

# Group A Streptococcal (GAS) Disease

## Fact Sheet



Maine Center for Disease  
Control and Prevention

An Office of the  
Department of Health and Human Services

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### What is group A streptococcus?

Group A streptococcus is a bacteria often found in the throat and on the skin. People can carry group A streptococci in the throat or on the skin without looking or feeling sick. Most GAS infections cause somewhat mild illnesses such as "strep throat," or impetigo. Rarely, these bacteria can cause severe and even life-threatening diseases.

### How are group A streptococci spread?

GAS is spread through direct contact with mucus from the nose or throat of persons who are infected. It can also be spread through direct contact with infected wounds or sores on the skin. Ill persons, such as those who have strep throat or skin infections, are most likely to spread the infection. People who carry the bacteria but do not have symptoms are much less likely to spread the bacteria. If an ill person is treated with antibiotics for 24 hours or more, they are also less likely to spread the bacteria. However, it is important to complete the entire course of antibiotics as prescribed. It is not likely that household items like plates, cups, or toys spread these bacteria.

### What kinds of illnesses are caused by infection with GAS?

Infection with GAS can result in various symptoms including:

- Mild illness (strep throat or a skin infection such as impetigo)
- Severe illness (blood infection, breakdown of skin, organ failure)

Some people carry GAS in their throat and on their skin without looking or feeling sick.

### What is invasive GAS disease?

Severe, sometimes life-threatening, GAS disease may occur when bacteria get into parts of the body where bacteria usually are not found, such as the blood, muscle, or the lungs. These infections are called "invasive GAS disease." Two of the most severe, but least common forms of invasive GAS disease are necrotizing fasciitis and Streptococcal Toxic Shock Syndrome. Necrotizing fasciitis (sometimes described by the media as "the flesh-eating bacteria") destroys muscles, fat,

and skin tissue. Streptococcal Toxic Shock Syndrome (STSS) causes blood pressure to drop rapidly and organs to fail. STSS is not the same as the "toxic shock syndrome" associated with tampon usage. About 20% of patients with necrotizing fasciitis and more than half of patients with STSS die. About 10%-15% of patients with other forms of invasive GAS disease die.

### How does invasive GAS disease occur?

Invasive GAS infections occur when the bacteria get past the defenses of the person who is infected. This may occur when a person has sores or other breaks in the skin that allow the bacteria to get into the tissue. It may also occur when the person's ability to fight off the infection is decreased because of chronic illness or a weakened immune system. Some strains of GAS are more likely to cause severe disease than others.

### Who is most at risk of getting invasive group A streptococcal disease?

Few people who come in contact with GAS will develop invasive GAS disease. Most people will have a throat or skin infection, and some may have no symptoms at all. Although healthy people can get invasive GAS disease, people with chronic illnesses like cancer, diabetes, and kidney failure, and those who use medications such as steroids have a higher risk of invasive GAS disease.

### What are the early signs and symptoms of necrotizing fasciitis and streptococcal toxic shock syndrome?

Early signs and symptoms of necrotizing fasciitis:

- Fever
- Severe pain and swelling
- Redness at the wound site

Early signs and symptoms of STSS:

- Fever
- Dizziness
- Confusion
- A flat red rash over large areas of the body

### How is invasive group A streptococcal disease treated?

GAS infections can be treated with antibiotics. Early treatment may reduce the risk of death from invasive GAS disease. However, even the best medical care does not prevent death in every case. For those with very severe illness, supportive care in an intensive care unit may be needed. For persons with necrotizing fasciitis, surgery is often needed to remove damaged tissue.

### **What can be done to prevent group A streptococcal infections?**

The spread of all types of GAS infection can be reduced by good hand washing, especially after coughing and sneezing and before preparing foods or eating. Persons with sore throats should be seen by a medical provider who can perform tests to find out if the illness is strep throat. If the test result shows strep throat, the person should stay home from work, school, or day care until 24 hours after taking an antibiotic. All wounds should be kept clean and watched for possible signs of infection. Possible signs of infection include: redness, swelling, drainage, and pain at the wound site. A person with signs of an infected wound, especially if fever occurs, should seek medical care. It is not necessary for all persons exposed to someone with an invasive GAS infection (i.e. necrotizing fasciitis or streptococcal toxic shock syndrome) to receive antibiotics to prevent infection. However, in certain circumstances, antibiotics may be appropriate. That decision should be made after speaking with your medical provider.

### **How common is invasive GAS disease?**

In Maine, only cases of invasive or severe GAS infections are reported to the state. For specific information on the number of invasive GAS infections reported in Maine, please visit the Maine CDC website:

<http://www.maine.gov/dhhs/boh/ddc/epi/airborne/group-a.shtml> and refer to the Infectious Disease Epidemiology Program Documents.

### **Where can I get more information?**

For more information contact your healthcare provider or local health center. You can also contact the Maine Center for Disease Control and Prevention by calling 1-800-821-5821. The federal Centers for Disease Control and Prevention website - <http://www.cdc.gov> - is another excellent source of health information.