Antibiotic regimens for group A *Streptococcus* chemoprophylaxis, carriage eradication

Multiple antibiotic regimens have been recommended for chemoprophylaxis either in the 2002 U.S. guidelines for postpartum and post-surgical outbreaks or in Canada's guidelines for prevention and control of invasive group A *Streptococcus* (GAS) disease. Several have been used in previous outbreaks as chemoprophylaxis for GAS carriage eradication.

Choose regimen on a case-by-case basis

Which antibiotic regimen to use for GAS carriage eradication during an outbreak depends on multiple considerations, and LTCFs and public health should carefully consider the pros and cons of each regimen on a case-by-case basis with the LTCF medical director and LTCF infection prevention and control personnel.

Multiple regimens are likely needed

It's likely necessary to choose multiple regimens, including a first-line regimen and alternative regimens for those who have allergies to antibiotics or who are at risk for drug-drug interactions with antibiotic regimens.

First-line regimens that do not need susceptibility test results

GAS is universally susceptible to beta-lactam antibiotics, including penicillin and cephalosporins. LTCFs and public health do not need to consider antibiotic susceptibility when selecting one of these treatment regimens.

The footnotes referenced in the following two tables are listed immediately following the tables.

Table 1. Universally susceptible antibiotic regimens, with dosages

Antibiotic regimen	Dosage(s)
Benzathine penicillin G (BPG) plus rifampin[1,3,5]	**BPG:** 600,000 units for patients <27 kilograms (kg) or 1,200,000 units for patients ≥27 kg intramuscular (IM) in a single dose **Rifampin:** 20 mg/kg/day (maximum daily dose 600 mg/day) oral in 2 divided doses for 4 days
First-generation cephalosporins, such as cephalexin[2,3,5]	Cephalexin: 25-50 mg/kg/day (maximum daily dose 1000 mg/day) in 2–4 divided doses for 10 days

Alternative regimens that need susceptibility test results prior to use

LTCFs and public health should only consider clindamycin or macrolides if the outbreak strain is documented as susceptible to these antibiotics. Clindamycin and macrolide (e.g., azithromycin) resistance have been commonly reported. Among invasive disease isolates in 2021, 35% of GAS isolates were macrolide resistant and 34% of isolates were clindamycin resistant.

Table 2. Antibiotic regimens, with dosages, needing susceptibility testing

Antibiotic regimen	Dosage(s)
Azithromycin[1,4]	12 mg/kg/day (maximum daily dose 500 mg/day) in a single dose daily for 5 days
Clindamycin[1,3]	20 mg/kg/day (maximum daily dose 900 mg/day) in 3 divided doses for 10 days

[1] CDC. Prevention of Invasive Group A Streptococcal Infectio ns Workshop Participants. Prevention of invasive group A streptococcal disease among household contacts of case patients and among postpartum and postsurgical patients: Recommendations from the Centers for Disease Control and Prevention. *Clin Infect Dis*. 2002;35(8):950–9. Erratum in: *Clin Infect Dis*. 2003;36(2):243.

[2] Public Health Agency of Canada. Supplement - Guidelines for the prevention and control of invasive group A Streptococcal disease. *Can Commun Dis Rep*. 2006;32S2(October 2006).

[3] Dooling KL, Crist MB, Nguyen DB, et al. Investigation of a prolonged group A streptococcal outbreak among residents of a skilled nursing facility, Georgia, 2009–2012. *Clin Infect Dis*. 2013;57(11):1562–7.

[4] Morita JY, Kahn E, Thompson T, et al. Impact of azithromycin on oropharyngeal carriage of group A *Streptococcus* and nasopharyngeal carriage of macrolide-resistant *Streptococcus pneumoniae*. *Ped Infect Dis J*. 2000;19(1):41–6.

[5] Nanduri SA, Metcalf BJ, Arwady MA, et al. Prolonged and large outbreak of invasive group A *Streptococcus* disease within a nursing home: Repeated intrafacility transmission of a single strain. *Clin Microbiol Infect*. 2019;25(2):248.e241–7.