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# Scarlet Fever

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Scarlet fever is due to a throat infection caused by a germ (bacterium) called streptococcus, usually group A streptococcus. It causes a rough-feeling red rash, **sore throat**, fever and sometimes other complications

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Scarlet fever is most common in children aged less than 10 years, with 4-year-olds most likely of all to catch it. 87% of cases in the UK are in children under 10 years. Although adults can get scarlet fever, this is very unusual. However, the symptoms and treatment are the same as for children.

Scarlet fever used to be very common in the 1800s and early 1900s because of overcrowding and poor living conditions. In those days it was the leading cause of death in children. But it got much rarer as general health measures improved. There have been some recent outbreaks in the UK, usually in schools, but antibiotics can now treat scarlet fever very effectively.

## What are the symptoms of scarlet fever?

- High temperature (fever).
- Sore throat.
- Redness of the tongue with tiny white spots (this occurs around the same time).
- Sometimes swelling of the tongue a few days later.
- A red, rough-feeling rash on their chest, tummy and cheeks - it feels a bit like sandpaper.

Scarlet fever starts with a very sore throat and a high temperature (fever). It is often initially put down to tonsillitis. Sometimes at roughly the same time as the sore throat comes on, the tongue goes red, with tiny white spots. This makes it look like a strawberry, hence the name: strawberry tongue. This is pretty typical of scarlet fever.

After the sore throat and whitish tongue comes a red rash on the cheeks, chest and tummy. If you run your hands over the rash on the tummy and chest it feels slightly rough, like fine sandpaper. This is the typical rash of scarlet fever.



By [www.badobadop.co.uk](https://www.badobadop.co.uk) (own work) via Wikimedia Commons

After a couple of days the tongue, previously only slightly red with white spots, goes very red and a bit bigger than usual. Some people call this a 'beef tongue'.



By Afag Azizova (own work) via Wikimedia Commons

By this stage, the combination of a sore throat, rough-feeling rash and red tongue makes the diagnosis of scarlet fever fairly obvious to doctors. If left untreated, the rash and sore throat will fade over about 10 days, but the skin sometimes peels (like with sunburn). Not all people with streptococcal infections develop the rash, as some people are not sensitive to the poison (toxin). A mild form of scarlet fever may occur; this is often called scarlatina.

## What causes scarlet fever?

Scarlet fever is caused by a tiny germ (bacterium) called *Streptococcus pyogenes*. The germ is sometimes called 'group A Strep'. This germ causes quite a few illnesses, including skin infections, chest infections and infections of the heart.

Sometimes the germs (bacteria) only cause a sore throat, without causing the rash of scarlet fever. This is often called a 'Strep throat' or simple tonsillitis. But in scarlet fever, the streptococcus bacterium releases toxins that spread through the body. The toxins cause the rash and, if untreated, can cause problems in the kidneys and heart even years later, which you can read more about in the treatment and complications section.

## How is scarlet fever diagnosed?

In general the diagnosis can be made on the clinical picture: a child with a high temperature (fever), sore throat, a red tongue and a rough-feeling rash on their chest and tummy. No tests are usually necessary.

If there is any doubt as to the diagnosis, a doctor can take a 'throat swab' - using something that looks like a long cotton bud. They will send it to the hospital to be tested for the germ (bacterium) that causes scarlet fever. But the results will take a few days to come back, so if scarlet fever is suspected it's usually best to start the antibiotics first.

There is a blood test which can detect the scarlet fever germ (the anti-streptolysin titre test, or ASO for short). But the blood test is only positive from between one week and one month after the infection. So it won't tell you if someone has scarlet fever right now, only if they had it in the past.

A family doctor, or GP, will be able to recognise scarlet fever and should not need blood tests or throat swabs to make the diagnosis.

## What is the treatment for scarlet fever?

Because scarlet fever is caused by a germ (bacterium) and can cause serious complications without treatment, the best treatment is antibiotics. These take a little time to get to work, so it's also important to give general treatment to relieve symptoms in the meantime.

### Antibiotics

- The best antibiotic is penicillin. It almost always kills the scarlet fever germ.
- You need to take a long course of penicillin: ten days. This is longer than for a simple throat or ear infection and it requires quite a lot of perseverance and organisation to complete the course.
- The dose will be worked out according to the age and weight of the child, but is likely to be 125-250 mg four times a day, for ten days.
- If the child is allergic to penicillin then erythromycin or clarithromycin can be used instead.
- But penicillin is the best for scarlet fever so it's important to check if the child is genuinely allergic to penicillin.

### General treatment of a fever

- It is generally important for anyone who is unwell to keep their fluid levels up.
- Water alone is fine but a little bit of sugar will help the water to be absorbed. Dilute squash is fine. In a young child, milk is good too.
- If the child is distressed by the fever - for example, they are limp, drowsy or whimpering - it is worth trying paracetamol.
- Paracetamol can bring a high temperature (fever) down a little but it does not treat the underlying infection. **Note:** you should not use paracetamol just to bring down a temperature; it should only be used if the child is really affected by the fever.

- Too much paracetamol has been shown to be bad for children because having a mild fever can actually help them to fight off the scarlet fever infection.
- If the child looks OK but has a fever, it is generally best to leave them to have a fever because it can help them fight off the infection.
- Using paracetamol in children or babies does not reduce the risk of **febrile convulsions**.
- You should dress them in clothes that are appropriate for the outside or inside temperature. There is no need to strip down feverish children, fan them, or mop them with wet towels. In studies, none of these treatments has been shown to help.
- Ibuprofen is generally not recommended in infections that involve the skin.

Generally antibiotics and fluids are the best treatment for scarlet fever.

## What are the possible complications?

Treatment with antibiotics reduces the chance of complications. Complications now occur very rarely. However, if they do occur, they can be serious. They can be broadly divided into early complications, which occur within days, and later complications, which happen weeks or months after the infection seems to have gone.

### Early complications

Complications due to the spread of the infection can occur early in the infection and may include the following:

- Ear infection (otitis media).
- Throat infection and collection of pus (abscess).
- Sinus infection.
- Pneumonia.
- Meningitis and brain abscess.

### Later complications

Later complications are rare, but when they do happen problems start weeks, months or even years after the infection has cleared. These occur as a result of immune reactions in the tissues. The body's immune system, rather than the germ itself, are causing the problem. These may include:

- Rheumatic fever (which can damage the heart).
- Kidney damage (**glomerulonephritis**).

This is why it's important to take the full course of antibiotics, even if your child seems to be getting better by themselves.

## What is the outlook for people with scarlet fever?

In the past, scarlet fever used to be a very serious condition. Fortunately, nowadays for most cases, scarlet fever is a mild, self-limiting illness. Most children will recover fully within a week or so, even without treatment. (However, it is best to have treatment - see above.)

Deaths from scarlet fever are now extremely rare in the western world.

## Is scarlet fever infectious?

Yes. Coughing, sneezing and breathing out the germs (bacteria) can pass it on (be infectious) to others. Scarlet fever can even be passed on by sharing towels, baths, clothes or bed linen with a person who has been infected.

It takes 2-4 days to develop symptoms after being infected. You should keep children with scarlet fever off school and away from others, for 24 hours after starting antibiotics.

Once a person has had scarlet fever, they are very unlikely to get it again. This is because they become immune to the bacteria. However, it is possible to have repeated attacks, as there are different types of streptococcal bacteria which cause the infection.

The recent outbreak of scarlet fever has sometimes occurred in schools where there is also an outbreak of chickenpox. If you have a child who has recently had chickenpox and then gets scarlet fever you need to watch out for signs of serious infection. These may include joint pains, high temperature (fever) and persistent skin infection.

There is no evidence that catching scarlet fever when pregnant will put your baby at risk

## Further reading & references

- **Scarlet fever: guidance and data**; Public Health England
- **Interim guidelines for the public health management of scarlet fever outbreaks in schools, nurseries and other childcare settings**; Public Health England, 2014 (archived content)
- **Wong S et al**; Emerging Microbes and Infections, Nature.com, 2012
- **Fever in under 5s - assessment and initial management**; NICE Guideline (updated August 2017)
- **Scarlet fever**; NICE CKS, May 2010
- **No authors listed**; Varicella, herpes zoster and nonsteroidal anti-inflammatory drugs: serious Prescrire Int. 2010 Apr;19(106):72-3.

- **No authors listed**; Sixtyseconds on . . . scarlet fever. BMJ. 2016 Mar 23;352:i1658. doi: 10.1136/bmj.i1658.

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