

FACT SHEET

GROUP A *STREPTOCOCCUS*

For Health Professionals

What is group A Streptococcus?

Group A *Streptococcus* (GAS) is a bacteria commonly found in the throat and on the skin. Group A streptococci can be present in the throat or on the skin and without causing symptoms, but they may cause illnesses that range from mild to life threatening.

The majority of GAS infections are relatively mild, such as "strep throat" or impetigo. Occasionally, however, these bacteria can reach parts of the body where bacteria are not usually found, such as the blood, deep muscle and fat tissue, or the lungs, and cause invasive infections. 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," is a destructive infection of muscle and fat tissue. Streptococcal toxic shock syndrome is a rapidly advancing infection that causes shock and injury to internal organs such as the kidneys, liver, and lungs.

How are group A streptococci spread?

Group A streptococci are spread by direct contact with drainage from the nose or throat of infected persons 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 with "strep throat" or an infected wound. Persons who carry the bacteria but have no symptoms are much less contagious. Treatment of infected persons with an antibiotic that works for 24 hours or longer generally stops their ability to spread the bacteria. Household items like plates, cups, or toys most likely do not play a big role in disease transmission.

Why does invasive group A streptococcal disease occur?

Invasive group A streptococcal 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. Health conditions that lessen a person's ability to fight infection also make invasive disease more likely.

How common is invasive group A streptococcal disease?

Approximately 9,000 to 11,000 cases of invasive GAS disease occur in the United States each year. Of these, about 6-7% were streptococcal toxic shock syndrome or necrotizing fasciitis. In contrast, several million persons get "strep throat" and impetigo annually.

Approximately 1,000 – 1,800 deaths occur annually due invasive GAS disease; 20% of those patients with necrotizing fasciitis, and more than half of the patients with streptococcal toxic shock syndrome.

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; many will have a routine throat or skin infection, and most will have no symptoms at all. Although healthy people can get invasive GAS disease, those with chronic illnesses like cancer, diabetes, and kidney disease requiring dialysis, and those who use medications such as steroids are at higher risk. Breaks in the skin, like cuts, wounds, or chickenpox lesions may provide an opportunity for the bacteria to enter the body.

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 streptococcal toxic shock syndrome may include fever, dizziness, confusion, and a flat red rash over large areas of the body. Unfortunately, no sign or symptom is unique only to streptococcal toxic shock syndrome, making it sometimes difficult to differentiate from other illnesses.

How is group A streptococcal disease treated?

GAS infections can be treated with many different antibiotics. Early treatment may reduce the risk of death in cases of invasive disease, although even the correct therapy does not prevent death in every case. It is always important to complete the full course of antibiotics.

What can be done to help prevent invasive group A streptococcal infections?

The spread of all types of GAS infections may be reduced by good hand-washing, 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 the cause is strep; if so, the person should stay home from work, school, or child care until 24 hours or more after starting antibiotic treatment. All wounds should be kept clean, and watched for possible signs of infection: increasing redness, swelling, drainage, and pain at the wound site. A person with signs of an infected wound (swelling, warmth or redness at the site), especially if fever develops, should seek medical care.