Indiana State Department of Health
Epidemiology Resource Center

Quick Facts

About...Group A Streptococcal (GAS) Infections (Invasive Disease)

What is Group A Streptococcal (GAS) Disease?

Group A *streptococcus* (GAS) causes many types of infections, most commonly throat infections (strep throat), skin infections (impetigo), or scarlet fever. Rarely, these bacteria enter the blood, muscle, fluid surrounding the brain and spinal cord, or other parts of the body where bacteria are not usually present. When bacteria enter these areas, a severe, life-threatening infection ("invasive disease") can develop. This is not a common infection; approximately 200 to 250 cases are reported each year in the state of Indiana.

What are the symptoms of GAS disease?

- **Necrotizing fasciitis** (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 muscles become red, swollen and painful with fluid-filled blisters on the skin.

- **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.

- **Streptococcal bacteremia** occurs when GAS infects the bloodstream. Bacteremia is a common complication which may follow skin infections from GAS. Symptoms can include fever, low blood pressure, fatigue, and muscle weakness.

How is GAS spread?

GAS bacteria are spread through contact with the saliva or nose and throat droplets of infected persons or with fluids oozing out of wounds or sores in the skin. GAS bacteria spread more easily in crowded settings, such as dormitories, barracks, childcare centers, or jails. The bacteria are not commonly spread through contact with contaminated surfaces.

Who is at risk for getting 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 GAS infections.

How do I know if I have GAS disease?

If you have any of the symptoms listed above, it is important to seek medical attention immediately.

How is GAS disease treated?

Early treatment may reduce the risk of complications or death from invasive GAS disease. Admission to an intensive care unit may be necessary for those with severe infection. For persons with necrotizing fasciitis, 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. 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.

No vaccine is currently available to prevent GAS disease.

All information presented is intended for public use. For more information, please refer to:
- https://www.cdc.gov/groupastrep/index.html
  https://www.cdc.gov/Features/NecrotizingFasciitis/

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