CONDITION

Scarlet fever

Scarlet fever is a bacterial throat infection that causes fever and a rough, red rash.

WHAT IT IS
Group A streptococcal infection with a toxin-related rash

BODY SYSTEM
Throat and skin

MAIN SYMPTOMS
Fever, sore throat, rough rash, strawberry tongue

WHAT CAUSES IT
Group A streptococcal bacterial infection

HOW IT IS DIAGNOSED
Throat swab with rapid testing or culture

MAIN TREATMENT
Antibiotics and symptom relief

CAN IT BE CURED?
Yes - antibiotics clear the infection

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or signs of severe illness

LONG-TERM OUTLOOK
Full recovery is usual with treatment

Overview

Scarlet fever is an infection caused by group A Streptococcus bacteria, often called group A strep. These bacteria commonly cause strep throat. In scarlet fever, the bacteria also produce a toxin that leads to a distinctive rash.

The condition mainly affects children aged 5 to 15, but younger children and adults can also develop it. It spreads easily between people in close contact, including within households, schools, and childcare settings.

Scarlet fever was once linked with serious illness. Antibiotic treatment has made complications much less common. Treatment also shortens the time a person can spread the bacteria and helps prevent some later complications.

A rough, sandpaper-like rash is an important clue, but other infections and skin conditions can

look similar. A healthcare professional may use a throat swab to check whether group A strep is present.

Symptoms

Symptoms usually begin about two to five days after exposure to the bacteria. They often start with a sore throat and fever.

Common symptoms include:

The rash may appear one or two days after the first symptoms, although it can appear earlier or several days later. It often begins on the chest, stomach, groin, or under the arms before spreading to other areas. It usually does not affect the palms or soles.

The rash may look bright red on lighter skin. On brown or black skin, the change in colour may be harder to see, but the raised, rough texture can still be felt. It may be especially noticeable in skin folds, such as the armpits, elbows, and groin. These deeper red lines in skin creases are sometimes called Pastia's lines.

The face may look flushed while the area around the mouth stays pale. Early in the illness, the tongue can have a white coating with swollen red bumps. As the coating clears, the tongue may become bright red.

The rash usually fades within about a week. Skin may then peel around the fingers, toes, or groin. Peeling can continue for several weeks and does not usually mean that the infection is getting worse.

- A painful, red throat
- Fever and chills
- Swollen glands in the neck
- Headache or body aches
- Nausea, vomiting, or stomach pain, especially in children
- A rough rash that feels like fine sandpaper
- A red, bumpy "strawberry tongue"

Causes and risk factors

Scarlet fever is caused by strains of group A strep that release particular toxins. The immune system's response to these toxins produces the rash. Most cases begin with a throat infection,

although group A strep skin infections can occasionally be involved.

The bacteria spread through droplets and saliva released when an infected person talks, coughs, or sneezes. They can also spread through direct contact with infected mucus, saliva, or skin sores. Sharing cups or cutlery may allow close contact with these fluids.

Risk is higher with:

Scarlet fever is more common during colder months in temperate climates, although it can occur at any time. Having it once does not guarantee lifelong protection because different strains and toxins can cause later infections.

- Close contact with someone who has scarlet fever or strep throat
- Spending time in crowded settings, such as schools or childcare centres
- Being between 5 and 15 years old
- Living in the same household as an infected person

Diagnosis

A healthcare professional will ask about the symptoms and examine the throat, tongue, glands, and rash. The combination of a sore throat, fever, strawberry tongue, and rough rash may strongly suggest scarlet fever, but an examination alone cannot always separate it from viral infections.

A throat swab can test for group A strep. A rapid antigen test may provide results quickly. A throat culture takes longer but can find infections missed by some rapid tests.

When a rapid test is negative, whether a culture is also needed depends on age and local guidance. Follow-up cultures are more often recommended for children than adults because children have a higher risk of acute rheumatic fever, a rare immune complication.

Blood tests that measure antibodies to strep are not normally used to diagnose the current throat infection. These antibodies take time to rise and are more useful when investigating certain later complications.

Treatment and management

Scarlet fever is treated with antibiotics like amoxicillin or doxycycline . Penicillin or amoxicillin is commonly used, while other antibiotics may be chosen for someone with a penicillin allergy or for other medical reasons. The choice and length of treatment should follow the

prescription and local clinical guidance.

Antibiotics can:

Complete the prescribed course, even if symptoms improve sooner. Contact the prescriber if doses cannot be kept down, a dose is missed, or a possible medicine reaction develops.

Rest and regular fluids can help during recovery. Cool drinks and soft foods may be easier to swallow. Paracetamol, also called acetaminophen, or ibuprofen may help with fever and throat pain when suitable for the person taking it. Follow the label or professional advice, particularly for children or people with other health conditions. Aspirin should not be given to children or teenagers with a fever because of the risk of Reye's syndrome, a rare but serious condition.

People can usually return to school, childcare, or work once they have taken appropriate antibiotics for at least 24 hours and no longer have a fever. Local public health advice may differ, especially during an outbreak.

- Shorten the illness
- Reduce spread to other people
- Lower the risk of some complications
- Help prevent acute rheumatic fever

Complications

Most people recover without complications, particularly when antibiotics are started promptly. Complications can happen if the infection spreads or if the immune system reacts after the infection.

Nearby infections can include:

Group A strep can rarely enter deeper tissues or the bloodstream. This is called invasive group A strep infection and can cause severe illness, including sepsis.

Immune complications can appear after the original symptoms have improved. Acute rheumatic fever can affect the joints, heart, skin, or nervous system. Post-streptococcal glomerulonephritis is inflammation in the kidneys that may cause dark urine, puffiness, or reduced urination. Antibiotics help prevent acute rheumatic fever, but they do not reliably prevent post-streptococcal kidney inflammation.

New joint pain, chest symptoms, unusual movements, swelling, or dark urine in the weeks after scarlet fever needs medical assessment.

- An ear or sinus infection

- A collection of pus near a tonsil, called a peritonsillar abscess
- Swollen or infected neck glands
- Skin infection

Prevention

There is no vaccine that prevents scarlet fever. Not every exposure can be avoided, particularly within families or schools, but basic infection-control steps reduce spread.

Wash hands with soap and water, especially after coughing, sneezing, or handling used tissues. Cover coughs and sneezes, dispose of tissues promptly, and avoid sharing cups, cutlery, food, or toothbrushes.

Wash used dishes normally with hot, soapy water or in a dishwasher. Routine cleaning of frequently touched surfaces is reasonable; extensive disinfection of the home is not usually needed.

A person taking antibiotics should remain away from school, childcare, or work for the advised period, commonly at least 24 hours after starting treatment and until the fever has gone.

Household contacts do not usually need preventive antibiotics simply because they were exposed. Different advice may apply during an outbreak or when a contact has particular medical risks. Anyone who develops symptoms should seek assessment rather than use another person's antibiotics.

Living with it and what to expect

With appropriate treatment, fever and throat pain often begin to improve within one or two days. The rash may take longer to settle. Peeling can continue after the person otherwise feels well.

Drinking may be uncomfortable at first, so small, frequent amounts can be easier than a full glass. Children may have a reduced appetite for a few days. Fluids are more important than solid food during this short period.

Scarlet fever does not usually become a long-term condition. Once the infection has cleared, most people return to their usual activities without lasting effects. The rash does not normally scar.

Symptoms that are not improving after about 48 hours of antibiotics need follow-up. The diagnosis, the antibiotic, or another possible infection may need to be reviewed. Repeated

episodes can occur because a previous infection does not protect against every toxin-producing strain of group A strep.

Later complications are uncommon, but watch for new symptoms during the following weeks. Dark or reduced urine, swelling around the eyes or ankles, painful swollen joints, chest pain, or unusual uncontrolled movements should not be treated as part of routine recovery.

When to get medical help

Arrange prompt medical assessment for a fever, sore throat, and sandpaper-like rash. Assessment is particularly important for a child, someone who is pregnant, or a person with a weakened immune system.

Seek same-day medical advice if:

Call emergency services for:

A mild peeling rash during recovery is usually not urgent. It can be discussed during routine follow-up if it is painful, widespread, or not settling.

- Fluids are difficult to swallow or signs of dehydration develop
- Fever or other symptoms worsen or do not improve after 48 hours of antibiotics
- There is increasing neck swelling or severe one-sided throat pain
- A medicine causes a new rash, vomiting, or other suspected reaction
- Dark urine, reduced urination, facial swelling, or joint swelling develops later
- Difficulty breathing, noisy breathing, or blue or grey lips
- Severe trouble swallowing with drooling or inability to swallow saliva
- Confusion, extreme drowsiness, or difficulty waking
- A rapidly worsening condition with severe pain, cold or mottled skin, or fainting
- Swelling of the face or tongue, wheezing, or collapse after medicine

Common questions

Is scarlet fever the same as strep throat?

They are closely related. Both are caused by group A strep, but scarlet fever includes a toxin-related rash. Many people with scarlet fever also have the usual symptoms of strep throat.

Can adults get scarlet fever?

Yes. It is more common in school-aged children, but adults can develop it. Adults who live or work closely with children may have more opportunities for exposure.

How long is scarlet fever contagious?

After appropriate antibiotics begin, the risk of spreading the bacteria drops quickly. People are commonly advised to stay home until they have taken antibiotics for at least 24 hours and no longer have a fever. Without treatment, they may remain contagious for much longer.

Can you get scarlet fever twice?

Yes. Immunity after one episode does not protect against every group A strep strain or toxin. A new fever, sore throat, and rash should be assessed even if scarlet fever has occurred before.

Does the scarlet fever rash itch?

It can itch, although its rough texture is often more noticeable than itching. Ask a pharmacist or healthcare professional about suitable relief if itching is troublesome. Avoid scratching because broken skin can become infected.

What does scarlet fever look like on darker skin?

Redness may be subtle or difficult to see. The rash can be easier to identify by its fine, rough texture and may stand out more in the armpits, elbows, or groin. The strawberry tongue and other symptoms remain useful clues, but testing may be needed to confirm the infection.

Sources

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