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 two 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, and about 20,000 deaths from liver cancer occur.

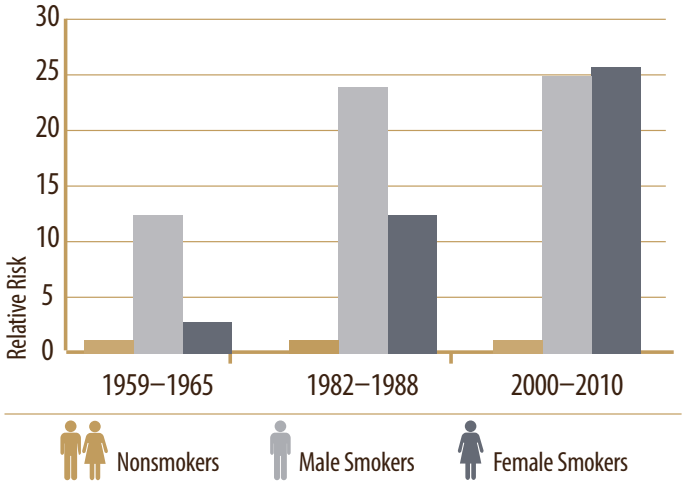
In all, SGRs from 1964 to 2014 have identified the following specific cancers caused by smoking, including acute myeloid leukemia and cancer of the:

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

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



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 new SGR 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.

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.

SMOKING IS DANGEROUS FOR CANCER PATIENTS AND SURVIVORS

Smoking not only causes cancer, but evidence suggests that it might also affect cancer treatment. People who continue to smoke after being diagnosed with cancer are at higher risk for future cancers and death. Cancer patients and survivors who smoke are more likely to get a new primary cancer (a cancer that occurs in a different organ). They are also at higher risk for death from causes related to their cancer and from other causes. Smoking may make cancer treatment less effective and may increase the risk of complications from cancer treatment. Quitting smoking improves the outcomes for 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, and at smokefree.gov.

Within 5 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.

1 OUT OF 3 CANCER DEATHS COULD BE PREVENTED

RESOURCES FOR QUITTING

- Call 1-800-QUIT-NOW
- www.smokefree.gov
- www.cdc.gov/tips

Centers for Disease Control and Prevention
Office on Smoking and Health