



GROUP A *STREPTOCOCCUS*

Cause/Epidemiology

Streptococci are gram- positive cocci arranged in chains of cells. Group A *Streptococcus* (*Streptococcus pyogenes*) are beta hemolytic and some sero-types are invasive and virulent.

Group A *Streptococcus* (GAS) disease has come under increased attention in the last few years. Recent reports indicate an apparent increase in cases and severity. Cases have increased in otherwise healthy individuals and have been associated with severe outcomes such as death and limb loss.

These infections are caused by the bacteria Group A *Streptococcus*

Clinical Presentation

Group A *Streptococcus* infections include

- Sore throat
- Otitis media
- Skin infections- impetigo
- Scarlet fever
- Puerperal fever
- Pneumonia
- Septicemia
- Wound infections
- Cellulitis

Invasive Group A Streptococcal diseases, which include Necrotizing Fasciitis (NF) Necrotizing Myositis (NM) and Streptococcal Toxic Shock Syndrome (STSS), are the more serious infections caused by Group A *Streptococcus*. Necrotizing Fasciitis and Necrotizing Myositis are less severe infections with a mortality rate of approximately 20%. They may progress to Streptococcal Toxic Shock Syndrome, which has a mortality rate of up to 80%. Survivors may be left with severe long-term disability.

Symptoms at the onset of these infections may be vague and could include

- Pain of unusual severity (out of proportion to clinical findings)
- Swelling
- Fever, chills
- Flu-like symptoms
- Generalized muscle aches
- Generalized macular rash



- Bullae (a blister more than 5 mm (about 3/16 inch) in diameter with thin walls that is full of fluid)
- Nausea, vomiting or diarrhea
- Malaise
- Joint pain

Complications of invasive Group A *Streptococcus* infections include:

- Hypotension
- Acute respiratory distress syndrome (ARDS)
- Renal impairment
- Rapid onset of shock and multi-organ failure
- Toxic shock syndrome
- Soft tissue invasion, pneumonia, septic arthritis, primary bacteremia

A history of minor injury, blunt or penetrating trauma, surgery and breaks in the skin may be noted in cases of invasive GAS disease. The development of invasive GAS disease depends on the presence of specific strains that might be more virulent and underlying illnesses.

Incubation Period

The incubation period is usually short, 1 to 3 days and rarely longer.

Transmission

Transmission is through direct or indirect contact, or droplet spread depending on the infection.

Pneumonia, pharyngitis and scarlet fever are spread by direct contact with respiratory droplets and discharge from nose and throat of infected or colonized persons. Individuals with Group A *Streptococcus* pneumonia are infectious until 24 hours after effective antibiotic therapy. Individuals with pharyngitis and scarlet fever can be infectious for 10-21 days. Persons with untreated streptococcal pharyngitis may carry the organism in the pharynx for weeks or months.

Wound and skin infections, fasciitis, myositis, endometritis are spread by direct or indirect contact with skin exudates, drainage secretions. Wound and skin infections such as cellulitis, necrotizing fasciitis, endometritis are infectious as long as bacteria are in the exudate/drainage.



Infection Prevention & Control Practices

Minor Wounds (Drainage is contained by dressing)

Erysipelas, Necrotizing Fasciitis

Follow Routine Practices for caring for a resident with Erysipelas or Necrotizing Fasciitis caused by Group A *Streptococcus*

Refer to the Routine Practices section 4 and/or the Routine Practices policy # 90.00.060 for specific information

Major Wound (Drainage is not contained by dressing)

Erysipelas, Necrotizing Fasciitis

Implement Contact Precautions for a resident with Erysipelas or Necrotizing Fasciitis caused by Group A *Streptococcus*. Refer to the Management of Communicable Diseases in Personal Care Homes Table for specific disease/microorganism information. Refer to Contact Precautions in the Additional Precautions section 5.

Respiratory

Follow Routine Practices for caring for an adult with a respiratory infection caused by Group A *Streptococcus*.

Refer to the Routine Practices section 4 and/or the Routine Practices policy # 90.00.060 for specific information.

Implement Droplet Precautions for a child with a respiratory infection caused by Group A *Streptococcus*. Refer to the Management of Communicable Diseases in Personal Care Homes Table for specific disease/microorganism information. Refer to Droplet Precautions in the Additional Precautions section 5.

Occupational Health

Definition of Occupational Exposure

A healthcare worker who has had droplet, direct, or indirect contact of oral or nasal mucous membranes, or direct contact of non-intact skin with infectious respiratory or wound secretions from an infectious person with invasive disease during the period of communicability (from within 7 days



before the onset of GAS until completion of 24 hours of effective antibiotic therapy).

A Healthcare Worker Exposed to GAS

- Exposed healthcare workers shall contact Occupational Health/designate for clinical management
- No modifications to work practices or work restrictions

A Healthcare Worker Symptomatic or Infected with GAS

- Physician confirmed diagnosis
- Healthcare workers shall contact Occupational Health/designate for clinical management
- Inform Infection Prevention & Control immediately if suspected or confirmed case
- Healthcare workers shall be excluded from work until completion of 24 hours of effective antibiotic therapy