

Scarlet fever

Introduction

Scarlet fever is a bacterial illness that mainly affects children. It causes a distinctive pink-red rash.

The illness is caused by *Streptococcus pyogenes* bacteria, also known as group A streptococcus, which are found on the skin and in the throat.

Generally, scarlet fever is much less common than it used to be but in recent years there have been a number of significant outbreaks.

For example, figures published by Public Health England show that from September 2013 to March 2014 there were 2,830 cases of scarlet fever. For the same period in 2014/15 a total of 5,746 cases were recorded. The reason for recent increase is unclear.

It's important to be aware of the signs and symptoms of scarlet fever so that early treatment with antibiotics can be given.



Scarlet fever symptoms

Scarlet fever usually follows a sore throat or a skin infection, such as impetigo, caused by particular strains of streptococcus bacteria.

Initial symptoms usually include a sore throat, headache and a high temperature (38.3C/101F or above), flushed cheeks and a swollen tongue.

A day or two later the characteristic pinkish rash appears. It usually occurs on the chest and stomach before spreading to other areas of the body, such as the ears and neck.

The symptoms of scarlet fever usually develop two to five days after infection, although the incubation period (the period between exposure to the infection and symptoms appearing) can be as short as one day or as long as seven days.

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The rash feels like sandpaper to touch and it may be itchy. On darker skin the rash may be more difficult to see although its rough texture should be apparent.

When to seek medical advice

Scarlet fever usually clears up after about a week, but if you think you or your child may have it, see your GP for a proper diagnosis and appropriate treatment.

Your GP should be able to diagnose scarlet fever by examining the distinctive rash and asking about other symptoms. They may also decide to take a sample of saliva from the back of the throat so it can be tested in a laboratory to confirm the diagnosis.

There's no evidence to suggest that catching scarlet fever when pregnant will put your baby at risk. However, if you're heavily pregnant, tell the doctors and midwives in charge of your care if you've been in contact with someone who has scarlet fever.

How scarlet fever spreads

Scarlet fever is very contagious and can be caught by:

- breathing in bacteria in airborne droplets from an infected person's coughs and sneezes
- touching the skin of a person with a streptococcal skin infection, such as impetigo
- sharing contaminated towels, baths, clothes or bed linen

It can also be caught from carriers – people who have the bacteria in their throat or on their skin but don't have any symptoms.

Who's affected by scarlet fever

Most cases (about 80%) of scarlet fever occur in children under 10 (usually between two and eight years of age). However, people of any age can get the illness.

As it's so contagious, scarlet fever is likely to affect someone in close contact with a person with a sore throat or skin infection caused by streptococcus bacteria. Outbreaks often occur in nurseries and schools where children are in close contact with one another.

The symptoms of scarlet fever will only develop in people susceptible to toxins produced by the streptococcus bacteria. Most children over 10 years of age will have developed immunity to these toxins.

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It's possible to catch scarlet fever more than once, but this is rare.

Treating scarlet fever

Scarlet fever used to be a very serious illness, but nowadays most cases tend to be mild.

It can easily be treated with antibiotics. Liquid antibiotics, such as penicillin or amoxicillin, are often used to treat children. These must be taken for 10 days, even though most people recover after four to five days.

It's important to be aware that your child will still be infectious for 24 hours after antibiotic treatment has begun, and therefore they shouldn't attend nursery or school during this period (see below).

Without antibiotic treatment, your child will be infectious for 1-2 weeks after symptoms appear.

Read more about treating scarlet fever.

Complications of scarlet fever

With the right treatment, further problems are unlikely. However, there's a small risk of the infection spreading to other parts of the body and causing more serious infections, such as an ear infection, sinusitis, or pneumonia.

Read more about complications of scarlet fever.

Preventing scarlet fever from spreading

There's currently no vaccine for scarlet fever.

If your child has scarlet fever, keep them away from nursery or school for at least 24 hours after starting treatment with antibiotics. Adults with the illness should also stay off work for at least 24 hours after starting treatment.

GPs, schools and nurseries should be aware of the current high levels of scarlet fever and inform local health protection teams if they become aware of cases, particularly if more than one child is affected.

Children and adults should cover their mouth and nose with a tissue when they cough or sneeze and wash their hands with soap and water after using or disposing of tissues.

Avoid sharing contaminated utensils, cups and glasses, clothes, baths, bed linen or towels.

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Scarlatina

Scarlet fever is also sometimes known as scarlatina, although this often refers to a milder form of the illness.

Symptoms of scarlet fever

The symptoms of scarlet fever usually take two to five days to appear after infection.

However, the incubation period (the time between exposure to the infection and symptoms starting) can be as short as one day or as long as seven days.

The symptoms of scarlet fever include a sore throat, headache, high temperature (38.3C/101F) or above), flushed face and swollen tongue. The distinctive pink-red rash develops 12 to 48 hours later.

Rash

Red blotches are the first sign of the rash. These turn into a fine pink-red rash that feels like sandpaper to touch and looks like sunburn. It may also be itchy.

The rash usually starts on the chest and stomach, but soon spreads to other parts of the body, such as the ears, neck, elbows, inner thighs and groin.

The rash doesn't usually spread to the face. However, the cheeks become flushed and the area just around the mouth stays quite pale. The rash will turn white if you press a glass on it.

The rash usually fades after about a week, but the outer layers of skin, usually on the hands and feet, may peel for several weeks afterwards.

In milder cases, sometimes called scarlatina, the rash may be the only symptom.

Other symptoms

Other symptoms may include:

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- swollen neck glands
- loss of appetite
- nausea or vomiting
- red lines in the folds of the body, such as the armpit, which may last a couple of days after the rash has gone
- a white coating on the tongue, which peels a few days later leaving the tongue red and swollen (this is known as strawberry tongue)
- a general feeling of being unwell

When to seek medical advice

See your GP as soon as possible if you think you or your child has scarlet fever. Although the illness usually clears up after about a week, your GP will be able to confirm a diagnosis and recommend appropriate treatment.

Chickenpox and scarlet fever

If your child has chickenpox and develops a rash that looks like scarlet fever, it may be a sign of a secondary bacterial infection.

In this case, you should seek immediate medical advice to reduce the risk of potentially serious complications.

Treating scarlet fever

Most cases of scarlet fever clear up after about a week without treatment. However, treatment is recommended.

Treatment reduces the length of time you're contagious, speeds up recovery and lowers the risk of complications of scarlet fever.

With treatment, most people recover in about four to five days and can return to nursery, school or work 24 hours after starting antibiotic treatment.

Without treatment, you'll be contagious for one to two weeks after symptoms appear.

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Antibiotics

Scarlet fever is usually treated with a 10-day course of antibiotics. This is often in the form of penicillin or amoxicillin tablets, although liquid may be used for young children.

For people who are allergic to penicillin, alternative antibiotics such as erythromycin can be used instead.

The fever usually gets better within 24 hours of starting antibiotics, with the other symptoms disappearing within a few days. However, it's important that the whole course of treatment is completed to ensure the infection is fully cleared.

Keep your child away from nursery or school for at least 24 hours after starting antibiotic treatment. Adults with scarlet fever should also stay off work for at least 24 hours after starting treatment.

Self care

Many of the symptoms of scarlet fever can be relieved using some simple self care measures, such as:

- drinking plenty of cool fluids
- eating soft foods (if your throat is painful)
- taking paracetamol to bring down a high temperature
- using calamine lotion or antihistamine tablets to relieve itching

Complications of scarlet fever

Most cases of scarlet fever don't cause complications, particularly if the condition is properly treated.

In the early stages, there's a small risk of:

- an ear infection
- a throat abscess (painful collection of pus)
- sinusitis (inflammation of the sinuses)

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- pneumonia (inflammation of the lungs)

Very rare complications that can occur at a later stage include:

- rheumatic fever, which can cause joint pain, chest pain and shortness of breath
- glomerulonephritis (damage to the tiny filters inside the kidneys)
- liver damage
- osteomyelitis (infection of the bone)
- blood poisoning
- necrotising fasciitis (a flesh-eating disease)
- toxic shock syndrome (a rare, life-threatening bacterial infection)

You may have one of these rare complications if you're very unwell, in severe pain and have a severe headache, vomiting or diarrhoea.

See your GP immediately if any of these symptoms appear in the first few weeks after the main infection has cleared up.

Can I get scarlet fever again?

If you've had one episode of scarlet fever you'll usually be immune to further infection. However, rarely, it is possible to experience recurring episodes.

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