ATENOLOL SHORTAGE

Several generic brands of atenolol tablets 25mg, 50mg and 100 mg are approved for marketing by Health Canada (http://webprod5.hc-sc.gc.ca/dpd-bdpp/dispatch-repartition.do?lang=eng)¹ and are on the Saskatchewan Drug Plan Formulary (http://formulary.drugplan.health.gov.sk.ca/)².

Health Canada approved indications³
- mild to moderate hypertension
- long-term management of angina pectoris due to ischemic heart disease

Off-label uses⁴
- post-myocardial infarction
- atrial fibrillation (rate control)
- migraine prophylaxis

Options to handle shortage of atenolol tablets:

- Evaluate the appropriateness of atenolol therapy. Evidence suggests that atenolol is less effective than certain other beta-blockers and drugs from other pharmacologic classes in reducing cardiovascular risk when used to treat hypertension, particularly in older adults.⁵ Atenolol has also been associated with increased mortality.⁶ This could be an opportune time to recommend switching atenolol to a more effective and safer alternative.

- Extemporaneous compounding: atenolol bulk powder is available (e.g. Medisca⁷) for compounding tablets or capsules.

- Therapeutic alternatives:

| Beta-blockers⁸,⁹ |
|---|---|---|
| **Indication** | **Recommended atenolol dose** | **Alternative(s)** |
| Mild to moderate hypertension | 50 to 100 mg daily | • Acebutolol 100 to 400 mg BID  
• Bisoprolol 5 to 20 mg once daily  
• Labetolol 100 mg to 600 mg BID  
• Metoprolol RR 50 to 200 mg BID or 100 to 200 mg SR once daily  
• Nadolol 40 to 320 mg daily  
• Nebivolol 5 to 20 mg once daily  
• Pindolol 5 to 15 mg BID or TID up to 45 mg daily.  
• Propranolol RR 40 mg BID up to 320 mg daily or LA 60 to 320 mg daily  
• Timolol 5 to 10 mg BID up to 60 mg daily |
| Angina pectoris | 50 to 200 mg once daily | • Acebutolol 200 to 300 mg BID  
• Metoprolol 50 to 200 mg BID or 100 to 200 mg SR once daily  
• Nadolol 40 to 240 mg daily  
• Pindolol 5 mg TID or QID up to 40 mg daily |
- Propranolol RR 10 to 20 mg TID or QID up to 240 mg daily or LA 80 mg daily up to 320 mg daily
- Timolol 5 mg BID or TID up to 45 mg daily

### Post-myocardial infarction (Non-approved indication for atenolol)
Target 100 mg daily
- Acetubolol target 400 mg BID
- Carvedilol target 25 mg BID
- Metoprolol target RR 100 mg BID; SR 200 mg once daily
- Nadolol target 160 mg daily
- Propranolol target RR 60 to 80 mg TID
- Timolol target 10 mg BID

### Atrial fibrillation (Non-approved indication for atenolol)
50 to 150 mg once daily
- Bisoprolol 2.5 to 20 mg once daily
- Metoprolol RR 25 to 200 mg BID or SR 100 mg daily to 200 mg BID

### Migraine prevention (Non-approved indication for atenolol)
25 to 100 mg once daily
- Metoprolol 50 to 200 mg daily
- Propranolol RR 80 to 320 mg daily; LA 120 mg daily
- Timolol 10 to 30 mg daily

RR= regular release; SR= slow release, LA = long acting

### Alternatives from other pharmacologic classes
(Note: if switching to another pharmacologic class, the atenolol must be tapered)

<table>
<thead>
<tr>
<th>Indication</th>
<th>Alternative pharmacologic class</th>
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</thead>
<tbody>
<tr>
<td>Mild to moderate hypertension</td>
<td>Diuretics, ACE inhibitors, ARBs, calcium channel blockers</td>
</tr>
<tr>
<td>Angina pectoris</td>
<td>Nitrates, calcium channel blockers, ACE inhibitors</td>
</tr>
<tr>
<td>Atrial fibrillation rate control</td>
<td>Nondihydropyridine calcium channel blockers</td>
</tr>
<tr>
<td>Migraine prevention</td>
<td>TCAs, anticonvulsants, venlafaxine, calcium channel blockers, ACE inhibitors, pizotifen</td>
</tr>
</tbody>
</table>

Prepared by Karen Jensen MSc, BSP; reviewed by Carmen Bell BSP
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References: