

Patient information from BMJ

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Pericarditis

Pericarditis is painful inflammation (swelling) of the sac that surrounds and protects the heart. Pericarditis is often simple to treat, but it can have serious complications.

What is pericarditis?

The heart is loosely contained in a sac called the **pericardium**. This sac helps protect the heart. It also contains a small amount of fluid that helps to lubricate the heart and keep it working smoothly.

If the pericardium becomes inflamed it is called pericarditis. The main symptom of this inflammation is chest pain.

Pericarditis can often be treated fairly easily. But in some people it is more serious. For example, if fluid begins to fill the pericardium, or if the swelling affects the blood flow to and from the heart, it can be life threatening.

It's often not possible to tell what has caused pericarditis. But the most common cause seems to be a viral infection.

Pericarditis can also be caused by a bacterial infection in the lungs called tuberculosis, and by other types of bacterial or fungal infection. But these causes are rare.

There are some things that make getting pericarditis more likely. They include:

- being male
- having had a heart attack in the past
- having had heart surgery in the past
- having dialysis treatment for kidney disease
- having what's called an autoimmune condition. This is where the body's immune system, which normally protects us from infection, starts to attack some of the body's own tissues. Common autoimmune conditions include rheumatoid arthritis and inflammatory bowel diseases, such as Crohn's disease.

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What are the symptoms?

The main symptom of pericarditis is pain in the centre of the chest. In many people the pain spreads out on both sides to cover all of the chest.

The pain can either be sharp or more like an ache. Most people find that the pain is worse when they lie down and gets better when they sit up or lean forward.

You might also have a fever and a cough, but this is less common.

Chest pain can be a sign of serious problems, including a heart attack. So it's important to see a doctor urgently if you have chest pain. If you have severe chest pain, or if you think you might be having a heart attack, call an ambulance.

If your doctor thinks you might have pericarditis, he or she will ask about your symptoms, examine you, and listen to your chest through a stethoscope for any unusual sounds.

Your doctor might also want to do some tests, including blood tests, a chest x-ray, and an electrocardiogram (ECG).

Pericarditis is not usually dangerous, and the swelling is often simple to treat. But sometimes the pericardium can fill with pus. This is called purulent pericarditis. Purulent pericarditis is life threatening because it can stop the heart from working properly. It needs immediate treatment.

Purulent pericarditis is a sign of a serious infection. Your doctor will draw out some of the fluid with a needle. It will then be tested to see what has caused the infection. This means that the infection can be targeted with the right treatment.

What treatments are available?

The treatment you will need depends on what has caused the inflammation in the pericardium.

You might need to stay in hospital until your doctor has found the cause of your pericarditis. But if you don't have any complications, such as fever, or fluid in the pericardium, you can usually go home and be treated as an outpatient.

Medicines

The main treatment for most people with pericarditis is to take medicines called **non-steroidal anti-inflammatory drugs (NSAIDs)**. These drugs reduce the inflammation. NSAIDs that you might have heard of include ibuprofen and aspirin. You will probably need to take these for several weeks.

NSAIDs can cause irritation of the stomach lining. So your doctor might also prescribe a medicine to protect your stomach while you take the NSAID. If your chest pain is severe, your doctor might also prescribe a stronger painkiller.

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If the cause of your pericarditis is not clear, or if you don't get better within two weeks, your doctor might prescribe a stronger anti-inflammatory drug, called a steroid (the full name is **corticosteroid**).

Your doctor will also advise you not to do any vigorous exercise until he or she is happy that you no longer have pericarditis.

If you have pericarditis that comes back after treatment you may need to take other anti-inflammatory medicines for several months. If your doctor thinks your pericarditis might be linked to a problem with your immune system, he or she might also suggest medicines that help stop your immune system from attacking your body.

Surgery

If drug treatments have not cured your pericarditis, your doctor might suggest that you have an operation called a **pericardectomy**. This means removing part or all of the pericardium.

If you need to have this operation it means that the pericardium isn't doing its job any more. So removing part or all of it shouldn't cause problems. The heart can usually work normally without it.

If your pericardium has begun to fill with pus you might need surgery to drain the fluid. You will then need to take antibiotics to fight the infection and anti-inflammatories to reduce the swelling in the pericardium.

What to expect in the future

Most people with pericarditis that's caused by a virus, and that gets better with NSAIDs, don't need any long-term follow-up treatment.

For pericarditis with other causes, the outlook can be more serious. For example, about 40 in 100 people who have purulent pericarditis die from the condition, even with treatment.

If you have pericarditis that was caused by tuberculosis or another bacterial infection, complications are more likely, and your doctor will want to check on you regularly.

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