GENERAL INFORMATIONS

**MOST PHARYNGITIS-TONSILLITIS CASES** are caused by a **VIRUS**.

**Bacteria** : Group A \(\beta\)-hemolytic streptococci (*Streptococcus pyogenes*) is the most frequent cause;

- Involves in 5 to 15% of pharyngitis-tonsillitis in adults
- Involves in 20 to 30% of pharyngitis-tonsillitis in children

**DIAGNOSIS**

<table>
<thead>
<tr>
<th>POTENTIAL INDICATORS OF</th>
<th>Group A (\beta)-hemolytic streptococcus (GAS) infection</th>
<th>Viral infection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Season</strong></td>
<td>Winter–spring</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>3 to 15 years old</td>
<td></td>
</tr>
<tr>
<td><strong>Onset</strong></td>
<td>Abrupt</td>
<td>Gradual</td>
</tr>
<tr>
<td><strong>Signs and symptoms</strong></td>
<td>• Tender anterior cervical adenopathy</td>
<td>• No fever</td>
</tr>
<tr>
<td></td>
<td>• Pain on swallowing</td>
<td>• Conjunctivitis</td>
</tr>
<tr>
<td></td>
<td>• Fever</td>
<td>• Diarrhea</td>
</tr>
<tr>
<td></td>
<td>• Tonsils and pharynx inflammation</td>
<td>• Hoarseness of voice</td>
</tr>
<tr>
<td></td>
<td>• Severe sore throat</td>
<td>• Rhinorrhea</td>
</tr>
<tr>
<td></td>
<td>• Nausea</td>
<td>• Cough</td>
</tr>
<tr>
<td></td>
<td>• Palatal petechiae</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• <strong>Tonsillar exudates</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Scarlatiniform rash</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vomiting, and occasionally, abdominal pain, especially in children</td>
<td></td>
</tr>
</tbody>
</table>

The epidemiological context (proven contact in the past two weeks) also increases the risk of GAS infection.
The modified Centor score is useful to identify cases with a low risk of bacterial pharyngitis-tonsillitis and to determine if a diagnostic test is needed.

Even with a high score (≥ 4), the risk of having bacterial pharyngitis-tonsillitis is only 50%.

The new rapid detection tests have an estimated sensitivity and specificity of 0.86 (CI of 95%: 0.83 to 0.88) and 0.96 (CI of 95%: 0.94 to 0.97), respectively.
TREATMENT PRINCIPLES

For VIRAL PHARYNGITIS: DO NOT TREAT WITH ANTIBIOTICS; the vast majority of cases clear up within 3 to 5 days. Reassess if symptoms persist.

SUPPORTIVE TREATMENTS

- It is important to reduce pain and fever by using an analgesic/antipyretic (acetaminophen or ibuprofen*), especially in the first few days.

*Ibuprofen is not recommended for children under 6 months of age.

Treatment should not be initiated before a positive rapid test result or a positive culture is received, unless the patient presents:
- Very severe symptoms
- Clinical signs of scarlatina
- Complications from their pharyngitis-tonsillitis (tonsillar abscess, bacterial adenitis, etc.)
- A history of acute rheumatic fever (ARF)

HISTORY OF ALLERGIC REACTION TO A PENICILLIN ANTIBIOTIC

- True penicillin allergy is uncommon.
  - For 100 people with a history of penicillin allergy fewer than 10 will be CONFIRMED to have a true diagnosis of allergy.
  - In children, the prevalence of true allergy is lower (< 6%). Most of the reactions observed are generally non-severe delayed rashes.

- It is therefore important to carefully assess the allergy status of a patient who reports a history of allergic reaction to penicillin, before considering using alternatives to beta-lactams. For help, consult the decision-making tool in case of allergy to penicillins.

ANTIBIOTIC THERAPY

- Provides a modest reduction in symptoms duration (approximately 1 day).
- Prevent acute rheumatic fever if started within 9 days after the onset of symptoms.
- Helps reducing infection complications and person-to-person transmission.

The antibiotic treatment value has not been determined in patients coping with pharyngitis-tonsillitis caused by Group C or G streptococci. Some clinicians offer antibiotic treatment to symptomatic patients.

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# FIRST-LINE ANTIBIOTIC TREATMENT FOR GROUP A STREPTOCOCCAL PHARYNGITIS-TONSILLITIS

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Daily dosage</th>
<th>Maximum dosage</th>
<th>Treatment duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Penicillin V</strong></td>
<td>50 mg/kg/day PO ÷ BID</td>
<td>600 mg PO BID</td>
<td>10 days</td>
</tr>
<tr>
<td><strong>Amoxicillin</strong></td>
<td>50 mg/kg/day PO ÷ BID 50 mg/kg PO daily</td>
<td>500 mg PO BID 1 000 mg PO daily</td>
<td></td>
</tr>
</tbody>
</table>

If history of allergic reaction to a penicillin antibiotic

Click [here](#) to view the group A streptococcal pharyngitis-tonsillitis algorithm for help in choosing an antibiotic therapy

- Children can return to school or daycare after 24 hours of treatment.

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## ADULT

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Daily dosage</th>
<th>Treatment duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Penicillin V</strong></td>
<td>600 mg PO BID</td>
<td>10 days</td>
</tr>
<tr>
<td><strong>Amoxicillin</strong></td>
<td>500 mg PO BID OR 1 000 mg PO daily</td>
<td></td>
</tr>
</tbody>
</table>

If history of allergic reaction to a penicillin antibiotic

Click [here](#) to view the group A streptococcal pharyngitis-tonsillitis algorithm for help in choosing an antibiotic therapy

1. Penicillin V is still the first-choice treatment due to its effectiveness and safety.
2. In children, amoxicillin may be used and seems just as effective as penicillin V.

In the case where no response is observed after 48 to 72 hours of treatment and before starting second-line treatment:

- Verify acceptability and adherence to treatment
- Reassess diagnosis

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### MAIN REFERENCES


Please note that other references have been consulted.
PHARYNGITIS-TONSILLITIS IN CHILDREN AND ADULTS

For dosages see next page

SEVERITY OF PREVIOUS ALLERGIC REACTION TO PENICILLIN ANTIBIOTICS

### Vague history

- Unconvincing history reported by patient or family

### Non-severe reaction

- **Immediate reaction**¹
  - Isolated cutaneous involvement (urticaria and/or angioedema)

- **Delayed reaction**²³
  - Isolated cutaneous involvement (Rash and/or urticaria and/or angioedema)

### Severe reaction

- **Immediate reaction**
  - Anaphylaxis⁴

- **Delayed reaction**
  - Severe skin reaction (desquamation, pustules, vesicles, purpura with fever or joint pain, but no DRESS, SJS/TEN, or AGEP)
  - Serum sickness³

### Very severe reaction

- **Immediate reaction**
  - Anaphylactic shock (with or without intubation)

### Conditions of Administration

- Reaction in childhood³
- Reaction in adulthood
- Long time ago (≥10 years)
- Recent

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**THE FOLLOWING CAN BE PRESCRIBED SAFELY**

- **Similar cephalosporins**
  - Cephalexin or Cefadroxil⁶ if history of allergy does not suggest an immediate reaction...
  - If in doubt about the possibility of an immediate reaction...
    - a 1-hour observation period after the administration of the 1st dose of Cephalexin or Cefadroxil under the supervision of a health professional could be advised according to the clinician judgment.

**PRESCRIBE THE FOLLOWING WITH CAUTION**

- **Penicillins**
  - Penicillin V or Amoxicillin
  - The 1st dose should always be administered under medical supervision.
  - If history of:
    - Immediate reactions, a drug provocation test should be performed;
    - Delayed reactions, the patient or his/her family should be informed of the possible risk of recurrence in the days following initiation of the antibiotic.

**AVOID PRESCRIBING**

- **Beta-lactams**⁷
  - Choose another class of antibiotics.

**PRESCRIBE THE FOLLOWING**

- **Clarithromycin or Azithromycin or Clindamycin⁶**

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1. Immediate reaction (type I or IgE-mediated): usually occurs within one hour after taking the first dose of an antibiotic.
2. Delayed reaction (types II, III and IV): may occur at any time from one hour after administration of a drug.
3. Delayed skin reactions and serum sickness-like reactions that occur in children on antibiotic therapy are generally non-allergic and may be of viral origin.
4. Anaphylaxis without shock or intubation: requires an extra level of vigilance.
5. With no recommendations concerning other beta-lactams.
6. Option only in adult
7. Penicillins, cephalosporins and carbapenems.

For further information, see the interactive tool and the decision-making tool.

- **AGEP**: acute generalized exanthematous pustulosis
- **DRESS**: drug reaction with eosinophilia and systemic symptoms
- **SJS**: Stevens–Johnson syndrome
- **TEN**: toxic epidermal necrolysis
### CHILDREN

#### FIRST-LINE ANTIBIOTIC THERAPY FOR GROUP A STREPTOCOCCAL PHARYNGITIS-TONSILLITIS IF HISTORY OF ALLERGIC REACTION TO A PENICILLIN ANTIBIOTIC

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Daily dosage</th>
<th>Maximum dosage</th>
<th>Treatment duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cephalexin</td>
<td>50 mg/kg/day PO ÷ BID</td>
<td>500 mg PO BID</td>
<td>10 days</td>
</tr>
<tr>
<td>Penicillin V</td>
<td>50 mg/kg/day PO ÷ BID</td>
<td>600 mg PO BID</td>
<td></td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>50 mg/kg/day PO ÷ BID</td>
<td>500 mg PO BID OR 1 000 mg PO daily</td>
<td></td>
</tr>
<tr>
<td>Alternative if a beta-lactam cannot be administered</td>
<td>Clarithromycin</td>
<td>15 mg/kg/day PO ÷ BID</td>
<td>250 mg PO BID</td>
</tr>
<tr>
<td></td>
<td>Azithromycin</td>
<td>12 mg/kg PO daily</td>
<td>500 mg PO daily</td>
</tr>
</tbody>
</table>

Beta-lactams recommended, according to the clinical judgement support algorithm

### ADULT

#### FIRST-LINE ANTIBIOTIC THERAPY FOR GROUP A STREPTOCOCCAL PHARYNGITIS-TONSILLITIS IF HISTORY OF ALLERGIC REACTION TO A PENICILLIN ANTIBIOTIC

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Daily dosage</th>
<th>Treatment duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cefadroxil</td>
<td>1 000 mg PO daily</td>
<td>10 days</td>
</tr>
<tr>
<td>Cephalexin</td>
<td>500 mg PO BID</td>
<td></td>
</tr>
<tr>
<td>Penicillin V</td>
<td>600 mg PO BID</td>
<td></td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>500 mg PO BID OR 1 000 mg PO daily</td>
<td></td>
</tr>
<tr>
<td>Alternative if a beta-lactam cannot be administered</td>
<td>Clarithromycin</td>
<td>250 mg PO BID</td>
</tr>
<tr>
<td></td>
<td>Azithromycin</td>
<td>500 mg PO daily on day 1, then 250 mg PO daily from days 2 to 5</td>
</tr>
<tr>
<td></td>
<td>Clindamycin</td>
<td>300 mg PO TID</td>
</tr>
</tbody>
</table>

1. Penicillins, cephalosporins and carbapenems.

1. Use only if the cautious administration of a penicillin antibiotic is the option chosen.