Group A Streptococcal (GAS)

WHAT IS GAS INFECTION & HOW IS IT SPREAD?

Group A Streptococcal (GAS) disease is caused by bacteria that spread person-to-person through direct contact with nose, throat, wound secretions, or respiratory droplets. This bacteria can be found in the nose and throat of about 5-10% of healthy children and 1% of healthy adults who are asymptomatic carriers. Non-invasive GAS infections include strep throat, scarlet fever, impetigo and ear infections. These infections are less severe than invasive GAS infections; however, they are more common and can spread easily between individuals.

WHEN DOES GAS INFECTION BECOME INVASIVE?

In rare cases, GAS bacteria may become "invasive" (known as invasive Group A Streptococcal disease or iGAS) when they enter sterile sites of the body. Examples of these sites may include the bloodstream, deep muscle tissues, and lungs. This invasion can happen suddenly and result in severe, life-threatening illnesses. iGAS infections are more severe than non-invasive GAS infections and may result in serious conditions such as Streptococcal toxic shock syndrome and necrotizing fasciitis.

What are the signs and symptoms?

	Key Message	Signs/Symptoms	Clinical Presentation
Carrier/No symptoms 	Individuals can carry GAS without symptoms or have mild illness.	• No symptoms • Asymptomatic colonization (e.g., skin) • Mild illness (e.g., sore throat)	No clinical disease
GAS & iGAS 	Infection can progress rapidly.	• Fever • Cough • Confusion • Headache • Severe pain at wound site • Dizziness • Diffuse rash • Abdominal pain	• Pneumonia • Necrotizing fasciitis • Streptococcal toxic shock syndrome (STSS) • Meningitis • Myositis

WHO IS AT RISK?

- Anyone can develop iGAS; however, older adults (65 years and older) and young children (under 5 years of age) are at increased risk.
- Those with underlying health issues like those living with chronic illnesses such as diabetes, cancer, chronic kidney failure or are immunocompromised.
- Long-term steroid users.
- Pregnant or postpartum individuals.
- Those with recent viral infections like influenza or chickenpox.

HOW CAN TRANSMISSION OF GROUP A STREPTOCOCCUS BE PREVENTED?

- Good handwashing, particularly after coughing and sneezing, is important to prevent the spread of GAS infection.
- It is important to cover the nose and mouth when coughing and sneezing.
- Washing, treating and covering infected wounds and sores prevents the spread of bacteria.
- Health care workers must use Droplet/Contact Precautions for care of a patient with invasive GAS until 24 hours after initiation of appropriate antibiotic therapy.



iGAS is considered a disease of public health significance in Ontario and therefore must be reported immediately to your local public health unit.

Ministry of Health (2024). Disease: Group A Streptococcal Disease, invasive (iGAS).
York Region (2023). Increase in Invasive Group A Streptococcal Disease (iGAS).