



# Tobacco and Cancer



## Basic description

Smoking-related diseases are the most preventable cause of death in the world. In the United States, tobacco use accounts for at least 30% of all cancer deaths and is responsible for nearly 1 in 5 deaths overall; this amounted to 443,000 premature deaths each year between 2000 and 2004. About half of those people who continue to smoke will die prematurely from smoking-related diseases.

## Strength of evidence

Many studies done over the years have given us strong evidence of a clear link between the use of tobacco and many different types of cancer.

## Cancers affected

Smoking causes about 87% of lung cancer deaths. The risk of getting lung cancer is about 23 times higher in male smokers and 13 times higher in female smokers, compared with people who have never smoked. Tobacco use is also linked to many types of cancers, including cancer of the nose, throat, sinuses, lip, mouth, larynx (voice box), lung, esophagus (swallowing tube), pancreas, cervix, kidney, bladder, and stomach, as well as acute myeloid leukemia.

Smoking is also a major cause of:

- Heart disease (problems with blood supply to the heart, including heart attacks)
- Cerebrovascular disease (problems with blood vessels in the brain, including stroke)
- Chronic bronchitis (inflammation in the lungs leading to narrowed airways)
- Emphysema (lung damage that leads to poor lung capacity)
- Stomach ulcers

Oral or smokeless tobacco products, pipe tobacco, and cigars also cause cancer. Oral (mouth) cancer is far more common in snuff users than non-users.

Cigars contain many of the same carcinogens that are found in cigarettes. Regular cigar smoking causes cancer of the lung, larynx, oral cavity, esophagus, and probably also the pancreas. Cigar smokers have 4 to 10 times the risk of dying from cancer of the larynx, mouth, or esophagus, compared to non-smokers.

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Each year, secondhand smoke causes about 3,400 lung cancer deaths in non-smoking adults and 46,000 deaths from heart disease in non-smokers. Exposure to secondhand smoke may also cause other health problems, such as respiratory illnesses (like pneumonia and bronchitis) and asthma attacks.

## Opportunities for risk reduction

Quitting tobacco greatly decreases the risk of certain cancers, heart disease, stroke, and lung diseases. People who quit at any age live longer than people who keep smoking. For example, smokers who quit before the age of 50 cut their risk of dying in the next 15 years in half, compared to those who keep smoking.

## Quitting

The best way to quit using tobacco and stay quit is to use more than one quit approach. Approaches that can help you quit include:

- Behavioral therapy/counseling
- Nicotine replacement therapy (gum, skin patches, inhaler, spray, or lozenges)
- Non-nicotine prescription medicine (such as bupropion or varenicline)
- Group therapy
- Advice from a doctor or other health care provider
- A combination of the therapies listed above

### Lung cancer in the United States: 2010 estimates

- New cases: 222,520
- Deaths: 157,300
- Five-year relative survival rate for localized stage: 53%
- Five-year relative survival rate for all stages combined: 16%

Equally important is the prevention of tobacco use among children and youth, since more than 80% of smokers begin to smoke at or before age 18. If more children and teens can be prevented from starting, a large number of tobacco-related health problems can be avoided.

## Emerging trends

Emerging trends in the area of tobacco and cancer include:

**Genetics** Researchers are studying the role genetics may play in the development of tobacco-related cancers. They are also looking at how genetics may be linked to how likely a person will become addicted to nicotine.

**Risk reduction** Researchers are studying how cancer risk can be reduced for smokers who cannot or will not stop. So far, they have found that beta carotene supplements don't reduce risk, and in fact increase lung cancer risk in smokers. Other substances are being tested.

**Early detection** There is renewed interest in studying ways to find lung cancer early – when it is small, hasn't spread, and is most likely to be curable. A large study is looking at special computed tomography (CT) scans called low-dose spiral or helical CT scans, which may be able to find lung cancers early. Results of this study should be coming out in the next few years. Other studies are looking at whether cancer cells can be found in sputum (mucus) that is coughed up from the lungs. At this time, it is too early to recommend any tests for screening, but more research is being done to try to save the lives of people at high risk for developing lung cancer.

# Tobacco and Cancer

**Advocacy** The fight to reduce cancer through tobacco control is being fought in courtrooms and legislatures, as well as in doctors' offices. Your American Cancer Society and its non-profit, non-partisan advocacy affiliate, the American Cancer Society Cancer Action Network<sup>SM</sup> (ACS CAN), are working to help people stay well and improve tobacco control by:

- Fighting to reduce tobacco ads and promotions aimed at young people
- Getting more funding to support comprehensive tobacco control programs and tobacco-related research
- Supporting clean indoor air laws to reduce exposure to secondhand smoke
- Helping people who want to quit get access to quit-smoking programs
- Pushing for higher tobacco taxes to offset the health care costs linked to tobacco use
- Supporting partners around the world to help reduce disease and death from tobacco

## Additional resources

To learn more about tobacco and cancer and how the American Cancer Society's programs are helping people stay well through prevention and early detection, please call our toll-free number at 1-800-227-2345 or visit our Web site at [www.cancer.org](http://www.cancer.org).

More information on tobacco and cancer may also be found at:

- **National Cancer Institute  
Cancer Information Service**  
Toll-free number: 1-800-422-6237  
Web site: [www.cancer.gov](http://www.cancer.gov)
- **The American Lung Association**  
Toll-free number: 1-800-586-4872  
Web site: [www.lungusa.org](http://www.lungusa.org)
- **Campaign for Tobacco-Free Kids**  
Web site: [www.tobaccofreekids.org](http://www.tobaccofreekids.org)
- **Lung Cancer Alliance**  
Toll-free number: 1-800-298-2436  
Web site: [www.lungcanceralliance.org](http://www.lungcanceralliance.org)
- **American Heart Association**  
Toll-free number: 1-800-242-8721  
Web site: [www.americanheart.org](http://www.americanheart.org)
- **Centers for Disease Control and Prevention  
Office on Smoking and Health**  
Toll-free number: 1-800-232-4636  
Web site: [www.cdc.gov/tobacco](http://www.cdc.gov/tobacco)

## Bottom line

Stopping tobacco use, or even better, not starting, is the single most important action that can be taken to reduce cancer in the United States. If all adults stopped tobacco use and children did not start, about one-third of all cancer deaths would be prevented, billions of dollars would be saved, and millions of family members and friends would avoid having to witness the sickness and premature death of a loved one.

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We **save lives** and create more birthdays  
by helping you stay well, helping you get well,  
by finding cures, and by fighting back.

[cancer.org](http://cancer.org) | 1.800.227.2345