



Colorado Department
of Public Health
and Environment

Group A Streptococcal Infections in Long-Term Care Facilities Frequently Asked Questions (FAQs)

What is group A *Streptococcus* (GAS)?

Group A *Streptococcus* is a bacterium often found in the throat and on the skin. People may carry group A streptococci in the throat or on the skin and have no symptoms of illness. Most GAS infections are relatively mild illnesses such as "strep throat," or impetigo. 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 termed "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 (occasionally described by the media as "the flesh-eating bacteria") is a rapidly progressive disease which destroys muscles, fat, and skin tissue. Streptococcal toxic shock syndrome (STSS) results in a rapid drop in blood pressure and multi-organ failure (e.g., kidney, liver, lungs).

What are the symptoms of group A streptococcal disease?

Pharyngitis is the most common manifestation, with symptoms of sore throat and fever. Skin and wound infections can develop with redness, swelling, drainage, and pain. Impetigo is a skin infection with crusted blisters. Early signs and symptoms of necrotizing fasciitis include severe pain and swelling, often rapidly increasing, fever, and redness at a wound site. Early signs and symptoms of STSS include fever, abrupt onset of generalized or localized severe pain, dizziness, influenza-like syndrome, confusion, and a flat red rash over large areas of the body (only occurs in 10% of cases).

How are group A streptococci spread?

These bacteria are spread through direct contact with respiratory secretions from the nose or throat of persons who are infected or through contact with infected wounds or sores on the skin. Symptomatic persons are most likely to spread the infection. Persons who carry the bacteria but have no symptoms are much less contagious. Treating an infected person with an antibiotic for 24 hours or longer generally eliminates their ability to spread the bacteria. However, to completely cure the infection and prevent complications, it is important to complete the entire course of antibiotics as prescribed.

How common is invasive group A streptococcal disease?

About 9,000-11,500 cases of invasive GAS disease occur each year in the United States, resulting in 1,000-1,800 deaths annually. In contrast, there are several million cases of strep throat and impetigo each year.

Why does invasive group A streptococcal 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, or when the person's ability to fight off the infection is decreased because of chronic illness or an illness that affects the immune system. Also, some virulent 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 chronic heart or lung disease, and those who use medications such as steroids have a higher risk. Persons with skin lesions (such as cuts, chicken pox, and surgical wounds), the elderly, and adults with a history of alcohol abuse or injection drug use also have a higher risk for disease. Residents of long-term care facilities (LTCFs) are at increased risk of invasive GAS disease due to underlying medical conditions or advanced age.

How can long-term care facilities prevent the spread of group A streptococcal disease from staff to residents?

Healthcare workers should perform hand hygiene before and after caring for residents, after coughing or sneezing, and before preparing food, eating, or feeding residents. Staff should stay home when they are sick to prevent the spread of illness to others. Employees diagnosed with GAS should stay home from work for at least 24 hours after the first dose of antibiotic has been taken. It is important to complete the entire course of antibiotics as prescribed.

What should be done when a case of group A streptococcal disease is identified in a resident of a long-term care facility?

Even a single case of invasive GAS disease should be investigated because of the possibility of unrecognized GAS transmission among staff members and residents. A single case of non-invasive GAS disease (such as a wound infection) in a LTCF resident should also prompt the following interventions:

Hand hygiene

- Review hand hygiene practices of staff and provide education to staff, residents, and visitors on proper hand hygiene.
- For more information on hand hygiene, see www.cdc.gov/handhygiene.

Infection control measures

- Per standard precautions, gloves should be worn if contact with secretions or other body fluids might occur. For more on standard precautions, see www.cdc.gov/hicpac/2007IP/2007ip_part3.html.
- Residents with a positive culture for GAS should be confined to their rooms for 24 hours after the first dose of antibiotics has been given.
- For residents with respiratory infections with GAS, including pharyngitis, droplet precautions should be used for 24 hours after the first dose of antibiotics.
- For residents with skin lesions or wounds infected with GAS, contact precautions should be used for 24 hours after the first dose of antibiotics.
- Review standard and transmission-based precautions and wound care practices, and provide education to staff.

Sick leave for employees

- Institute employee sick leave policies that discourage employees from working while ill.
- Educate staff on sick leave policies and the importance of adherence to these policies.
- Employees that have been diagnosed with GAS should not come to work for at least 24 hours after the first dose of antibiotic has been taken.

Identify additional cases

- Educate staff on recognition of GAS infections, including pharyngitis, skin and wound infections including impetigo, and more severe infections such as necrotizing fasciitis and streptococcal toxic shock syndrome.
- Perform active surveillance for GAS infections including pharyngitis and skin infections among both residents and staff. Maintain a low threshold for culturing.
- Perform retrospective review of medical records of recent illnesses, transfers to acute care facilities, and deaths, and perform review of microbiology records for the previous 4-6 months.
- Follow up with hospitals when residents are hospitalized to rule out GAS infection in these residents.

Notify public health and other facilities

- Invasive GAS disease is reportable in the Denver metropolitan area. Outbreaks of any condition, including GAS, are reportable state-wide. An outbreak of GAS is defined as 2 or more cases of GAS disease within a few months. Single cases of GAS or outbreaks of GAS should be reported to CDPHE or your local public health agency. If additional cases are detected after surveillance measures are instituted, please notify CDPHE at 303-692-2700. Specific recommendations will depend on the nature of the outbreak. Storage of GAS isolates for 4-6 months might be recommended for strain and molecular characterization.
- Notify other facilities that will be receiving your patients that your facility has identified a case of GAS.
- Notify other facilities that have recently transferred a patient with GAS to your facility of the diagnosis.

What additional measures should be taken when an outbreak (two or more cases) of group A streptococcal disease is identified in a long-term care facility?

Additional infection control measures

- Cohorting of patients can be considered, (e.g. patients with GAS separate from those who are immunocompromised).
- Consider halting new admissions to the facility.
- The decision to administer antibiotic prophylaxis should be made in consultation with public health.

Screening

- The identification of potential carriers by screening close contacts of patients and symptomatic healthcare workers should be strongly considered. If a resident has had a particularly severe infection (toxic shock syndrome or necrotizing fasciitis) or the resident population is particularly frail (e.g. many patients on ventilators, population of immunocompromised patients), screening can prevent further severe infections. This decision should be made in consultation with public health.