



Scarlet fever

Scarlet fever (sometimes called scarlatina) is an infectious disease caused by bacteria called *Streptococcus pyogenes*, or group A streptococcus (GAS). The same bacteria can also cause impetigo.

Scarlet fever is characterised by a rash, which usually accompanies a sore throat. Bacteria that cause the infection produce toxins (poisons), which cause the rash, a red and swollen tongue and flushed cheeks. The scarlet fever rash can be confused with measles.

Scarlet fever is mainly a childhood disease and is most commonly seen between the ages of 2 and 8 years. Although historically considered a dangerous disease, it is now much less serious. Since 2014, a rise in numbers of cases has been seen with 15,000 to 30,000 cases currently diagnosed each year in England.

Scarlet fever is highly contagious and is spread by close contact with someone carrying the bacteria. It takes around 2 to 5 days to develop symptoms after exposure to these bacteria.

If you think you or your child has scarlet fever, you should consult your GP. The disease tends to be most common in the winter and spring and the treatment consists of a course of antibiotics.

Protection from scarlet fever

Scarlet fever is spread via the mucus and saliva of infected people. It can also be caught from sharing drinking glasses, plates or utensils they have used. To protect yourself from getting the illness you should:

- wash your hands often
- not share eating utensils with an infected person
- wash, or dispose of, handkerchiefs and tissues contaminated by an infected person
- be aware that you can catch scarlet fever by inhaling contaminated airborne droplets, if someone with the illness coughs or sneezes in the air near you.

If you think you, or your child, have scarlet fever:

- see your GP or contact NHS 111 as soon as possible
- make sure that you/your child take(s) the full course of any antibiotics prescribed. Although you or your child will feel better soon after starting the course of antibiotics, you must complete the course to ensure that you do not carry the bacteria in your throat after you have recovered

- stay at home, away from nursery, school or work for at least 24 hours after starting the antibiotic treatment, to avoid spreading the infection

You can help stop the spread of infection through frequent hand washing and by not sharing eating utensils, clothes, bedding and towels. All contaminated tissues or handkerchiefs should be washed or disposed of immediately.

Symptoms

Scarlet fever symptoms:

- the first symptoms of scarlet fever often include a sore throat, headache, fever, nausea and vomiting.
- after 12 to 48 hours the characteristic fine red rash develops (if you touch it, it feels like sandpaper). Typically, it first appears on the chest and stomach, rapidly spreading to other parts of the body. On more darkly-pigmented skin, the rash may be harder to spot, although the 'sandpaper' feel should be present
- fever over 38.3° C (101° F) or higher is common
- white coating on the tongue, which peels a few days later, leaving the tongue looking red and swollen (known as 'strawberry tongue')
- swollen glands in the neck
- feeling tired and unwell
- flushed red face, but pale around the mouth. The flushed face may appear more 'sunburnt' on darker skin
- peeling skin on the fingertips, toes and groin area, as the rash fades

It usually takes 2 to 5 days from infection before the first symptoms appear. However, the incubation period may be as short as 1 day and as long as 7 days. Scarlet fever usually clears up after a week, but it is advisable to visit your GP to get a full diagnosis and proper treatment.

Getting scarlet fever

- Scarlet fever is highly contagious. Bacteria are present in the mouth, throat or nose of an infected person, or someone carrying the bacteria without symptoms, and are spread by contact with that person's mucus or saliva. This might be on cups, plates, pens, toys or surfaces, such as tables which might have been used or touched by someone carrying the bacteria. You can also catch the disease by breathing infected airborne droplets produced by a person's coughing, sneezing or normal breathing.

Individuals at risk

Scarlet fever is mainly a childhood disease, with around 90% of cases occurring in children under 10 years old. It is most common in children between the ages of 2 and 8 years, with 4-year-olds most likely to develop the illness. Occasionally,

outbreaks of scarlet fever occur in nurseries and schools. People of all ages can catch scarlet fever, but the disease is much less common in adults.

Diagnosis and treatment

Most cases of scarlet fever will clear up on their own, but it is still best to see your GP if you, or your child, are showing symptoms. Having treatment for the illness speeds recovery and reduces risk of complications. You will also become non-contagious more quickly.

In most cases, doctors can diagnose scarlet fever from the symptoms alone. The diagnosis can be confirmed by taking a throat swab, which is then sent to a laboratory to identify the bacteria causing the infection. In some cases, a throat swab is not enough and a blood test may be needed.

The usual treatment for scarlet fever is a 10-day course of antibiotics. The fever will usually subside within 24 hours of starting this, but it is important to take the whole course to completely clear these bacteria from your throat and protect others from becoming infected.

If scarlet fever is not treated with antibiotics, it can be infectious for 2-3 weeks after symptoms appear. Provided all prescribed antibiotics are taken as directed, most cases will not infect other people after 24 hours of treatment. Current guidance advises that children should not return to nursery or school and adults to work until a minimum of 24 hours after starting antibiotic treatment.

If you have a high temperature you should drink plenty of fluids. You can also take paracetamol or ibuprofen to relieve discomfort.

Once you have had scarlet fever you are less likely to get it again.

Potential complications

Most cases of scarlet fever have no complications at all. However, in the early stages, there is a small risk that you might develop one of the following infections caused by the same bacteria (GAS) responsible for scarlet fever:

- ear infection
- throat abscess
- pneumonia
- inflammation of the sinuses (sinusitis)
- skin/soft tissue infection (cellulitis)
- joint inflammation (arthritis)
- septicaemia
- meningitis

Household contacts of scarlet fever patients are also at risk of developing scarlet fever or other infections caused by the same bacteria (see list above) and should seek medical advice if they develop new symptoms of concern.

On rare occasions, patients with scarlet fever can at a later stage of the disease develop:

- bone or joint problems
- liver damage
- kidney damage
- heart damage

Patients, or their parents, should keep an eye out for any symptoms which might suggest these complications in the first few weeks after the main infection has cleared up and, if concerned, seek medical help immediately.

Further information

If you would like more information about scarlet fever, please visit the NHS.uk website: www.nhs.uk/conditions/Scarlet-fever/Pages/Introduction.aspx.

If you have any concerns about your health, see your GP or contact NHS 111.