

Group A Streptococcus: Commonly Asked Questions

What is Group A Streptococcus (GAS)?

Group A Streptococci are bacteria commonly found in the throat and on the skin. People may carry GAS in the throat or on the skin and not become ill.

How are Group A Streptococci Spread?

These bacteria are spread by direct contact with discharges from the nose and throat of infected people or by contact with infected wounds or sores on the skin. The risk of spreading the infection is highest when a person is ill, such as when people have "strep throat" or an infected wound. People who carry the bacteria but have no symptoms are much less able to spread the bacteria. Treatment of an infected person with an appropriate antibiotic for 24 hours or longer removes their ability to spread the bacteria. However, it is important that a person take all of the antibiotic as prescribed. Household items like plates, cups, toys, etc., do not play a major role in disease spread.

What Kind of Illnesses are Caused by Group A Streptococcal Infection?

Infection with GAS can result in no illness, mild illness like strep throat or impetigo, or severe or life-threatening illness. Severe GAS illness can become "invasive," that is, the bacteria has reached parts of the body where bacteria are not usually found such as the blood, deep muscle and fat tissue, or the lungs. Two of the most severe, but least common, forms of invasive GAS disease are called "necrotizing fasciitis" and "streptococcal toxic shock syndrome" (STSS). Necrotizing fasciitis is a destructive infection of muscle and fat tissue, and occasionally described by the media as the "flesh eating" bacteria. STSS is a rapidly progressing infection that causes shock and injury to internal organs such as the liver, kidneys and lungs. About 20% of people with necrotizing fasciitis, and 60% of people with STSS die. About 10-15% of people with other forms of invasive GAS disease die.

How Common is Invasive Group A Streptococcal Disease?

It is estimated that about 10,000-15,000 cases of invasive GAS disease occur in the U.S. each year resulting in over 2,000 deaths. CDC estimates there are 500-1,500 cases of necrotizing fasciitis and 2,000-3,000 cases of STSS each year in the United States. In contrast, there are several million cases of the milder GAS illnesses, strep throat, and impetigo, each year.

Why Does Invasive Group A Streptococcal Disease Occur?

Invasive GAS infections occur when the bacteria gets 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. Health conditions that decrease a person's immunity to infection also make invasive disease more likely. In addition, there are certain types of GAS that are more likely to cause severe disease than others.

Who is Most at Risk of Invasive Group A Streptococcal Disease?

Few people who come in contact with GAS will develop invasive GAS disease; most will have a mild throat or skin infection and some may have no symptoms whatsoever. Although healthy people can get invasive GAS disease, people with chronic illnesses like cancer or diabetes, those on kidney dialysis, and those who use medications such as steroids are at higher risk. In addition, breaks in the skin like cuts, wounds, or chickenpox may provide an opportunity for the bacteria to enter the body.

How is Invasive Group A Streptococcal Disease Treated?

GAS infections can be treated with many different antibiotics. Early treatment may reduce the risk of death, although it unfortunately may not prevent death in every case.

What Can be Done to Help Prevent Invasive Group A Streptococcal Infections?

The spread of GAS infection may be reduced by good handwashing, especially after coughing and sneezing, before preparing foods, and before eating. Persons with sore throats should be seen by a doctor who can perform tests to find out whether it is strep throat. Persons with strep throat should stay home from work, school, or day care until 24 hours or more after taking an antibiotic. All wounds should be kept clean and watched for possible signs of infection including increasing redness, swelling, drainage, and pain at the wound site. A person with signs of an infected wound, especially if fever develops, should seek medical care.



What are the Early Signs and Symptoms of Necrotizing Fasciitis and Streptococcal Toxic Shock Syndrome?

Early signs and symptoms of necrotizing fasciitis include fever, severe pain and swelling, and redness at the wound site. Early signs and symptoms of STSS may include fever, dizziness, confusion, diffuse red rash, and abdominal pain.

If you have questions about Group A Strep, please talk with your health care provider.

Adapted from: Centers for Disease Control and Prevention, Division of Bacterial and Mycotic Diseases, Childhood & Respiratory Diseases Branch