacks than children whose parents don't. They also tend to have more ear infections. Children of smokers have higher rates of pneumonia and bronchitis.
- **Cardiovascular System**

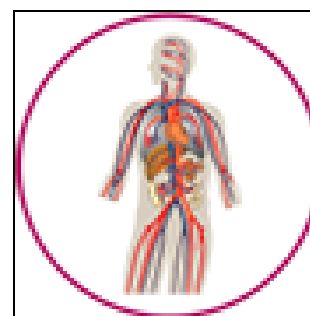


Fig 3

- Smoking damages your entire cardiovascular system. When nicotine hits your body, it gives your blood sugar a

boost. After a short time, you're left feeling tired and craving more. Nicotine causes blood vessels to tighten, which restricts the flow of blood (peripheral artery disease). Smoking lowers good cholesterol levels and raises blood pressure, which can result in stretching of the arteries and a buildup of bad cholesterol (atherosclerosis). Smoking raises the risk of forming blood clots.

- Blood clots and weakened blood vessels in the brain increase a smoker's risk of stroke. Smokers who have heart bypass surgery are at increased risk of recurrent coronary heart disease. In the long term, smokers are at greater risk of blood cancer (leukemia).
- There's a risk to nonsmokers, too. Breathing secondhand smoke has an immediate effect on the cardiovascular system. Exposure to secondhand smoke increases your risk of stroke, heart attack, and coronary heart disease.
- **Skin, Hair, and Nails (Integumentary System)**

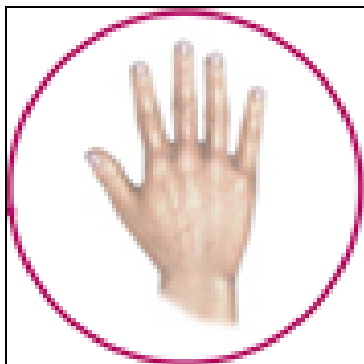


Fig 4

- Some of the more obvious signs of smoking involve the skin. The substances in tobacco smoke actually change the structure of your skin. Smoking causes skin discoloration, wrinkles, and premature aging. Your fingernails and the skin on your fingers may have yellow staining from holding cigarettes. Smokers usually develop yellow or brown stains on their teeth. Hair holds on to the smell of tobacco long after you put your cigarette out. It even clings to nonsmokers.
- **Digestive System**



Fig 5

- Smokers are at great risk of developing oral problems. Tobacco use can cause gum inflammation (gingivitis) or infection (periodontitis). These problems can lead to tooth decay, tooth loss, and bad breath.

- Smoking also increases risk of cancer of the mouth, throat, larynx, and esophagus. Smokers have higher rates of kidney cancer and pancreatic cancer. Even cigar smokers who don't inhale are at increased risk of mouth cancer.
- Smoking also has an effect on insulin, making it more likely that you'll develop insulin resistance. That puts you at increased risk of type 2 diabetes. When it comes to diabetes, smokers tend to develop complications at a faster rate than nonsmokers.
- Smoking also depresses appetite, so you may not be getting all the nutrients your body needs. Withdrawal from tobacco products can cause nausea.
- **Sexuality and Reproductive System**

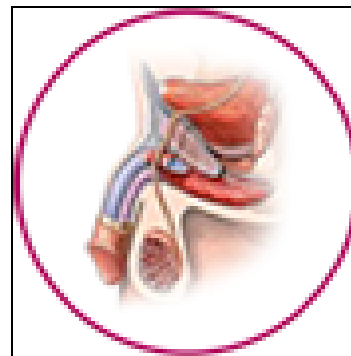


Fig 6

- Restricted blood flow can affect a man's ability to get an erection. Both men and women who smoke may have difficulty achieving orgasm and are at higher risk of infertility. Women who smoke may experience menopause at an earlier age than nonsmoking women. Smoking increases a woman's risk of cervical cancer.
- Smokers experience more complications of pregnancy, including miscarriage, problems with the placenta, and premature delivery.
- Pregnant mothers who are exposed to secondhand smoke are also more likely to have a baby with low birth weight. Babies born to mothers who smoke while pregnant are at greater risk of low birth weight, birth defects, and sudden infant death syndrome (SIDS). Newborns who breathe secondhand smoke suffer more ear infections and asthma attacks.

2. Conclusion

Much of the disease burden and premature mortality attributable to tobacco use disproportionately affect the poor", and of the 1.22 billion smokers, 1 billion of them live in developing or transitional economies. Smoking of tobacco is practised worldwide by over one thousand million people. However, while smoking prevalence has declined in many developed countries, it remains high in others and is increasing among women and in developing countries. Between one-fifth and two-thirds of men in most populations smoke. Women's smoking rates vary more widely but rarely equal male rates. In Indonesia, the lowest income group spends 15% of its total expenditures on tobacco. In Egypt, more than 10% of households' expenditure in low-income homes is on tobacco. The poorest 20% of households in Mexico spend 11% of their income on tobacco.

3. Reference

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