

Patient information from BMJ

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Rheumatic fever

Rheumatic fever is a serious complication that can happen after an untreated bacterial throat infection (often called ‘strep throat’), usually in children. There is no cure but treatments can relieve the symptoms and help prevent further problems.

What is rheumatic fever?

Sore throats are rarely serious and often go away by themselves. But infection with a bacteria called group A streptococcus can be more serious. If it is not treated with antibiotics it can lead to rheumatic fever.

The symptoms of rheumatic fever are not caused by the infection itself but by the body’s reaction to it. The immune system, which usually protects us against infections, attacks some of the body’s own tissues at the same time as it attacks the streptococcus infection.

This can cause problems with the joints, the brain, the skin, and the heart. Most of these problems are temporary and will go away by themselves. But if there has been damage to the heart it is likely to be permanent.

Rheumatic fever can damage the valves in the heart, which means that the heart can’t pump blood as well as it could before.

Rheumatic fever affects children much more often than adults. And it is most common where medical treatment is not always easily available and where people live in overcrowded conditions. It is most common in southern and western Africa, parts of Asia, and South America. It is rare in Western countries but it does still happen.

What are the symptoms?

As the name suggests, the main symptom of rheumatic fever is a raised temperature.

Other possible symptoms include:

- pain in the joints
- chest pain
- shortness of breath.

Rheumatic fever

Your doctor will ask about these and other symptoms. He or she should also ask if your child has recently had a sore throat or scarlet fever.

If the doctor suspects that your child might have rheumatic fever he or she will listen to your child's heart for signs of any weakness, unusual heart rhythm, or heart murmurs.

Your doctor might also want to do other tests to check for possible damage to your child's heart, such as a chest x-ray, and a blood test to check for streptococcus infection.

What treatments are available?

Relieving the symptoms

For the first phase of treatment your doctor will probably suggest that your child is admitted to hospital.

Apart from the damage to the heart, the symptoms of rheumatic fever usually clear up by themselves after a few weeks. But your doctor will probably recommend treatments to help your child get better more quickly. The first treatment will be antibiotics to get rid of the infection.

Your doctor will probably also recommend pain medicine suitable for your child's age, to treat the joint pain caused by rheumatic fever. This may be a simple painkiller such as paracetamol, or an anti-inflammatory such as ibuprofen or naproxen, which can help reduce any joint swelling as well as pain.

Ongoing antibiotics

People who have had a first episode of rheumatic fever are likely to have more without treatment. The danger if that happens is that it could cause more heart damage. So doctors recommend that people who have had rheumatic fever with severe symptoms have regular treatment with antibiotics, often for many years.

If this applies to your child, he or she will probably need to have an antibiotic injection every 3 or 4 weeks. Your doctor will discuss with you how this schedule will work, and what you and your child need to do.

People with less-severe symptoms may only need antibiotic treatment for one year.

Keeping the heart healthy

Unfortunately any damage to the heart caused by rheumatic fever is likely to be permanent. There is no cure for this damage but there are treatments to help your child stay as healthy as possible and avoid future heart problems.

These include medicines to help blood flow normally through the heart. Your doctor may also suggest medicines called diuretics to help get rid of any excess fluid that can build up around the heart with heart failure.

Some people have damage that is so mild that they don't need any medicine to help their heart.

Rheumatic fever

Sydenham's chorea

Sydenham's chorea is a complication that can affect some children after rheumatic fever. It affects the nerves, causing episodes of jerking movements, usually of the hands, feet, and face.

Sydenham's chorea usually goes away after a few weeks or months. Most children don't need any medical treatment, just reassurance and support, and a calm, quiet environment where they can rest and relax.

For children with severe symptoms of Sydenham's chorea, or with symptoms that last a long time, medicines can help. But these are usually a last resort as they can cause side effects.

What to expect in the future

With treatment the symptoms of rheumatic fever usually clear up after a week or two. Most people can leave hospital within two weeks.

Your child will need to have blood tests for a while until the signs of the infection are gone. This will probably be twice a week to begin with, then gradually less often. Your child may also need check-ups with a specialist heart doctor (a cardiologist), every six months to start with, then every one or two years after that.

The danger of rheumatic fever is not the fever itself, but the possible heart damage if your child has another episode in the future. For the best chance of preventing another attack it's important to stick to the long-term antibiotic treatment that your doctor recommends.

Streptococcus is a common infection of the mouth and throat. So children who have had rheumatic fever need to take special care of their oral health. This means:

- Cleaning teeth carefully and regularly
- Not delaying treatment for any dental or oral problems
- Not missing scheduled dental appointments, and
- Making sure sore throats are treated early.

Some people who have had rheumatic fever need to have antibiotics before any major dental work. So make sure you tell the dentist that your child has a history of rheumatic fever.

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