Cefalexin

**Indication**
- Bacterial cellulitis, erysipelas or lymphangitis

**INN**
- Cefalexin

**Medicine type**
- Chemical agent

**Antibiotic groups**
- ACCESS

**List type**
- Core

**Formulations**
- Oral > Liquid: 125 mg per 5 mL (anhydrous) powder for oral liquid; 250 mg per 5 mL (anhydrous) powder for oral liquid
- Oral > Solid: 250 mg (as monohydrate); 500 mg (as monohydrate) (EML)

**EML status history**
- First added in 2017 (TRS 1006)
- Changed in 2021 (TRS 1035)

**Sex**
- All

**Age**
- Also recommended for children

**Therapeutic alternatives**
- The recommendation is for this specific medicine

**Patent information**
- Patents have expired in most jurisdictions
- Read more about patents.

**Wikipedia**
- Cefalexin

**DrugBank**
- Cefalexin (Cephalexin)

**Expert Committee recommendation**

The Expert Committee noted that cefalexin has a spectrum of activity against pathogens responsible for mild to moderate skin and soft tissue infections which is comparable to amoxicillin + clavulanic acid and cloxacillin. The Committee considered that cefalexin as a first-generation cephalosporin is also an appropriate alternative first-choice treatment option for these infections. The Committee therefore recommended that the listing for cefalexin on the EML and EMLc be amended from a second-choice to a first-choice treatment option for mild to moderate skin and soft tissue infections. The Expert Committee also recommended the addition of a new strength formulation of cefalexin (solid oral dosage form 500 mg) to the core list of the EML. The Committee noted that the proposed strength formulation is higher than those currently included on the Model List, and is appropriate and aligned to meet recommended doses for treatment of adults, with the advantages of a reduced pill burden.

**Background**

Cefalexin was recommended as a second-choice treatment option on the EML and EMLc for empiric treatment of skin and soft tissue infections in adults and children in 2017, as part of the comprehensive review of antibiotics for common infectious syndromes (1). Amoxicillin + clavulanic acid and cloxacillin were recommended as first-choice treatment options because both provide good coverage against staphylococcal (non-methicillin-resistant Staphylococcus aureus (non-MRSA)) and streptococcal infections, which are the leading causes of mild to moderate community-acquired skin and soft-tissue infections worldwide. Cefalexin was recommended as second-choice for when first-choice options are not available or in patients allergic to penicillin who can tolerate cephalosporins. Bacterial skin infections occur worldwide and can affect all age groups; erysipelas is more frequent in children and elderly patients. In 2013, skin diseases (not limited to bacterial infections) were the fourth leading cause of disability
worldwide (2). Cellulitis, the most common skin infection, accounted for 0.04% (4 in 10 000) of the overall burden of all diseases combined in 2013. It was the only skin condition that showed a significant decrease (−13.2%) in disability-adjusted life years (a proxy for morbidity and mortality) between 2005 and 2013; this decrease was attributed to reduced mortality (2). In 2017, the Global Burden of Disease study reported 43 million new cases of cellulitis worldwide (3). Diabetes, peripheral arterial disease, HIV infection and other causes of immunosuppression are risk factors for severe skin infections.

### Summary of evidence

Evidence of the benefits of empiric use of cefalexin for skin and soft tissue infections was reviewed and accepted by the Expert Committee in 2017. Cefalexin offers good coverage against staphylococcal (non-MRSA) and streptococcal infections with a range of activity and tolerability that is comparable with amoxicillin + clavulanic acid and cloxacillin, the first-choice options currently recommended in the Model Lists for skin and soft tissue infections. The application proposed that by also including cefalexin as a first-choice option, it will indicate that the three antibiotics are equally adequate options for empiric treatment of mild, community-acquired skin and soft tissue infections. However, it is noted that for skin infections associated with bite wounds, amoxicillin + clavulanic acid remains the preferred treatment option. Most adult and adolescent patients with mild skin and soft tissue infections can be successfully treated with cefalexin 500 mg every 8 hours for 5 days. The proposed 500 mg oral formulation will allow for a reduced pill burden to complete a course of treatment compared with the currently listed 250 mg strength formulation, and should facilitate adherence to treatment.

### EML recommendations: Bacterial cellulitis, erysipelas or lymphangitis

<table>
<thead>
<tr>
<th>First choice</th>
<th>Second choice</th>
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<tbody>
<tr>
<td>amoxicillin + clavulanic acid</td>
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<tr>
<td>cloxacillin</td>
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<tr>
<td>cefalexin</td>
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3. GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and ye