



# **GROUP A *STREPTOCOCCUS* DISEASE CoP MEETING - RVH IPAC HUB**

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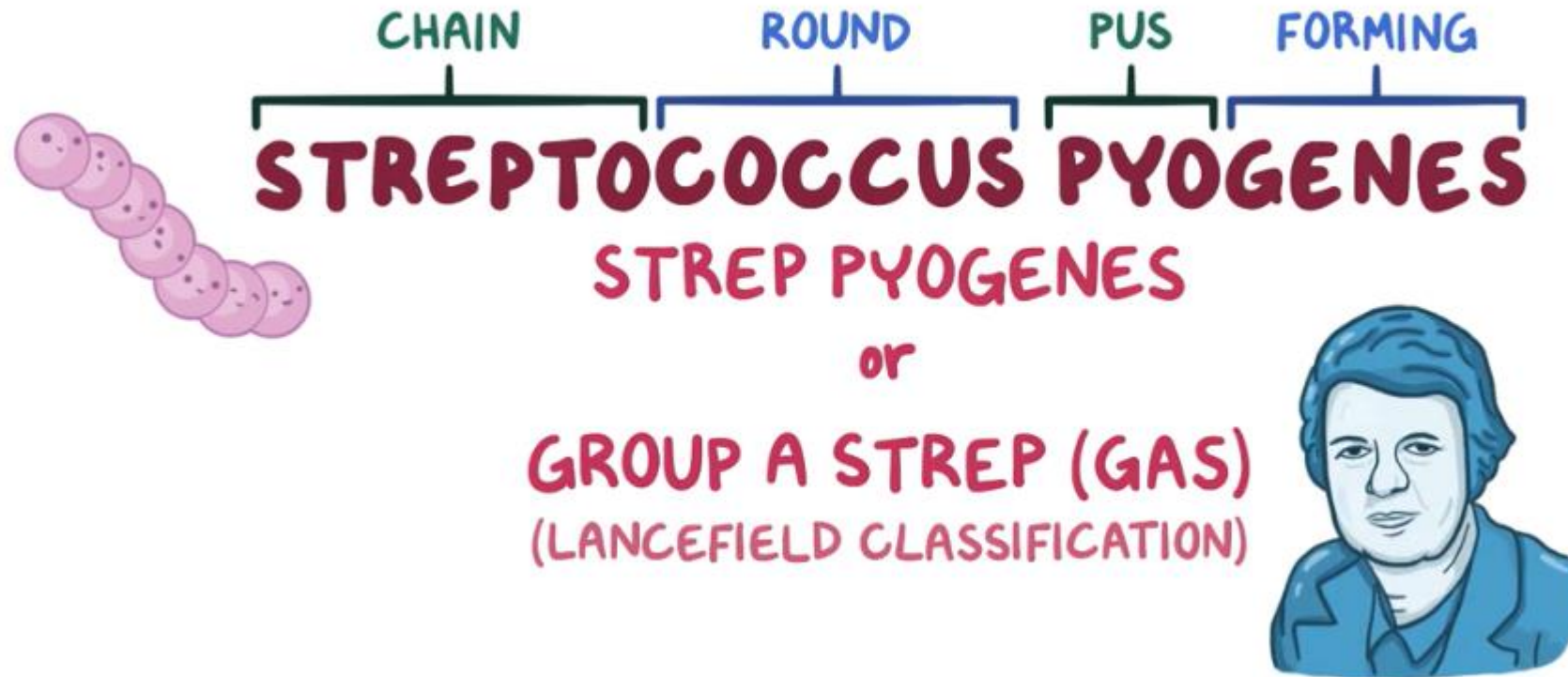
# WHAT IS GAS AND INVASIVE GAS?

- Group A *Streptococcus* (GAS) are bacteria commonly found in the throat and on the skin.
- People can be carriers of these bacteria with no symptoms of illness.
- Spreads from person-to-person through direct or indirect **contact** with secretions from nose, throat, wound secretions or respiratory **droplets**.
- Incubation period of group A strep infections is usually 1-3 days.
- Period of communicability could be from weeks or months when **not on** antibiotics.

## WHAT IS GAS AND INVASIVE GAS? (CONT.)

- Common non-invasive GAS infections include Strep throat, scarlet fever, impetigo, and ear infections.
- In rare cases, infection can become “**invasive**” when bacteria enter sterile parts of the body such as blood, deep tissue or the lining of the brain.

# THE PATHOGEN



Source: [www.osmosis.org](http://www.osmosis.org)

# *STREPTOCOCCUS PYOGENES*

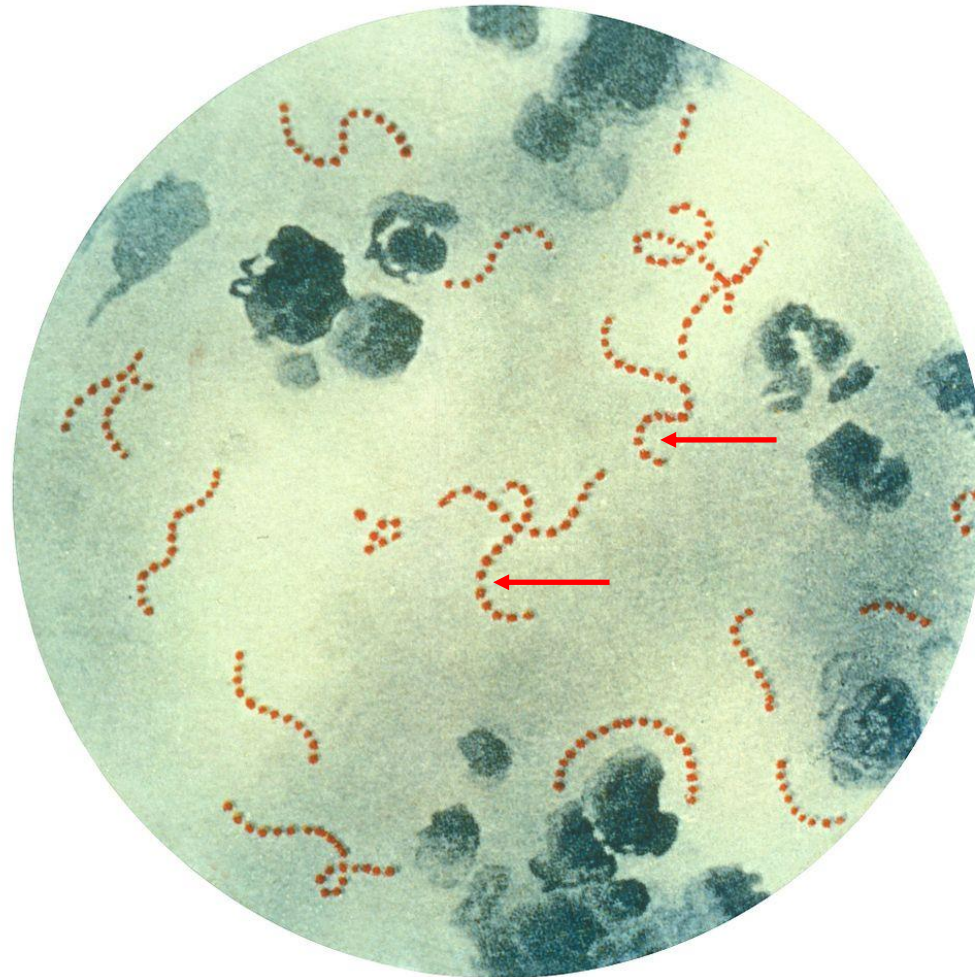


Image source: [phil.cdc.gov](http://phil.cdc.gov)

## HOW COMMON IS iGAS DISEASE?

- A total of 329 confirmed cases of iGAS reported in Ontario for the 2022-2023 iGAS season as of January 23, 2023.
- Highest incidence reported among those  $\geq 65$  years of age.
- In Ontario, the incidence rate is 2.1 iGAS cases per 100,000 population.
- In Canada, the incidence of iGAS disease increased from 4.0 to 8.1 cases per 100,000 from 2009 to 2019.
- iGAS disease remains an important public health concern.

# WHO IS AT RISK?

- Individuals with weaker immune system:
  - Infants and elderly
  - HIV infection
  - Diabetes
  - Malignancy
  - Underlying medical condition
- Bacteria can get into the blood stream usually through a breach in the skin, mucosal laceration, or following surgery.

# SYMPTOMS

- Pharyngitis: fever, painful swallowing, tonsils look reddish and swollen.
- Impetigo: itchy, honey-coloured scabs on the skin.
- Erysipelas: warm, painful lesions on the skin with raised edges.
- Scarlet fever: fever, bright-red skin rash, tongue with sandpaper feel.
- Necrotizing Fasciitis: fever with affected skin becoming painful and purple in colour – invasive GAS\*
- Streptococcal Toxic Shock Syndrome (STSS): fever, chills, myalgia, nausea, vomiting – invasive GAS\*



# DIAGNOSIS

- In Canada, iGAS is **reportable** in all provinces and territories. Confirmed cases are notifiable at the national level.
- Rapid Strep Test (RST) or culture from throat swabs usually used for non-invasive GAS infection.
- For skin infections, cultures can be done from blisters or debrided tissues.

## CASE DEFINITION FOR INVASIVE GAS

- **Confirmed case:** laboratory confirmation of infection with or without clinical evidence of invasive disease. Requires isolation of group A streptococcus (*Streptococcus pyogenes*) from a normally sterile site like blood, cerebrospinal fluid, joint, pleural, pericardial fluid.

**OR**

- isolation of group A streptococcus from a non-sterile site (e.g., skin) with clinical evidence of severity.

# CLOSE CONTACT DEFINITION IN LTCH AND RH

- Individual must have exposure to the case during the period from 7 days prior to onset of symptoms in the case to 24 hours after the case's initiation of antimicrobial therapy.
- Spending ~4 hours per day on average in the previous 7 days or 20 hours per week with the case.
- Those with following types of contact with the iGAS case:
  - Sharing the same bed, sexual relations, direct mucous membrane contact with oral or nasal secretions, or direct contact with the open skin lesion, shared needles.

# CASE MANAGEMENT

- Report confirmed case and close contacts immediately to the local public health unit.
- Conduct a retrospective chart review of all residents/clients over the previous 4 to 6 weeks:
  - For culture-confirmed cases of GAS disease
  - For any suggested cases of non-invasive or invasive GAS infection
  - Exclude pneumonia and conjunctivitis not confirmed by culture
- Assess the potential for a source of infection from outside the home.

## IPAC MEASURES FOR iGAS DISEASE

- Symptomatic residents/clients should be placed on **Contact and Droplet Precautions** immediately until 24 hrs after initiation of ABT.
- Have staff wear appropriate PPE when providing care to resident on isolation.
- Practice good hand hygiene and other routine practices at all times.
- Do not allow symptomatic residents to participate in group activities for at least 48 hrs after symptoms have resolved.
- Use dedicated equipment for residents on isolation when possible. Thoroughly clean and disinfect shared items after each use.

# TREATMENT



# REFERENCES

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- Appendix 1: Case Definitions and Disease-Specific Information - Disease: Group A Streptococcal Disease, invasive (iGAS). 2022. Ontario Public Health Standards - Infectious Disease Protocol. *Ministry of Health*. Available at: [https://www.health.gov.on.ca/en/pro/programs/publichealth/oph\\_standards/docs/gas\\_chapter.pdf](https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/gas_chapter.pdf). Accessed February 15, 2023.



# QUESTIONS?

