

# SMOKING AND CANCER



**This fact sheet is for public health officials and others who are interested in information on smoking and cancer risks. People who want to lower their risk for cancer should not smoke.**

## WHAT YOU NEED TO KNOW ABOUT SMOKING AND CANCER

One of every three cancer deaths in the United States is linked to smoking. The 2014 Surgeon General's Report (SGR) identifies additional cancers that are linked to smoking: cancer of the colon and of the rectum (also called colorectal cancer) and liver cancer. Colorectal cancer causes the second largest number of cancer deaths every year, behind only lung cancer, and is the fourth most commonly diagnosed cancer in the United States. About 30,000 new cases of liver cancer are diagnosed every year in this country; about 20,000 deaths from liver cancer occur.

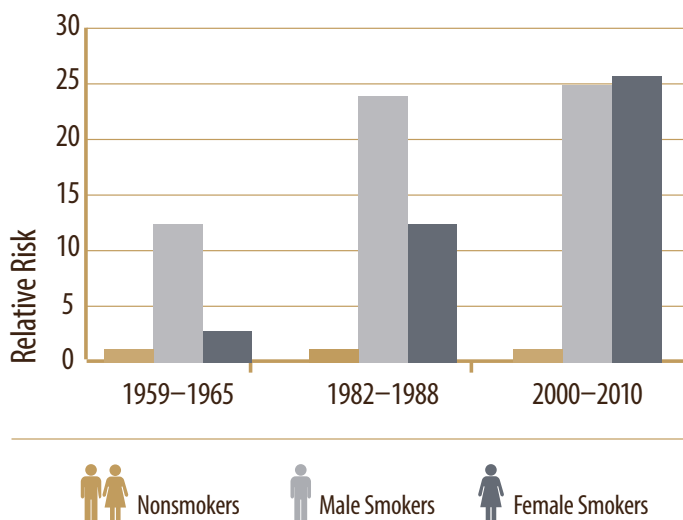
In all, SGRs from 1964 to 2014 have identified the following specific cancers caused by smoking, including cancer of:

- the lungs, trachea, and bronchus;
- the oropharynx;
- the esophagus;
- the larynx;
- the stomach;
- the bladder;
- the kidney and ureter;
- the pancreas;
- the uterine cervix;
- the colon and rectum (colorectal cancer);
- the liver; and
- acute myeloid leukemia.

## LUNG CANCER

Lung cancer, the first of many deadly diseases to be identified in an SGR as being caused by smoking, is now the nation's most common cancer killer among both men and women. Smoking causes almost 9 out of 10 lung cancers. Even though smoking rates have gone down dramatically, the risk for lung cancer has gone up over the last 50 years.

### GROWING LUNG CANCER RISKS





## SMOKING IS DANGEROUS FOR CANCER PATIENTS AND SURVIVORS

Smoking not only causes cancer but also interferes with cancer treatment. Cancer patients and cancer survivors who smoke are at greater risk for their cancer to recur. They are also more likely to die from their primary cancer and from secondary cancer (a cancer that occurs in a different organ). They are more likely to have serious medical issues from their cancer treatment—a condition known as treatment toxicity. They are also at higher risk for death from all other causes, such as pneumonia and infection. Quitting smoking improves the prognosis of cancer patients.

## QUITTING SMOKING AND RISK OF CANCER

Even though we don't know exactly which smokers will develop cancer from smoking, all smokers who want to lower their risk of cancer should quit smoking. Their doctors can help them quit, and free help is available at 1-800-QUIT-NOW, at [cdc.gov/tips](http://cdc.gov/tips), and at [smokefree.gov](http://smokefree.gov).

Within five years, smokers who quit entirely cut in half their chances of cancer of the:

- mouth;
- throat;
- esophagus; and
- bladder.

Within 10 years, their risk for dying from lung cancer drops by half.

Three studies tracked cancer risks among U.S. men and women over age 55. The studies showed that in the early 1960s, men who smoked were 12.2 times more likely to develop lung cancer than men who did not smoke; by 2010, that risk had more than doubled, from 12.2 to 25. Among women smokers, the risk of lung cancer went up even more dramatically. In 1965, women smokers were 2.7 times more likely to develop lung cancer than women nonsmokers; by 2010, the risk for women smokers had jumped to 25.7. Cancer risks went up even though smokers in the 2000–2010, study smoked fewer cigarettes than did smokers in earlier studies.

The 2014 Surgeon General's Report finds that changes in how cigarettes are designed and what they contain have contributed to higher risks of lung cancer in smokers. The evidence suggests that ventilated filters and increased levels of certain chemicals in cigarettes may have played a role.

## HOW SMOKING CAUSES CANCER

Each cigarette puff delivers a mixture of chemicals to the lungs where they are absorbed into the bloodstream and carried to every organ in the body. Many of these chemicals damage DNA, which controls how cells reproduce and directs cells to carry out different tasks. DNA damage can cause cells to mutate and grow uncontrollably, and can start the body on the path to cancer. Tobacco smoke contains more than 7,000 chemicals, at least 70 of which are known to cause cancer.

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**Most people find a combination of resources works best. Many smokers do not quit on their first attempt. Many need several tries to successfully quit. But the benefits are well worth it. Keep trying.**

**1 OUT OF 3  
CANCER  
DEATHS  
COULD BE  
PREVENTED**

## RESOURCES FOR QUITTING

- Call 1-800-QUIT-NOW.
- [www.smokefree.gov](http://www.smokefree.gov)
- [www.cdc.gov/tips](http://www.cdc.gov/tips)



**Centers for Disease  
Control and Prevention**  
Office on Smoking  
and Health