

## 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>)<sup>1</sup> and are on the Saskatchewan Drug Plan Formulary (<http://formulary.drugplan.health.gov.sk.ca/>)<sup>2</sup>.

### Health Canada approved indications<sup>3</sup>

- mild to moderate hypertension
- long-term management of angina pectoris due to ischemic heart disease

### Off-label uses<sup>4</sup>

- 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.<sup>5</sup> Atenolol has also been associated with increased mortality.<sup>6</sup> 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. Medisca<sup>7</sup>) for compounding tablets or capsules.
- **Therapeutic alternatives:**

### Beta-blockers<sup>8,9</sup>:

Indication	Recommended atenolol dose	Alternative(s)
Mild to moderate hypertension	50 to 100 mg daily	<ul style="list-style-type: none"> <li>• Acebutolol 100 to 400 mg BID</li> <li>• Bisoprolol 5 to 20 mg once daily</li> <li>• Labetolol 100 mg to 600 mg BID</li> <li>• Metoprolol RR 50 to 200 mg BID or 100 to 200 mg SR once daily</li> <li>• Nadolol 40 to 320 mg daily</li> <li>• Nebivolol 5 to 20 mg once daily</li> <li>• Pindolol 5 to 15 mg BID or TID up to 45 mg daily.</li> <li>• Propranolol RR 40 mg BID up to 320 mg daily or LA 60 to 320 mg daily</li> <li>• Timolol 5 to 10 mg BID up to 60 mg daily</li> </ul>
Angina pectoris	50 to 200 mg once daily	<ul style="list-style-type: none"> <li>• Acebutolol 200 to 300 mg BID</li> <li>• Metoprolol 50 to 200 mg BID or 100 to 200 mg SR once daily</li> <li>• Nadolol 40 to 240 mg daily</li> <li>• Pindolol 5 mg TID or QID up to 40 mg daily</li> </ul>

		<ul style="list-style-type: none"> <li>• Propranolol RR 10 to 20 mg TID or QID up to 240 mg daily or LA 80 mg daily up to 320 mg daily</li> <li>• Timolol 5 mg BID or TID up to 45 mg daily</li> </ul>
<b>Post-myocardial infarction (Non-approved indication for atenolol)</b>	Target 100 mg daily	<ul style="list-style-type: none"> <li>• Acebutolol target 400 mg BID</li> <li>• Carvedilol target 25 mg BID</li> <li>• Metoprolol target RR 100 mg BID; SR 200 mg once daily</li> <li>• Nadolol target 160 mg daily</li> <li>• Propranolol target RR 60 to 80 mg TID</li> <li>• Timolol target 10 mg BID</li> </ul>
<b>Atrial fibrillation (Non-approved indication for atenolol)</b>	50 to 150 mg once daily	<ul style="list-style-type: none"> <li>• Bisoprolol 2.5 to 20 mg once daily</li> <li>• Metoprolol RR 25 to 200 mg BID or SR 100 mg daily to 200 mg BID</li> </ul>
<b>Migraine prevention (Non-approved indication for atenolol)</b>	25 to 100 mg once daily)	<ul style="list-style-type: none"> <li>• Metoprolol 50 to 200 mg daily</li> <li>• Propranolol RR 80 to 320 mg daily; LA 120 mg daily<sup>11</sup></li> <li>• Timolol 10 to 30 mg daily</li> </ul>

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

### Alternatives from other pharmacologic classes<sup>10,11</sup>:

**(Note: if switching to another pharmacologic class, the atenolol must be tapered)**

Indication	Alternative pharmacologic class
Mild to moderate hypertension	Diuretics, ACE inhibitors, ARBs, calcium channel blockers
Angina pectoris	Nitrates, calcium channel blockers, ACE inhibitors
Atrial fibrillation rate control	Nondihydropyridine calcium channel blockers
Migraine prevention	TCA's, anticonvulsants, venlafaxine, calcium channel blockers, ACE inhibitors, pizotifen

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#### References:

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