Definition

Smoking refers to the habit of consuming smoke generated from tobacco in cigarettes, cigars, and pipes. Major cause for cancer, emphysema, and heart disease.

See also Tobacco Carcinogenesis; Tobacco-Related Cancers

Summary Article: Smoking

Smoking, the most prevalent form of tobacco consumption in the world, is a major preventable cause of premature death and chronic disease. The World Health Organization (WHO) estimates that smoking kills nearly 5 million people every year, accounting for 12 percent of global adult mortality. Both smokers and nonsmokers are at risk—smokers from the direct adverse impact of smoking, and nonsmokers from involuntary exposure to secondhand tobacco smoke. Thus, reducing smoking by helping smokers quit and supporting nonsmokers to remain tobacco-free is a key global health priority.

GLOBAL SMOKING PREVALENCE

While there are various ways to consume tobacco, cigarette smoking is the most widespread. Cigarettes constitute about 96 percent of total tobacco sales worldwide. Half of all cigarettes produced annually are smoked in five countries: China, the United States, the Russian Federation, Japan, and Indonesia. China accounts for about one-third of all cigarettes smoked in the world.

Globally, about one in three adults and one in ten youth smoke. Among adults, smoking is significantly higher among men—almost 1 billion men smoke compared to about 250,000 women. Male smoking is higher in the developing world, with prevalence averaging about 50 percent as compared to 35 percent in developed countries. Female smoking is higher in developed countries, although smoking rates among women are increasing in several developing countries.

The Global Youth Tobacco Survey (GYTS) reveals that among youth aged 13 to 15, gender differences in smoking are minimal. Over half of the countries surveyed showed no difference between boys and girls smoking. This finding foreshadows increases in adverse reproductive outcomes and tobacco-related deaths among women in the future. Consequently, gender-sensitive approaches to reducing smoking, especially among youth, are crucial. The GYTS also confirms that use of other tobacco products is as prevalent as smoking among young people, highlighting the need to address alternate forms of tobacco consumption.

Scientific evidence confirms that smoking harms nearly every organ in the body, causing multiple diseases and impairing the health of smokers. The adverse health effects can begin before birth and continue across the life span. The 2004 U.S. Surgeon General’s Report concluded that evidence is sufficient to infer a causal relationship between smoking and the following:

https://search.credoreference.com/content/topic/smoking
Cancer of the bladder, cervix, esophagus, kidney, larynx, lung, oral cavity, pancreas, stomach, and leukemia

Cardiovascular diseases—abdominal aortic aneurysms, hardening of the arteries, stroke, and coronary heart disease

Respiratory diseases, both acute (pneumonia, acute bronchitis) and chronic (emphysema and chronic bronchitis), and impaired lung function

Other diseases and conditions—peptic ulcer, cataracts, hip fractures, low bone density, and poor wound healing after surgery

Adverse reproductive outcomes for women who smoke during pregnancy, including infertility, premature labor, complicated labor, stillbirth, low birth weight babies, and sudden infant death syndrome (SIDS)

Decreased overall health, manifested as increased absenteeism from work and increased use of medical services

Evidence indicates that smoking harms nonsmokers too. According to the 2006 Surgeon General's Report, infants and children exposed to secondhand smoke are at an increased risk of SIDS, acute lung infections, ear problems, worsening asthma, and impaired lung growth. Adults exposed to secondhand smoke are at higher risk for lung cancer and heart disease. Workplace exposure to secondhand smoke is widespread. The World Bank reports that in 1996, in China, over 130 million adult nonsmokers experienced occupational tobacco smoke exposure. Almost half of youth surveyed by the GYTS reported exposure to secondhand smoke at home, and over 60 percent reported exposure in public places. Recent studies demonstrate the efficacy of smoke-free laws in reducing exposure to secondhand smoke. These findings reinforce the importance of legislative strategies to protect nonsmokers from exposure to cigarette smoke.

Smokers initiate and continue cigarette smoking for multiple reasons. Young people start smoking because of curiosity, rebellion, risk taking, role modeling from parents and older siblings who smoke, peer pressure, the desire to lose weight, the aspiration to appear grown-up, and the wish to look "cool" and to "fit in." Aggressive marketing by the tobacco industry and permissive environments that make cigarettes available, accessible, and affordable induce people to take up smoking. However, while smoking initiation is prompted by diverse factors, smoking maintenance is often driven by nicotine addiction.
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Human and animal studies identify nicotine as the substance in cigarettes that leads to addiction. Nicotine in cigarette smoke is easily absorbed through the lungs, rapidly enters the bloodstream, and quickly reaches the brain. Nicotine reacts with specific brain receptors that cause the release of chemicals, among them dopamine and norepinephrine. Activating some of these receptors causes the pleasurable “rush” that smokers experience with smoking. Other receptors are activated when nicotine levels drop, evoking symptoms that characterize the “withdrawal syndrome.” People addicted to nicotine smoke regularly to sustain their nicotine levels, maintaining the pleasure, and avoiding the discomfort of withdrawal. Other key factors that reinforce smoking dependence include psychological and social pressures and difficulty in quitting.

SMOKING AND MENTAL HEALTH

The relationship of smoking with mental health is an area of increasing scientific interest. People with mental health problems are generally more likely to smoke, with smoking prevalence as high as 75 percent of people with severe mental health problems. Smoking is related to a wide range of psychiatric diagnoses (e.g., anxiety, agoraphobia, panic disorder, depression, schizophrenia) and can act as a trigger for mental illness. However, the evidence is inconclusive on whether smoking is the cause or effect of mental illness.

Patients with schizophrenia have an extremely high prevalence of smoking (about 90 percent). This may be related to smoking-induced dopamine release, which alleviates certain schizophrenic symptoms. Although nicotine may reduce symptoms in schizophrenia, the dangers of smoking far outweigh any benefits. Likewise, smoking was once thought to be protective against Parkinson’s disease (PD) because nicotine may restore dopamine to normal levels in the brain. However, the hazards associated with smoking far outweigh any conceivable protection against PD.

Clinical depression and smoking are associated. This may result from genetics, social environment, personality, and coping styles. Long-term nicotine exposure on the brain may have a causal influence on major depression. A history of daily smoking may increase significantly symptoms and attacks of major depression.

Although it was thought that nicotine could delay the onset of familial Alzheimer’s disease (AD), recent
Evidence indicates that smoking heightens the risk of AD and vascular dementia by increasing free radicals, which impair cell function and undermine immunity. Indeed, smoking may accelerate cognitive decline in nondemented elderly.

Smoking may increase the mortality of people with mental disorders. For instance, smoking-related fatal disease is more prominent in patients with schizophrenia than in the general population.

Persons with mental disorders should quit smoking. The health risks of smoking far outweigh any possible ameliorative effects. Helping patients to stop smoking should be a priority for mental health service providers and planners. Patients need support and assistance in quitting smoking, dealing with the root causes of their mental health problems, and finding alternative coping strategies. In several countries, policies to make mental health institutions completely smoke-free are resulting in positive health outcomes for both patients and staff.

**SOCIOECONOMIC CONSEQUENCES**

Smoking kills about 5 million people annually; more deaths occur in the developing world. Half of these deaths occur during the productive years of life, causing a significant economic impact on families, communities, and societies. Moreover, smoking is strongly associated with poverty and other markers of social disadvantage. Numerous studies demonstrate higher smoking rates among the poor and less educated. In some countries, as much as 10 percent of a family’s income is diverted away from food and medical care to purchase cigarettes.

The economic consequences of smoking are significant, and are borne by smokers and nonsmokers alike. A 1994 report estimated that tobacco use resulted in an annual global net loss of $200 trillion, a third of this loss occurring in developing countries. These costs extend beyond direct healthcare expenditures for tobacco-related illness, encompassing lost productivity from absenteeism and premature death, social and welfare costs, and environmental costs.

For example, in 1987, cigarettes sparked off one of China’s worst fires in modern history, causing 300 deaths, destroying 1.3 million hectares of land and making 5,000 people homeless. The costs due to the health and economic consequences of smoking make a compelling rationale for a concerted effort to reduce smoking.

**A GLOBAL RESPONSE TO REDUCE SMOKING**

Interventions that effectively reduce smoking and other forms of tobacco consumption can be divided into two categories: those that reduce the demand and those that reduce the supply of tobacco. Supporting strategies include tobacco control research, establishment of surveillance and monitoring systems, consideration of litigation to recover costs of tobacco-related healthcare, counteracting the tobacco industry and creation of funding mechanisms to support tobacco control in developing countries.

Research shows that increasing the price of cigarettes and other tobacco products, primarily through tax increases, is the single most effective measure to quickly reduce short-term tobacco consumption. Equally important, raising cigarette prices has been shown to play a significant role in determining how many young people will start smoking, thus influencing long-term consumption trends. The World Bank estimates that overall, for every 10 percent increase in cigarette taxes, smoking is reduced by 4 percent. Young people, minorities and the poor are two to three times more likely to quit or smoke less in response to price increases. Hence, raising cigarette prices protects these vulnerable groups.
Other demand reduction strategies include the following:

- Comprehensive advertising bans—Evidence from 102 countries demonstrates that comprehensive advertising bans can reduce smoking by 6 percent.
- Smoke-free policies in public places and workplaces—Data from the United States indicate that these policies can reduce smoking by 4 to 10 percent.
- Prominent health warnings—Half of smokers intending to quit were motivated to do so by large, graphic warnings on cigarette packets in Canada.

Information and advocacy campaigns

- Cessation programs—Increasing the use of nicotine replacement therapy is estimated to potentially persuade an additional 6 million smokers in the world to quit, averting 1 million tobacco-related deaths.

Measures to reduce supply include preventing cigarette smuggling, restricting youth access to cigarettes, and promoting alternatives to tobacco agriculture through crop diversification and similar strategies.

Recognizing the need for a coordinated global response to the tobacco epidemic, the WHO in 1999 initiated the development of an international Framework Convention on Tobacco Control (WHO-FCTC). The WHO-FCTC is the first public health treaty with a comprehensive evidence-based mix of policy and strategic directions for reducing smoking and other forms of tobacco consumption. The WHO-FCTC was adopted on May 21, 2003, and entered into force on February 27, 2005. It currently has 140 WHO member states as parties to the convention.

The global pervasiveness of smoking, its considerable adverse impact on health and survival, and the significant resources it drains from individuals, families, and societies make controlling smoking relevant to the health community, academia, the private sector, and governments. The WHO-FCTC contains the template for the policy and program mix to effectively prevent and/or reduce smoking and other forms of tobacco use. Ensuring the successful implementation of the convention worldwide is needed to avert smoking-related preventable death, disability, and chronic disease in the future.

SEE ALSO:
- Cancer; Mental Health; Tobacco; World Health Organization (WHO).

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