

LIFESTYLE: Understanding Tobacco

The first Surgeon General's report on smoking was published in 1964—since this time, dozens of Surgeon General's reports have summarized the conclusive evidence from biologic, epidemiologic, behavioral, and pharmacologic studies that tobacco use is detrimental to health.

While users of non-cigarette forms of tobacco (e.g., cigars, smokeless tobacco, pipes) often believe these products are safe (or safer), it's important to know all forms of tobacco are harmful. As the death toll continues to rise, public health advocates continue to work toward identifying effective ways to (1) prevent the onset of tobacco use and (2) help patients to cease use of all tobacco products.

Objectives:

- Trends in Smoking
- The Tobacco Industry
- Health and Economic Effects of Smoking/Smoke
- Benefits to Quitting

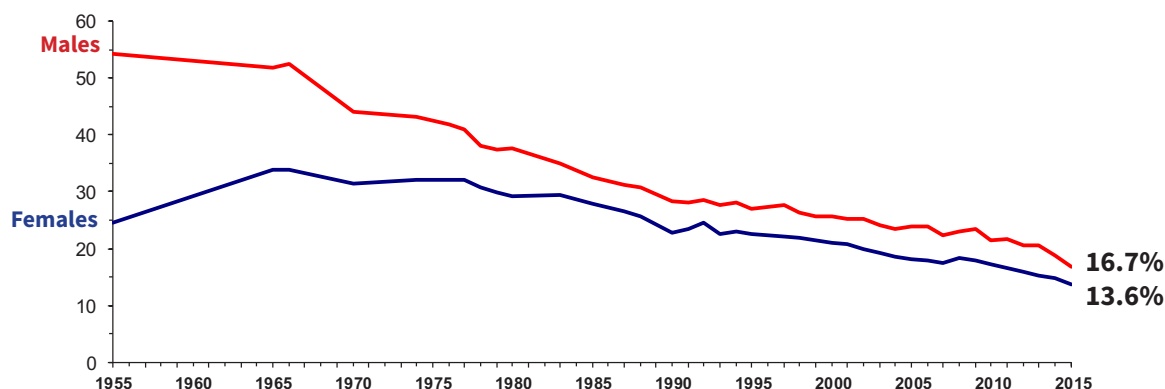
TRENDS IN SMOKING

- **36.5 million adults** (15.1% of the U.S. adult population) are **current smokers** (2015)
- **75.7% smoked every day and 24.3% smoked some days**
- **More men than women were smokers**
- **69% of all smokers want to quit completely**
- **53% of current cigarette smokers reported having made a quit attempt for > 1 day in the past year.**

Cigarette smoking is the chief, single, avoidable cause of death in our society and the most important public health issue of our time”.

-Everett Koop, *former U.S. Surgeon General*
(1982)

15.1% of adults are current smokers



THE TOBACCO INDUSTRY

Historically, public health efforts to reduce tobacco-related morbidity and mortality have faced strong opposition. The biggest opponent to tobacco control efforts is the tobacco industry itself.

- **From 1998 to 2008, the tobacco industry's spending increased by more than 52%.**
- **For every \$1 spent by the states on tobacco control initiatives, it is estimated that the tobacco industry spends nearly \$23 to market its products**
- **Annual spending** (*in the U.S. only in 2014*) **for advertising and promotional expenditures was \$8.489 billion.**
- **The cigarette is a heavily-engineered product that was designed and marketed to maximize the bioavailability of nicotine and hence maximize its addictive potential**
- **Profits over people**

THE EFFECTS OF SMOKING

Cigarette smoking is the primary known preventable cause of premature death in the U.S., with nearly one of every five deaths being smoking related. Tobacco smoke, which is inhaled either directly or as second-hand smoke, contains an estimated 4,800 compounds. Of those compounds, 72 are proven or suspected human carcinogen and include:

- **Carbon monoxide:** automobile exhaust; binds to hemoglobin, inhibits respiration
- **Hydrogen cyanide:** gas chamber poison; highly ciliotoxic, inhibits lung clearance
- **Ammonia:** floor/toilet cleaning agent; irritation of respiratory tract
- **Nicotine:** addictive substance; toxic alkaloid
- **Benzene:** solvent, banned substance in organic chemistry labs; Group 1 carcinogen
- **Nitrosamines:** carcinogenic in animals and probably in humans; Group 2A and 2B carcinogens
- **Lead:** heavy metal, toxic to central nervous system; Group 2A carcinogen
- **Cadmium:** heavy metal found in rechargeable batteries; Group 1 carcinogen
- **Hexavalent chromium:** highlighted in the movie Erin Brockovich; Group I carcinogen
- **Arsenic:** pesticide; Group 1 carcinogen
- **Polonium-210:** radioactive agent; Group 1 carcinogen
- **Formaldehyde:** embalming fluid; Group 1 carcinogen

The scientific evidence indicated that there is no risk-free level of exposure to second-hand smoke.

• **Second-hand smoke causes premature death and disease in children and in adults who do not smoke.**

o **Children exposed to second-hand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.**

• **The effects of even brief exposure** (*minutes to hours*) **to second-hand smoke are often nearly as large** (*averaging 80–90%*) **as chronic active smoking.**

Grand total annual smoking-attributable economic costs in the United States is approximately \$288.9 billion. For each pack of cigarettes sold, the societal costs due to smoking-related health care costs and lost productivity are estimated at \$19.16 per pack, nearly 3 times the cost of the cigarettes.



THE BENEFITS OF QUITTING

1. Longevity: On average, cigarette smokers die approximately 10 years younger than do nonsmokers, and of those who continue smoking, at least half will eventually die due to a tobacco-related disease. Persons who quit before age 35 add 10 years of life and have a life expectancy similar to men who had never smoked.

2. Money: In addition to the many health benefits of quitting, there are financial benefits associated with quitting. The cost of smoking is \$2,248 per year for a pack-a-day smoker.

3. Health:

- **2 weeks to 3 months:** circulation improves, walking becomes easier, and lung function increases.

- **1 to 9 months:** lung ciliary function is restored. This improved mucociliary clearance greatly decreases the chance of infection because the lung environment is no longer as conducive to bacterial growth.

- **1 year:** excess risk of coronary heart disease (CHD) is decreased to half that of a smoker.

- **5 to 15 years:** stroke risk is reduced to a rate similar to that of people who have never smoked.

- **10 years:** chance of dying of lung cancer is approximately half that of continuing smokers. Also, the chance of getting mouth, throat, esophagus, bladder, kidney, or pancreatic cancer is decreased.

- **15 years:** risk of CHD is reduced to a rate similar to that of people who have never smoked.

The benefits of quitting are significant. It is never too late to quit to incur many of the benefits of quitting.

Tobacco dependence is a chronic condition that requires a two-prong approach for maximal treatment effectiveness.

Prolonged tobacco use of tobacco results in tobacco dependence, which is characterized as a physiological dependence (*addiction to nicotine*) and behavioral habit of using tobacco. Addiction can be treated with FDA-approved medications for smoking cessation, and the behavioral habit can be treated through behavior change programs, such as individualized counseling and group or online cessation programs.

