Quick Facts

About… Group A Streptococcal (GAS) Disease (invasive infections)

What is Group A Streptococcal (GAS) disease?

Streptococcus pyogenes, or group A strep, bacteria cause many types of infections, most commonly throat infections (strep throat) or superficial skin infections (impetigo). Scarlet fever is an infection also caused by strains of group A streptococcal bacteria that produce a toxin (poison). Rarely, these bacteria can enter areas of the body where bacteria are normally not found, such as the blood, muscle (necrotizing faciitis), or fluid surrounding the brain and spinal cord (meningitis). When bacteria enter these areas, a severe, life-threatening infection ("invasive disease") can develop. This is not a common infection, around 135 cases are reported each year in the state of Indiana.

How is GAS spread?

GAS bacteria are commonly found in the throat and on the skin. These bacteria are spread through direct contact with the secretions from the nose and throat of persons who are sick as well as by contact with an infected person's hands or with fluids oozing out of wounds or sores in the skin. Healthy people can also carry the bacteria; however, they do not generally spread bacteria to others. GAS bacteria spread more easily in crowded settings, such as dormitories, barracks, child-care centers, or correctional facilities. The bacteria are not spread through contact with infected surfaces.

Who is at risk for getting invasive GAS disease?

Very few people who come in contact with GAS will actually develop invasive GAS disease. Although healthy people can get invasive GAS disease, people with chronic illnesses, such as diabetes, cancer or lung disease or those who take steroid therapy have a higher risk of developing an invasive infection. Individuals with chickenpox or other skin infections are also at increased risk for severe group A strep infections.

What are the signs of being sick with severe GAS disease?

- Necrotizing faciitis (sometimes called "flesh-eating bacteria") is an infection that destroys muscles, fat, and skin tissue. This can happen when GAS bacteria enter the muscle through an open wound. The skin and surrounding muslces become red, swollen and painful with fluid-filled blisters on the skin. The person will also run a high fever.
- Streptococcal Toxic Shock Syndrome (STSS) is an infection that causes vital organs, such as the kidney, lungs, and liver, to shut down because of toxins produced by the bacteria. Symptoms can include fever, headache, vomiting, muscle aches, confusion, a rash that peels, breathing problems, rapid

decrease in blood pressure, and, if the skin is infected, severe pain at the infected site. STSS is not the same as "toxic shock syndrome," which is frequently associated with tampon usage.

- Streptococcal bacteremia occurs when GAS infects the bloodstream. Bacteremia is an uncommon complication which usually follows strep throat or skin infections from GAS. Symptoms can include fever, low blood pressure, fatigue, and muscle weakness.

How do I know if I have GAS?

If you have any of the above symptoms, it is important to seek medical attention immediately. Your health care provider may collect blood or samples from other sites of infection such as wounds or sores on the skin to see if group A strep bacteria are present. Test results (a bacterial culture) will not be available for at least 24 hours following the test.

How GAS be treated?

GAS infections can be treated with many different types of antibiotics, and early treatment may reduce the risk of complications or death from invasive GAS disease. A 24-hour course of antibiotic therapy reduces a person's likelihood of spreading the bacteria; however, it is important to take the full course of therapy to eliminate the infection. Supportive care in an intensive care unit may be necessary for those with severe infection. For persons with necrotizing faciitis, surgery is necessary to remove damaged tissue and stop the spread of infection.

How is GAS disease prevented?

GAS infection can be reduced by good personal hygiene, including proper hand washing technique. It is important to wash hands regularly, especially after coughing or sneezing, and before and after caring for a sick person. Use an alcohol-based hand sanitizer if soap and water is not available. Promptly discard used tissues. All wounds should be kept clean and watched for signs of redness, swelling, drainage, and pain at the wound site. Open wounds, especially with drainage, should be covered with a waterproof bandage. A person with signs of an infected wound, especially if fever is involved, should seek medical care right away. Health care providers may recommend that people who are exposed to someone with invasive GAS take antibiotics to help prevent infection.

Is there a vaccine that can prevent this disease?

No vaccine is currently available to prevent GAS disease.

All information presented is intended for public use. For more information, please refer to:

Centers for Disease Control and Prevention (CDC) website on GAS:

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/groupastreptococcal_g.htm

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