

# Scarlet Fever

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# What is Scarlet Fever?

- 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 where they can live without causing any problems.
- Under some circumstances GAS can cause non-invasive infections such as pharyngitis, impetigo and scarlet fever.
- On rare occasions they can cause severe disease, including streptococcal toxic shock syndrome, necrotising fasciitis, and invasive GAS (iGAS) infection.

# Signs and symptoms of Scarlet Fever

- 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 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.

- The scarlet fever rash occurs when the streptococcal bacteria release poisons (toxins) that make the skin go red.
- The toxins get into the blood from the infected throat. Scarlet fever is most common in children aged under 10 years, the most common age being 4 years.



# Diagnosing Scarlet Fever

- The GP can diagnose by examining the rash and asking about any other symptoms ie sore throat.
- Scarlet fever can also be diagnosed from swabs taken from the back of the throat.
- Child may also have a strawberry tongue



# How does scarlet fever spread?

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

# Complications of Scarlet Fever

Most cases of scarlet fever don't cause complications, particularly if the condition is properly treated. There is a small risk of:

- Ear infection
- Throat abscess
- Sinusitis
- Pneumonia

**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)

# Outbreaks of Scarlet Fever

An outbreak of scarlet fever is defined as two or more probable or confirmed scarlet fever cases attending the same school / nursery notified within ten days of each other with a link between cases

i.e they are in the same class or year group.



# Advice for vulnerable children and adults

The following are at increased risk of developing invasive group a step.

- Individuals who are immunocompromised due to underlying medical conditions.
- Women in the puerperal period.
- Schools, nurseries and child minders will normally have been made aware of children or staff members who are vulnerable to infections for the reasons outlined above.

# Scarlet Fever and Chicken Pox

- Evidence suggests that chickenpox is the most common risk factor for invasive group A strep disease in children.
- A study conducted in England show that by the age of five 65% of children will already have had chickenpox, therefore the majority of children susceptible to chickenpox are in the younger age groups.
- An analysis of chickenpox mortality data from 2001 to 2007 in England and Wales reported five deaths where co-infection or secondary infection with GAS was a risk factor and all of these were in children under five years

# Treating scarlet fever

- Nowadays most cases tend to be mild.
- Scarlet Fever can be treated with antibiotics, such as penicillin or amoxicillin.
- Antibiotics must be taken for 10 days, even though most children recover after four to five days.
- Without antibiotic treatment, the child will be infectious for 1-2 weeks after symptoms appear.

# Preventing Scarlet Fever spreading

- 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.