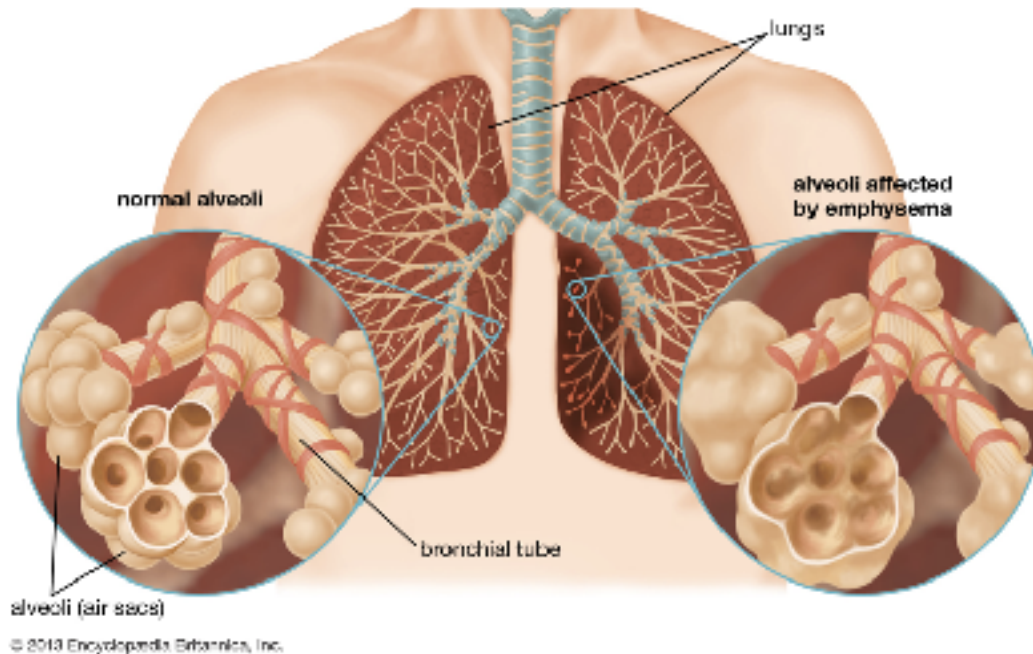


EMPHYSEMA

Emphysema is a type of lung condition that causes people to have shortness of breath. The main cause of developing emphysema is the long term exposure to irritants that will then results to your lungs and its airways being damaged.



<https://www.britannica.com/science/respiratory-disease>

Causes

Emphysema is the result of long term exposure of the lungs to irritants. People who smoke and have been doing it for a long amount of time are at risk for developing this diseases, second hand smoking can also contribute to Emphysema.

The following irritants can cause Emphysema:

- Tobacco smoke
- marijuana smoke
- Air pollution
- Chemical fumes and dust

Symptoms

Emphysema can show none to little symptoms in the early stages. The main symptom of the disease is shortness of breath, as the disease becomes more severe it can prevent a person from doing certain activities resulting in them having shortness of breath. As the disease worsens all the symptoms will also become more severe.

Symptoms of Emphysema: (<https://www.franciscanhealth.org/community/blog/living-with-end-stage-emphysema>)

- Shortness of breath, particularly during light exercise

- Long-term cough
- Feeling of not getting enough air
- Mental fog
- Wheezing
- Ongoing mucus production
- Constant fatigue
- An enlarged heart because of damaged lungs
- Swelling of the ankles, legs or abdomen
- A bluish tinge to skin, lips and nails due to poor oxygen supply.

Diagnosis

There are various test that your doctor might perform to confirm their diagnosis and determine how severe the disease is. A spirometry is used to diagnose many other lung conditions, one of them is Emphysema. A spirometry test assess how well the patient's lungs work by measuring how much air you inhale, how much you exhale and how quickly you exhale. Another test a doctor might perform is a chest X-ray, this method rules out other causes of shortness of breath. If a patient has severe Emphysema their lungs will appear to be much larger than its original size, but in the early stages an X-ray can also just show a normal looking lung this is why an X-ray alone cannot determine if you have Emphysema. Lastly, a good simple blood test can be assigned by your doctor. In the late stages of Emphysema the blood will produce greater red blood cells(cells that contain oxygen) to make up for the loss oxygen. A possible sign of infection will may come into attention when the patients white blood cell count is greater than normal.

Treatments

Unfortunately there is no cure for this lung disease but, there are many types of treatments that can help you manage emphysema such as medication, therapy or surgery.

A very common medication for treating emphysema is Bronchodilators. These drug help relieve the muscle in the lungs and makes the passages wider. Bronchodilators come in different forms, they can come as inhalers/puffers, liquid form or pill form. There are two types of acting Bronchodilators a short-acting type and a long-acting type. Short acting drugs work faster compared to the long-acting drug but doesn't last long. Long-acting drugs work slower compared to the short-acting drug but lasts longer. Bronchodilators comes in two forms. Anticholinergics which prevents the muscle that surrounds your airway from straining, it also helps a lot with clearing away mucus from the lungs. Beta-agonists relaxes the muscle around the airways.

A therapy that can help manage your emphysema is pulmonary rehabilitation, this program teaches you how to control your breathing problem and increase your stamina and help decrease your shortness of breath. The duration of the program last for about 4 to 12 weeks or more and patients usually come in two to three times a week, during this time the staff will frequently monitor your progress and increase exercise that is suitable for you. During the program patients will learn various things starting from the classroom, one on one with staff and even in their exercise sessions. In the exercise session you will learn how to breathe

during stressful times for your body and while being active. In the program they will also educate you about your medication and how to effectively use them.

Lastly, lung volume reduction surgery is a procedure that is done to people with severe emphysema to help improve their breathing. This procedure removes small wedges of damaged lung tissues, by doing so this helps the remaining lung tissue to expand and work more efficiently and help improve breathing. The results of the surgery are often very successful because patients have shown less shortness of breath and are even able to do exercise.

Prevention

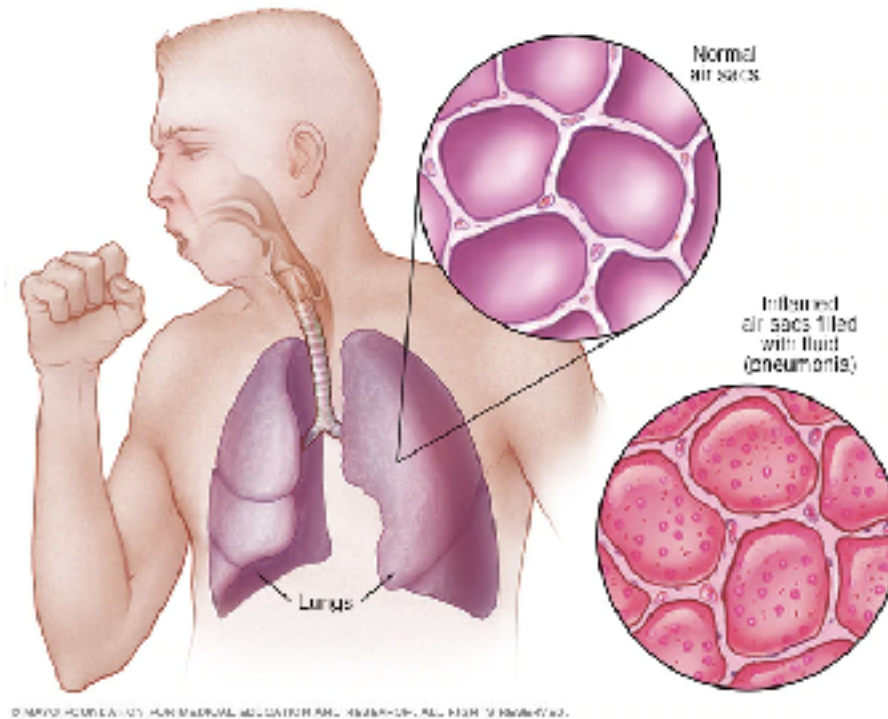
The number one cause of emphysema is smoking, so make sure to never smoke or stop smoking at an early age as the disease can develop worst and worst over time. It is also important to stay away from inhaling irritants such as second hand smoking, air pollution, chemical fumes and dust. If you are constantly exposed to chemical fumes at work always wear a respiratory mask if this already isn't protocol at your work place suggest this to your employer.

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Pneumonia

Pneumonia is a type of infection of the lungs that causes the air sac which is the alveoli to be inflamed. Symptoms are the results of the air sac filling up with fluid or pus.



<https://www.mayoclinic.org/diseases-conditions/pneumonia/symptoms-causes/syc-20354204>

Cause

Pneumonia has three major causes bacteria, viruses and fungi. Bacterial pneumonia is caused after having the cold or a flu this is the type that is common found in adults and children under a year old. If the respiratory tract is affected by a virus this can cause the most common type of bacterial pneumonia, which is called pneumococcal pneumonia. Viral pneumonia tends to not be harsh and often heals after 1-3 weeks . Another cause of pneumonia is fungal infections people with weak immune systems are mostly affected by this. Pneumonia can also be a result of aspiration. This is the unintentional inhaling of particles in your lungs, these particles could be food, saliva, liquid or vomit. This normally happens after vomiting and you are not able to cough the particles out which causes inflammation and infection which will result into pneumonia.

Symptoms

The early symptoms of viral pneumonia normally appears after several days. Early symptoms are typically similar to influenza symptoms such as: fever, dry cough, headache, muscle pain and weakness. After or within a day the symptoms can be found to become worse such as a high fever and can show some blueness appearing on the lips.

Children or infants may not show any symptoms at all or may also show the following symptoms: (https://www.medicalnewstoday.com/articles/151632#in_children)

- difficulty breathing
- not feeding properly
- coughing
- fever
- irritability
- dehydration

More common symptoms for other ages: (same reference as the one above)

- cough
- rusty or green phlegm, or sputum, coughed up from lungs
- fever
- fast breathing and shortness of breath
- shaking chills
- chest pain that usually worsens when taking a deep breath, known as pleuritic pain
- fast heartbeat
- fatigue and weakness
- nausea and vomiting
- diarrhea
- sweating
- headache
- muscle pain
- confusion or delirium, especially in older adults

Diagnosis

Pneumonia can sometimes be tricky to diagnosed due to its similar symptoms to a cold and influenza. A blood test is used to identify and confirm the infection and find the type what type of organism it might be but this won't always be accurate.

A chest x-ray shows the location and is determine how severe the pneumonia might be. It can also confirm if the infection is for sure pneumonia.

Pulse oximetry is done to measure the oxygen level in your blood. This is done because pneumonia can stop the lungs from delivering oxygen into the bloodstream.

Sputum test is done to help identify the location of where the location started. This is done by taking a sample fluid from your lungs which is called a sputum which is taken after a deep cough.

Treatments

Treatment for pneumonia is both curing the infection and preventing further complications.

A community-acquired pneumonia is a type of lung infection that is developed in a community setting. This type of pneumonia can be treated at home with medication given by your doctor.

Medication is given by your doctor depending what type of pneumonia it is and how severe it is.

Antibiotics are used to treat bacterial pneumonia. Once it is identified what type of bacteria you have in your lungs your doctor will prescribe an antibiotic that will help treat the infection. Antibiotics come in pills that can be taken by the mouth but, if it is a more severe case of pneumonia this can be injected at first and once the infection is less severe the patient can then take pills.

Cough Medicine this medicine can help relieve your cough. Coughing helps break up and move fluid from your lungs. This is why it is a good idea to not completely take away your cough.

Prevention

There are of course many ways to prevent yourself from developing pneumonia.

First thing is to always get the flu vaccine every year, as it is common to develop pneumonia after getting the flu, getting a flu shot every year will lessen your chances from getting pneumonia. This also includes the pneumococcal vaccine.

Practicing good hygiene has always been the most important in our daily lives. Making sure to wash your hand with soap and water. Especially before eating can easily help prevent infections into your lungs.

Preventing to smoke is important this is because, it makes it more challenging for your lungs and body to fight germs and disease due to all the chemicals you inhale from smoking, it is best to quit smoking early on and there are many ways to make it easier to quit.

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