

Issue At A Glance:

Lung Cancer and Tobacco Use

World Lung Cancer Day is observed each year on August 1 to raise awareness about lung cancer while encouraging people at risk to get regular screenings for the disease. This brief explores the direct and indirect effects of tobacco use on lung cancer and highlights tobacco control policies and programs that aim to stop tobacco use.

Introduction

Since its inception in 2012, World Lung Cancer Day is celebrated on August 1 to promote awareness of lung cancer issues, educate the population, and magnify the need for more lung cancer research.^{1,2}

Lung cancer is usually fatal because it is inherently more difficult to diagnose and is generally diagnosed at late stage in most cases.^{3,4}

Furthermore, it continues to be the second most commonly diagnosed cancer and is the leading cause of cancer deaths, claiming more lives each year than breast, colon, and prostate cancers combined.^{5,6} It is estimated that in 2023, over 238,000 people will be diagnosed with lung cancer and, of those diagnosed, over 127,000 will die from the disease.⁶

Tobacco smoking is the main cause of lung cancer, contributing to 80-90% of lung cancer deaths.^{6,8,9} It harms nearly every organ of the body, causing many diseases and affecting the health of smokers in general.⁵ Furthermore, exposure to secondhand smoke causes over 7000 deaths due to lung cancer among nonsmokers yearly.⁹

This brief explores the direct and indirect effects of tobacco use on lung cancer and highlights tobacco control policies and programs that aim to stop tobacco use.

The Cost of Tobacco Use in California

\$3.6 million	Amount received from the CDC for tobacco prevention and control activities in Fiscal Year 2022 ¹⁰
\$15.44 billion	Annual healthcare costs as a result of smoking ¹¹
\$3.85 billion	Medicaid costs due to smoking ¹¹
\$28.1 billion	Amount lost due to smoking-caused productivity losses ¹¹
\$766 per household	Amount of state and federal tax burden from smoking-caused government expenditures ¹¹

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Tobacco Use and Secondhand Smoke Exposure

Tobacco Use: Tobacco smoking can lead to disease and disability, harming nearly every organ in the body.⁵ In California, almost 19% of high school students reported using any tobacco product, including e-cigarettes.^{10,12} Tobacco leaves contain nicotine, an ingredient that can lead to addiction, that is readily absorbed into the blood when a person uses it and increases levels of dopamine, which reinforces rewarding behaviors.¹³ Tobacco use remains as one of the leading preventable causes of disease and death for American adults, and 90% of tobacco users began using the substance before the age of 18, when the body and brain are most vulnerable to addiction.³ Moreover, people who smoke cigarettes are 15-30 times more likely to get lung cancer or die from lung cancer than people who do not smoke. Even smoking a few times per day or smoking occasionally throughout the year increases the risk of lung cancer, including smoking e-cigarettes, vapes, hookah, pipe tobacco, or traditional cigarettes that contain tobacco.⁸

Secondhand Smoke: Secondhand smoke (SHS), or the involuntary exposure to and inhalation of tobacco smoke, is the third most common cause of lung cancer in the U.S., which disproportionately influences Black individuals and families with lower income.⁶ Unfortunately, there is no safe level of exposure to SHS; even brief exposure can cause immediate harm and contains many toxic chemicals, including at least 50 known carcinogens (any substance that causes cancer).^{6,14,15} Adults who do not smoke and are exposed to SHS increase their risk of developing lung cancer by 20-30%.¹⁴ On the other hand, almost 40% of children ages 3-11 are regularly exposed to SHS and rates of exposure to e-cigarette aerosol have increased over the last decade.³ Furthermore, SHS contributes to approximately 41,000 deaths among nonsmoking adults and 400 deaths in infants each year.^{14,16} Among those, SHS causes more than 7,300 lung cancer deaths each year among U.S. adults who do not smoke.¹⁴

Lung Cancer Screening

Lung cancer screening is recommended for adults who have no symptoms but are at high risk. Currently, the only recommended screening test for lung cancer is a low-dose computed tomography (also called a low-dose CT scan). During a low-dose CT scan, an individual lies on a table and an X-ray machine uses a low dose (amount) of radiation to make detailed images of the lungs. The scan only takes a few minutes and is not painful.¹⁷ The United States Preventive Services Task Force (USPSTF) recommends annual screening for adults aged 50-80 who have a 20 pack per year smoking history and smoke now or have quit within the past 15 years.¹⁸



Key Tobacco Control Programs and Policies

Federal Programs and Policies

National and State Tobacco Control Program¹⁹

- Created by the Centers for Disease Control and Prevention (CDC) Office on Smoking and Health in 1999 to encourage coordinated, national efforts to reduce tobacco-related diseases and deaths
- Provides funding and technical support to state and territorial health departments
- Goals of the program include:
 - Eliminating exposure to SHS
 - Promoting quitting among adults and youth and preventing initiation among youth and young adults
 - Advancing health equity by identifying and eliminating commercial tobacco product-related inequities and disparities

H.R. 1256 – Family Smoking Prevention and Tobacco Control Act²⁰

- Became law on June 22, 2009
- Gives the Food and Drug Administration authority to regulate the manufacturing, distribution, and marketing of tobacco products²¹
- Specifically, it does the following:^{20,21}
 - Restricts tobacco marketing and sales to youth under the age of 18
 - Requires smokeless tobacco packages and advertisements to have larger and more visible warnings
 - Ensures modified risk claims (i.e., “light,” “low,” or “mild”) are supported by scientific evidence
 - Requires full disclosure of ingredients in tobacco products
 - Preserves state, local, and tribal authority

H.R. 1865 – Further Consolidated Appropriations Act, 2020²²

- Became law on December 20, 2019
- Includes provision known as Tobacco 21²³
- Amends the Federal Food, Drug, and Cosmetic Act, raising the federal minimum age of sale of tobacco products, including cigarettes, cigars, and e-cigarettes, from 18 to 21 years²³

California State Programs and Policies

California Tobacco Control Program (CTCP)

- Created in 1988 when voters increased the tobacco tax from 10 to 35 cents per pack²⁴
- Efforts by the CTCP have saved more than 1 million lives and over \$816 billion in healthcare costs.²⁵
- The goal of the CTCP is to change social norms surrounding tobacco use by funding statewide media campaigns and community interventions which focus on policy, system, and environmental changes.²⁵

Proposition 56 – California Healthcare Research and Prevention Tobacco Tax Act²⁶

- Passed in November 2016 and enacted on April 1, 2017
- Increases the tax rate on cigarettes, e-cigarettes, and other tobacco products from 87 cents to \$2.87 per pack of 20 cigarettes

SB 39 – Tobacco Products²⁴

- Became law on September 16, 2019
- Imposes stricter age verification requirements for tobacco products sold online or by mail^{27,28}
- Sellers must match the name, address, and date of birth of the customer to a database of individuals verified to be 21 years or older^{27,28}

SB 793 – Flavored Tobacco Products²⁷

- Became law on August 28, 2020
- Did not go into effect immediately because of a referendum (see Prop 31 below)²⁹
- Bans retailers from selling flavored tobacco products or a tobacco product flavor enhancer^{30,31}
- Flavored tobacco products include “any tobacco product that has a recognizable flavor, which is established to cover any notable taste or aroma other than that of tobacco (i.e., mint and menthol flavors)”³¹

Proposition 31 – Referendum on 2020 Law That Would Prohibit the Retail Sale of Certain Flavored Tobacco Products³²

- Approved on November 8, 2022
- Allowed SB 793 to go into effect, meaning retail stores and vending machines cannot sell most flavored tobacco products and tobacco product flavor enhancers^{29,31}

Conclusion

Lung cancer accounts for nearly a quarter of all cancer deaths in the United States and is most often diagnosed at an advanced stage when treatment options are limited. It is estimated that every year, as many as 60,000 lives can be saved if all eligible Americans receive an annual screening, emphasizing the importance of annual screenings and early detection.³³ Numerous studies have shown that tobacco smoking via cigar, cigarette, and pipe smoking is the most important risk factor for lung cancer. Quitting smoking has immediate health benefits that help minimize a person's risk of developing lung cancer.³⁴ While there is no sure way to prevent lung cancer, the best way to prevent it is to stop smoking or never start.

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Did you know?

Approximately 649 people each day in the U.S. are diagnosed with lung cancer, equating to about 27 people per hour and one person every 2.5 minutes.³⁵



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