

## Lung Cancer

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### What is lung cancer?

Your lungs are the organs that allow you to breathe in air, deliver oxygen to your body, and remove carbon dioxide waste produced in your body. Lung cancer happens when the cells of the lungs start to divide rapidly and out of control.

There are two main types of lung cancer: non-small cell lung cancer and small-cell lung cancer.



85% of people with lung cancer have non-small cell lung cancer. This type includes squamous cell carcinoma, adenocarcinoma, and large cell carcinoma.



15% of the people with lung cancer have small cell lung cancer. This type of cancer grows and spreads faster than non-small cell lung cancers. They are considered to be more aggressive with a greater risk of death.



Understanding the type of lung cancer you have is important because the treatment for each is specific and unique.

### Who gets lung cancer?

Lung cancer is the second-most common cancer in both men and women. It is also the most lethal, or deadly, cancer in both genders. In women, lung cancer is responsible for 25% of all cancer-related death.

Lung cancer typically affects older people. The average age of people who are diagnosed with lung cancer is around 70. In 2020, it is estimated that there will be 228,820 new cases of lung cancer with 135,720 deaths in the United States.










## What are the risk factors for lung cancer?

### Smoking

Smoking is the leading risk factor for developing lung cancer. 80% of men and 50% of women who have lung cancer were or are smokers.

Smoking tobacco is an addictive habit because of the nicotine in tobacco. Many other chemicals in tobacco are carcinogens, or substances that cause cancer. The more you smoke and the longer you smoke, the more exposure your lungs have to these harmful substances. This will increase your risk for developing lung cancer.

No tobacco product is safe for your health. These products include:

-  “Light” or “low-tar” cigarettes
-  Hand rolled cigarettes
-  “All natural” cigarettes rolled in cotton filters
-  Menthol cigarettes
-  Cigars
-  Kreteks (or clove flavored cigars from Indonesia)
-  Bidis or beedies (thin, flavored cigarettes from India and other Southeast Asian countries)
-  Electronic cigarettes (e-cigarettes), vaping devices, or JUUL
-  Hookahs

Some of these products are advertised to be “safer” than traditional cigarettes. This information is false because all forms of tobacco increase your risk for cancer and other health problems, including lung and heart diseases. For more information about each type of tobacco product, please visit the American Cancer Society (<https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/is-any-type-of-smoking-safe.html>).

## Passive Smoking

Passive smoking, or second-hand smoking, is breathing in smoke from the environment. This happens when you are around others who are smoking tobacco products. Second-hand smoke affects both children and adults. If a woman is smoking while she is pregnant, the passive smoke can also affect the baby's growth in the womb and after birth.

## Asbestos

People who work in mines, mills, textile plants, and shipyards may be exposed to asbestos. Asbestos is a fibrous material that increases the risk of mesothelioma, a type of lung cancer that is caused by rapidly multiplying of the cells in the lining of the lungs (also called the *pleura*). The use of asbestos has been decreased greatly in the last several years.

## Radon

Inhalation of radon is responsible for 9% of deaths from lung cancer. Radon comes from the breakdown of uranium, a chemical found in soil and rocks. Radon can be found indoors in all parts of the United States. Breathing in radon increases the risk of developing lung cancer. For more information, visit <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/radon.html>.

## Other factors






High levels of air pollution has been shown to increase the risk of developing lung cancer. This is especially important for people living in cities with a lot of traffic.

Past radiation to the chest increases the risk for developing lung cancer. People who have had a previous cancer may have had chest radiation. This includes radiation for Hodgkin's disease and breast cancer after a mastectomy.




There are some risk factors that increase your risk for lung cancer that you cannot control. Some people get lung cancer even if they have never smoked before and do not have any other risk factors. These people tend to get lung cancer much earlier than the average person with lung cancer. Current research is trying to understand why this happens. There are likely some genetic causes. For example, having a family history of lung cancer increases your risk of getting lung cancer.

## What are the symptoms of lung cancer?

Some people may have symptoms (signs) of lung cancer. These include:

-  A cough that is constant and is getting worse
-  Coughing-up blood/rust colored sputum or phlegm
-  Chest pain
-  Unexplained weight loss, loss of appetite
-  Difficult breathing and wheezing

If the cancer has spread, then it can cause other symptoms. These symptoms include:



-  Bone pain
-  Headaches, weakness, loss of balance
-  Yellowing of the skin and eyes (jaundice)

These signs are more likely caused by another diseases. If you are having any of these symptoms, it is important to follow-up with your doctor who can help figure out the reason you are having these symptoms.

## Is there screening for lung cancer?

The goal of cancer screening is to find cancer early so that it is easier to treat and has a better outcome. People who have a high risk for having lung cancer are screened before signs of the cancer are apparent. Risk is partially based on “pack-years,” or the number of years you smoked multiplied by packs of cigarettes you smoked per day. Screening is done with a low-dose computed tomography scan (also known as a low-dose CT scan).

The American Cancer Society recommends screening for certain people aged 55-74 years old who are at higher risk for lung cancer, are generally in good health AND are either:

-  Current smokers with a 30-pack-year history of smoking who are receiving smoking cessation counseling or
-  Former smokers who quit in the last 15 years and have a smoking history of 30-pack-years



People who want to be screened must discuss the risks and benefits of the screening with their healthcare provider. They also must have access to a treatment center for any necessary treatment.

Not everyone should be screened for lung cancer. Some people are too sick to get chemotherapy or radiation for lung cancer even if it is found on screening. Some people are too sick for surgery, and some people have too many other medical conditions.

There are also some drawbacks to lung cancer screening. For example, lung cancer screening can show “false positives.” This means that something that looks like lung cancer on the CT scan is not actually cancer. This can lead to unnecessary tests, procedures, and emotional stress.

Because lung cancer screening is complex, it is important to talk to your doctor to find out if you are a good candidate for lung cancer screening.



### What can I do to reduce my risk?

The Number 1 way to decrease your risk for lung cancer is to avoid smoking. Tobacco smoke contains thousands of chemicals that are harmful. Around seventy of those chemicals cause cancer. The good news is that quitting smoking at any time and any age reduces the risk of lung cancer. Quitting smoking also

has many other health benefits, such as:

- It can decrease your risk for other medical conditions such as heart disease, stroke, and peripheral vascular disease (narrowing of blood vessels that carry blood from the heart to the rest of the body).
- It can decrease respiratory symptoms such as coughing, wheezing, and shortness of breath.
- It can decrease your risk of developing lung diseases such as chronic obstructive pulmonary disease (COPD).



It can decrease the risk for infertility in women of childbearing age.

Quitting smoking is a challenge because nicotine found in tobacco products is addictive. Quitting can also lead to withdrawal symptoms, including:



Intense cravings for cigarettes



Depression symptoms and changes in mood



Difficulty sleeping and feeling restless/jumpy



Feeling hungry or gaining weight

Different people have different levels of withdrawal symptoms, and people have good days and bad days. It is important to remember that although withdrawal symptoms are uncomfortable and challenging, they are not harmful to your physical health.

Making the decision to quit smoking is courageous, and there are many resources to help you along the way. Healthcare providers, family, and friends are great resources to guide you through quitting smoking. Many people find it especially helpful to talk to others who have gone through the process of quitting. Below are some options to help you quit smoking.

## Medications

Medicine can help you quit smoking, and there are different options to choose from. Your doctor or pharmacist can help you decide which option is the best for you.

There are three over-the-counter options that can reduce symptoms of nicotine withdrawal:



Nicotine gum



Nicotine patches



Nicotine lozenges (nicotine infused tablet similar to a cough drop)

There are also four medications that require a prescription from a doctor:



Nicotine inhalers



Nicotine nasal sprays



Zyban (an antidepressant that also helps with smoking cessation)



Chantix

## Counseling

Counseling can help you quit smoking, especially when combined with medications. There are multiple ways to receive counseling on smoking cessation, and you can choose the option that works best for you. These include:

- 🌿 Counseling from your doctor, a nurse practitioner, pharmacist, or other health care provider
- 🌿 “Quitlines” can connect you to a specialist that can answer your questions and concerns about smoking. You can call 800-QUIT-NOW (800-784-8669) or visit <https://smokefree.gov/tools-tips/get-extra-help/speak-to-an-expert>. Information is also available in Spanish.
- 🌿 Support Groups can be helpful for people who are trying to quit. They offer a supportive environment where you can listen and share struggles with people who are going through similar struggles as you are. Ask your employer, doctor’s office, or health insurance company for more information. You can also call the American Cancer Society at 1-800-227-2345 for help in finding a support group.
- 🌿 Text Notifications: The National Cancer Institute offers a free text message program that gives you advice and support as you quit smoking. There are also special programs for pregnant women, veterans, young adults, and teenagers. There is also a texting program in Spanish. The National Cancer Institute also provides “practice modules” that can help you get started if you do not want to commit to quitting just yet. These programs can help you reduce your smoking and build skills for when you do decide to quit. Information about these programs can be found here: <https://smokefree.gov/tools-tips/text-programs>







## Quitting “Cold Turkey”

People who used to smoke sometimes state that they quit smoking “cold turkey,” or without help from any medications. If you choose this route, it is helpful to come up with a plan with your doctor or another trusted person. For example, you can plan to slowly decrease the







amount you smoke each day. Having a plan can help you track your progress and hold you accountable.

E-Cigarettes are not FDA-approved methods to quit smoking because the health effects of these tools are not completely understood. It is important to discuss alternatives to e-cigarettes with a health care provider to minimize your risk.

## Take Home Points

-  Lung cancer is a disease that affects many people, and smoking tobacco products increases your risk for lung cancer.
-  Signs and symptoms of lung cancer are important to bring up with your doctor because they can help you determine what the cause of your symptoms are.
-  There are ways to screen for and treat lung cancer, but these are complicated decisions that should be made with your doctor.
-  Quitting smoking is the most effective way to reduce your risk for lung cancer. This can be done through medications, counseling, and other online tools.

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## About the Author



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