

# GROUP A STREPTOCOCCAL DISEASE

## What is group A streptococcal disease?

**Group A streptococcal (GAS) disease describes a group of infections that are caused by the bacteria *Streptococcus pyogenes*, group A (also known as *Streptococcus A*). These bacteria are commonly found on the skin and in the throat of healthy individuals.**

The infections typically begin in the throat (strep throat) or skin (impetigo). Invasive GAS (iGAS) infection occurs when the bacteria enter sterile parts of the body such as blood, deep tissues or the lining of the brain. The most common clinical presentations for iGAS are skin or soft tissue infections, pneumonia, streptococcal toxic shock syndrome (STSS) and necrotizing fasciitis (NF), also known as flesh-eating disease.

## What are the signs and symptoms of GAS disease?

### **Non-invasive and non-severe GAS infection signs and symptoms (not reportable to public health):**

- Strep throat: Fever, sore throat, tender neck glands and swollen tonsils that may have pus on them. Ear infections may also develop
- Impetigo: Blisters on the skin that can break and leak yellow-coloured fluid. Blisters then dry and crust over

### **Invasive and/or severe GAS disease signs and symptoms (reportable to public health):**

- Necrotizing fasciitis (flesh-eating disease): Fever, severe pain and swelling, and/or redness of tissue
- Streptococcal toxic shock syndrome: Fever, dizziness, confusion, sudden severe pain, often in a limb or muscle, nausea, vomiting, low blood pressure and/or a red rash over large areas of the body
- Septicaemia (blood poisoning): Fever, chills, headache, generally not feeling well, pale skin, lack of energy, rapid breathing and/or increased heart rate

Progression of invasive GAS illness can be very rapid, and it is important to seek medical attention immediately. Prompt diagnosis, aggressive management and early use of appropriate antibiotics are crucial.

## Who is at increased risk of developing invasive GAS following exposure to an individual with invasive GAS?

Although the risk is low, close contacts of people with iGAS may be at increased risk of infection. Close contacts include:

- Household contacts of a case who have spent at least four hours/day on average with the case in the previous seven days
- Non-household persons who share the same bed with the case or had sexual relations with the case
- Persons who have had direct mucous membrane contact with the oral or nasal secretions of a case, such as mouth-to-mouth resuscitation, open mouth kissing or unprotected direct contact with an open skin lesion of the case
- Injection drug users who have shared needles with the case

People with weakened immune systems may also have a higher risk of iGAS including the elderly and individuals with a history of alcohol abuse or injection drug use, post-partum pregnant women, individuals with open wounds and those with chickenpox.

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## How do GAS bacteria spread?

GAS bacteria can spread from person to person, most commonly through droplet spread when an infected individual coughs or sneezes, direct or indirect contact or nasal mucus membranes from respiratory secretions or skin lesions, direct or indirect contact of open and infected skin, and through sharing of contaminated needles.

## How is invasive GAS disease treated?

People with invasive GAS disease are usually hospitalized and treated with antibiotics. For persons with necrotizing fasciitis, early and aggressive surgery is often needed to remove damaged tissue and stop the spread of the disease.

## How can you help prevent the spread of GAS?

There is no vaccine to prevent GAS infections. However, there are many ways to help prevent the spread of GAS:

- Practice good hygiene. Wash with soap and water, or use an alcohol-based hand cleaner
- Cover your mouth and nose with a tissue when you cough or sneeze
- Put your used tissue in the waste basket
- Clean your hands after coughing or sneezing
- If you don't have a tissue, cough or sneeze into your upper sleeve, not your hands
- Do not prepare or handle food for others if you are sick
- If you are sick, stay home until you have completed 24 hours of antibiotic treatment
- Disinfect items that have come in contact with an infected person
- Keep all cuts and wounds clean and watch for possible signs of infection, such as redness, swelling, drainage and pain at the wound site. If there are signs of an infected wound, especially with fever, see a doctor as soon as possible

In consultation with a health care provider, antibiotics are recommended for certain close contacts of severe cases of invasive GAS. York Region Public Health's role with invasive GAS is to investigate cases, conduct contact tracing activities within the community and assess the need for preventive antibiotics. Close contacts of invasive GAS cases are advised to self monitor for signs and symptoms of GAS infection, including fever, for 30 days. If any signs and symptoms of GAS develop, follow up with a health care provider immediately.