

Pleurisy explained

Each lung is wrapped in a thin membrane called the visceral pleura. The chest wall is similarly lined (parietal pleura). These two membranes touch and slide across each other while we breathe, lubricated by a slick of fluid. Pleurisy is inflammation of these membranes, commonly caused by upper respiratory tract infections. The pleura are irritated by the activity of viruses or bacteria in much the same way as the inside of the nose. Instead of gliding smoothly against each other, the inflammation causes the pleura to rub and grate. This causes pain, exacerbated by deep breathing and coughing. Sometimes, the inflammation can prompt a build-up of fluid between the two membranes. This is known as pleural effusion. Treatment options for pleurisy include addressing the underlying cause, and medications (such as antibiotics, painkillers and anti-inflammatory drugs).

Symptoms

The symptoms of pleurisy include:

- Prior upper respiratory tract infection
- Pain in the chest
- Pain in the muscles of the chest
- Persistent cough
- Fever
- General malaise
- Pain is exacerbated by deep breathing or coughing.

A range of causes

The various causes of pleurisy include:

- Viral infection
- Bacterial infection
- Pneumonia
- Tuberculosis
- Rheumatoid conditions, such as lupus erythematosus
- Pulmonary embolus (blood clot).

Pleural effusion

Inflammation can trigger a build-up of fluid between the two membranes. This can be caused by an overproduction of fluid by one membrane, or by the failure of the other membrane to drain the fluid properly. Pleural effusion may actually ease the symptoms of pleurisy, since the fluid stops the membranes from grating against each other. However, the compression of the lungs will cause breathing difficulties, such as shortness of breath or rapid breathing. The lack of oxygen may turn areas such as the mouth and fingertips a shade of blue (cyanosis). Apart from pleurisy, other causes of pleural effusion include cancer, protein deficiencies and some types of heart disease.

Diagnosis methods

Diagnosing pleurisy involves a number of tests, including:

- **Physical examination** - using a stethoscope, the doctor can hear the pleura scraping against each other. Other breath sound abnormalities that suggest pleurisy include rattling or crackling.

- **Blood tests** - to determine whether the cause is viral or bacterial.
- **X-rays** - of the chest, including CT scans or other imaging scans using ultrasound.
- **Thoracentesis** - a small sample of pleural fluid is removed and examined.
- **Bronchoscopy** - a thin tube is inserted down the windpipe to examine the airways.

Treatment methods

Treatment for pleurisy may include:

- Treating the underlying cause - for example, treatment for tuberculosis
- Medications such as antibiotics and anti-inflammatory drugs
- Pain-killing medication
- Draining off the excess fluid - in the case of pleural effusion
- Medications to stop the fluid from building up again.

Prevention strategies

Bacterial pleurisy is often a side effect of pneumonia, a type of lung infection. The infection from the airways spreads to include the pleura. There is a vaccine against one of the most common types of pneumonia. It is recommended that certain people be immunised, including the elderly, people with chronic illnesses (such as diabetes) and those with reduced immunity. Apart from vaccination, treating any upper respiratory tract infection promptly can also reduce the risk of developing pleurisy.

Where to get help

- Your doctor
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- The Australian Lung Foundation Freecall 1800 654 301

Things to remember

- The pleura are the thin membranes that line the chest wall and envelop the lungs.
- Pleurisy is inflammation of the pleura, which causes the membranes to rub and grate against each other.
- Common causes of pleurisy include bacterial and viral infections, such as pneumonia.

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