

Pleural Effusion

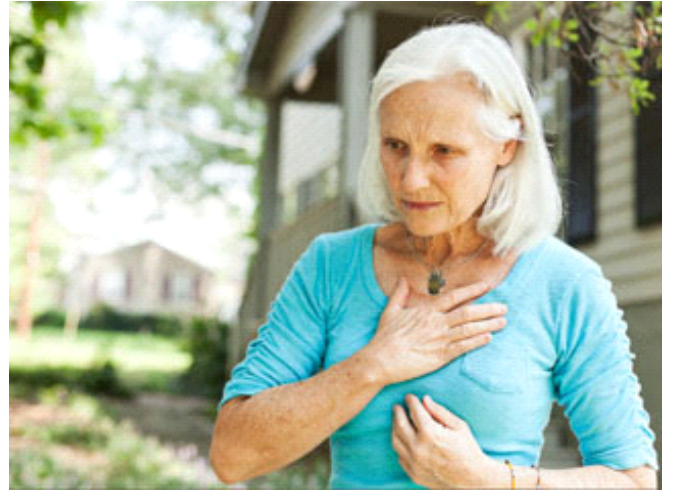
What is Pleural Effusion?

Pleural effusion is often referred to as “fluid in the lungs” or “water on the lungs.” It is a buildup of excess pleural fluid in the chest cavity and the outside of the lungs.

The inside your chest is lined with a thin membrane called the pleura. This membrane also lines the outside of your lungs. There is normally a small amount of fluid between these two spaces that keeps the lungs lubricated.

Infection, irritation or inflammation can create excess fluid and cause pleural effusion.

Pleural effusion is common. More than 200,000 cases are diagnosed each year in the U.S. The most common cause of pleural effusion is congestive heart failure. Other causes can include infection, cancer, chest trauma, tuberculosis, certain medications and cancer treatments.



Symptoms can include chest pain, difficulty breathing and fever. Symptoms can be mild to severe.

Treating pleural effusion depends on the cause. First treatment focuses on removing the extra fluid. Then it will treat the symptoms. Finally, treatment will work to prevent you developing pleural effusion again.

Pleural effusion can become complicated if the pleural fluid becomes infected or if the extra fluid places enough pressure on the lungs that they partially or fully collapse. Pleural effusion is treatable with proper medical attention and a healthy lifestyle.

Pleural effusion can include pleurisy, or inflammation of the pleura. Pleurisy is often caused by viral and bacterial infections. Symptoms can be uncomfortable and include sharp chest pain that worsens when breathing deeply, coughing or sneezing.

What are causes of Pleural Effusion?

Identifying the root cause of your pleural effusion determines the treatment you need.

The most common cause of pleural effusion is congestive heart failure. This means the heart has difficulty pumping blood throughout the body. Congestive heart failure (CHF) is also called cardiac failure, left-sided heart failure and right-sided heart failure. CHF doesn't mean that your heart has stopped or is going to stop. It means that your heart can't pump the blood that your body needs to function. CHF may affect the left side, the right side or both sides of the heart.

Congestive heart failure means that your heart is weak. CHF can be caused by coronary artery disease, high blood pressure and diabetes.

Other causes of fluid in the lungs include:

- Pulmonary embolism caused by blood clots

- Chest surgery or trauma
- Liver disease (cirrhosis)
- Cancer, including lung cancer, breast cancer and lymphoma
- Autoimmune diseases, such as rheumatoid arthritis or lupus
- Lung disease including sarcoidosis, asbestosis and mesothelioma
- Kidney disease
- Infection
- Tuberculosis
- Pneumonia

Some medications and cancer treatments, including radiation and chemotherapy, can also cause pleural effusion.

Pleurisy can cause pleural effusion. Viral infections are the most common cause of pleurisy. Other causes of pleurisy include:

- Bacterial or fungal infections
- Autoimmune diseases such as rheumatoid arthritis or lupus
- Chest trauma
- Cancer
- Certain medications

What are Symptoms of Pleural Effusion?

Some people do not notice any symptoms of pleural effusion. Pleural effusion is often discovered during a different medical procedure or test. This is because the fluid that builds up prevents the layers of pleura from rubbing against each other. That rubbing is the main cause of discomfort. People who do experience symptoms may notice one or more of the following:

- Chest pain
- Fever
- Chills
- Cough
- Difficulty breathing, especially when reclined or laying down
- Shortness of breath
- Hiccups
- Weight loss

If fluid continues to collect in and around the lungs, it causes extra pressure which can make the lungs partially or fully collapse. Fever can occur if the pleural fluid becomes infected and turns into a pus called empyema.

Symptoms of pleurisy are often more intense. The two layers of pleura rub directly against each other, causing irritation. Common symptoms of pleurisy include:

- Sharp pain in the chest that worsens when you breathe, cough or sneeze
- Dull ache in the chest that may radiate into the shoulders or back
- Difficulty breathing
- Shortness of breath
- Fever
- Cough

Anytime you experience breathing difficulty or pain when breathing, consult your doctor.

How is Pleural Effusion Diagnosed?

Accurate diagnosis is important. Treatment for pleural effusion is based on what caused pleural effusion. Your

doctor will perform a physical exam, listen to your chest and discuss your symptoms. You may also need to undergo tests or procedures, such as the following:

Chest X-ray

Chest X-rays provide an image of the inside of your lungs and allow your doctor to see whether fluid is present and how the lungs are functioning.

Computerized Tomography (CT) Scan of the Chest

Like a chest X-ray, a CT scan allows your doctor to look at images of your lungs, but in greater detail, using computer-generated images.

Chest Ultrasound

Ultrasound uses sound waves to create images of your lungs. This is another method that allows your doctor to examine the structures in and around the lungs.

Blood Tests

Blood tests help determine if you have an infection. They also assist in diagnosing underlying conditions, such as pulmonary embolism or lupus.

Thoracentesis

Your doctor may want to analyze your pleural fluid or tissue by taking a fluid sample or biopsy. This procedure, called thoracentesis, inserts a thin needle into the chest cavity, and removes a small amount of fluid. The fluid sample is analyzed for types of cells, chemical makeup, cultures and abnormal cells. If the fluid is infected, your doctor will want to address it quickly to prevent long-term damage. Thoracentesis can also be used to remove excess fluid from around the lungs.

Bronchoscopy or Thoracoscopy

Your doctor may want to get a closer look at the inside of your chest cavity. This can be done by inserting a small camera through your nose or mouth during a procedure called a bronchoscopy. A camera can be inserted through a small incision in your chest during a procedure called a thoracoscopy.

How is Pleural Effusion Treated?

Treatment of pleural effusion includes:

- Removing excess fluid from the lungs to prevent infection and alleviate pressure.
- Treating the symptoms.
- Treating the underlying cause to prevent fluid from reaccumulating.

Draining Fluid

A thoracentesis can be used for both diagnosis and treatment. During a thoracentesis procedure, a thin needle is inserted into the chest cavity, and a syringe is used to remove excess fluid. This can also be done using a chest tube (thoracostomy) if a very large amount of fluid is present. The chest tube is made of flexible plastic and is placed between your ribs. A local painkiller can be used to reduce discomfort.

Medication

Medication may be used in treatment especially if there is an infection. Types of medication used to treat pleural effusion include steroids, anti-inflammatories, diuretics or antibiotics.

Surgery

Surgery may be an option for people who do not get adequate results from other treatments. If the fluid has become thick or hardened, surgery may be necessary.

Managing symptoms

Pleural effusion and pleurisy may cause unpleasant symptoms that can be managed with:

- Ibuprofen or acetaminophen to reduce inflammation
- Cough syrup and other cough suppressants
- Getting plenty of rest
- Finding a comfortable position to relax

Tunneled Pleural Catheter

If you have recurrent pleural effusion, or fluid that reaccumulates around the lung, your doctor may recommend a tunneled pleural catheter. This outpatient procedure places a thin silicone tube (catheter) between the ribs, into the space filled with fluid around the lungs. A portion of the catheter remains outside the body, covered with a waterproof bandage, and connected to a disposable bottle collection system. A tunneled pleural catheter is a minimally invasive alternative to repeated thoracentesis procedures, allowing the patient to drain at home, minimizing procedures and doctor appointments.

Pleurodesis

If your pleural effusion keep recurring, your doctor may recommend a procedure called pleurodesis. After draining the pleural fluid with surgery or chest tube, your doctor will prescribe a medication that intentionally causes inflammation inside the pleural space. This will seal this area shut. This procedure normally requires a hospital stay of several days.

Pleural Effusion Lifestyle Management

While pleural effusion is a common condition, it can quickly become serious. People living with pleural effusion or pleurisy should see their doctor right away to begin treatment before infection or other complications occur. Always follow your treatment plan as prescribed and maintain a healthy lifestyle to prevent recurrence. Here are some additional resources to help you.

Coping

If you have pleural effusion or pleurisy, there are steps you can take to manage unpleasant symptoms and prevent the condition from recurring. Get plenty of rest, and avoid physical activity that may intensify pain or breathing problems. If your pleural effusion is caused by an underlying medical condition such as cancer, congestive heart failure or lung disease, speak with your doctor to learn more about living with chronic disease. Be honest about your concerns, and let your doctor know if you experience changes in your symptoms.

Eating

Eat a healthy, balanced diet with plenty of vegetables, fruit and lean protein. Limit sugar, fat and alcohol, and maintain a healthy weight. Healthy eating is important during and after treatment.

Exercise

Your doctor may recommend avoiding physical activity while you have pleural effusion or pleurisy. But after treatment, you'll want to resume normal exercise. High blood pressure increases your risk of pleural effusion. Exercise can help lower blood pressure, decrease stress and anxiety and improve strength, mood and bone health. If you don't regularly exercise, talk with your doctor before you start. Your doctor can help recommend

an exercise plan.

Lifestyle Changes

Smoking and high blood pressure put you at greater risk of getting pleural effusion. Avoid smoking altogether, and seek help if you would like to quit. Find healthy ways to manage stress, and aim for 7-8 hours of sleep a night. Get in the habit of washing your hands frequently to avoid exposure to viruses or bacteria. If you feel like you have a cold or virus, get plenty of rest, and seek medical attention if you experience chest pain, difficulty breathing or fever or if your symptoms worsen.

Clinical Trials

You may want to consider participating in clinical trials to learn more about pleural effusion and pleurisy. Clinical trials help contribute to the field of medicine and may help others in the future.

Visit our website for more information about support groups, clinical trials and lifestyle information.

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