

## Lung Cancer - Risk Factors and Prevention [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 06/2014

**ON THIS PAGE:** You will find out more about the factors that increase the chance of developing this type of cancer. To see other pages, use the menu on the side of your screen.

A risk factor is anything that increases a person's chance of developing cancer. Although risk factors often influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing your risk factors and talking about them with your doctor may help you make more informed lifestyle and health care choices. Most lung cancer occurs in people who smoke or in those who have smoked in the past. However, people who don't smoke can also develop lung cancer, so it is important for all people to learn about the risk factors and [signs and symptoms](#) [3] of lung cancer.

The following factors may raise a person's risk of developing lung cancer:

**Tobacco** [4]. Tobacco smoke damages cells in the lungs, causing the cells to grow abnormally. The risk that smoking will lead to cancer is higher for people who smoke heavily and/or for a long time. Regular exposure to smoke from someone else's cigarettes, cigars, or pipes can increase a person's risk of lung cancer, even if that person does not smoke. This is called environmental or [secondhand tobacco smoke](#) [5].

**Asbestos.** These are hair-like crystals found in many types of rock and are often used as fireproof insulation in buildings. When asbestos fibers are inhaled, they can irritate the lungs. Many studies show that the combination of smoking and asbestos exposure is particularly dangerous. People who work with asbestos in a job such as shipbuilding, asbestos mining, insulation, or automotive brake repair and who smoke have a higher risk of developing lung cancer. Using protective breathing equipment reduces this risk.

**Radon.** This is an invisible, odorless gas naturally released by some soil and rocks. Exposure to radon has been associated with an increased risk of some types of cancer, including lung cancer. Most hardware stores have kits that test home radon levels, and basements can be ventilated to reduce radon exposure.

### Prevention

Research continues to look into what factors cause lung cancer and what people can do to lower their personal risk. There is no proven way to completely prevent lung cancer, but there may be steps you can take to lower your risk. Talk with your doctor if you have concerns about your personal risk of developing lung cancer.

The most important way to prevent lung cancer is to avoid tobacco smoke. People who never smoke have the lowest risk of lung cancer. People who smoke can reduce their risk of lung cancer by stopping smoking [6], but their risk of lung cancer will still be higher than people who never smoked. Attempts to prevent lung cancer with vitamins or other treatments have not worked. For instance, beta-carotene, a drug related to vitamin A, has been tested for the prevention of lung cancer. It did not reduce the risk of cancer. In people who continued to smoke, beta-carotene actually increased the risk of lung cancer.

## Screening

Based on results from the National Lung Screening Trial [7], several groups, including ASCO, have developed recommendations for lung cancer screening with a test called a low-dose helical or spiral computed tomography (CT or CAT) scan. A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors.

CT scanning is not recommended for every person who smokes. The current recommendations are discussed below.

The United States Preventive Services Task Force recommends that people age 55 to 80 who have smoked for 30 pack years or more or who have quit within the past 15 years receive **screening for lung cancer with low-dose CT scans each year, and screening can stop after a person has not smoked for 15 years or develops a health problem that would shorten their life or prevent them from being able to have surgery for lung cancer. A pack year is equal to smoking 20 cigarettes (1 pack) a day each year, about 7,305 cigarettes per year.**

ASCO recommends the following lung cancer screening schedules for people who currently smoke or who have quit smoking:

- Yearly screening with a low-dose CT scan is recommended instead of screening with a chest x-ray or no screening for people age 55 to 74 who have smoked for 30 pack years or more or who have quit within the past 15 years.
- CT screening is not recommended for people who have smoked for less than 30 pack years, are younger than 55 or older than 74, have quit smoking more than 15 years ago, or have a serious condition that could affect cancer treatment or shorten a person's life.

Learn more about ASCO's recommendations for lung cancer screening in current or former smokers [8] and information on lung cancer screening from the National Cancer Institute [9].

*To continue reading this guide, use the menu on the side of your screen to select another section.*

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**Links:**

- [1] <http://www.cancer.net/cancer-types/lung-cancer/risk-factors-and-prevention>
- [2] <http://www.cancer.net/about-us>
- [3] <http://www.cancer.net/node/19152>
- [4] <http://www.cancer.net/node/25002>
- [5] <http://www.cancer.net/node/25004>
- [6] <http://www.cancer.net/node/25003>
- [7] <http://www.cancer.net/node/24518>
- [8] <http://www.cancer.net/node/29901>
- [9] <http://www.cancer.gov/cancertopics/pdq/screening/lung/Patient>