



## Adalat® (Nifedipine) Shortage

Shortages of Adalat® XL 20 mg have been reported.

**Table 1: Suppliers of nifedipine tablets in Canada<sup>1</sup>:**

Product	Strength	DIN	Mfr
<b>Nifedipine Extended Release Tablets</b>			
Adalat XL	20 mg	02237618	TEV
	30 mg	02155907	
	60 mg	02155990	
Mylan-Nifedipine XL	30 mg	02349167	MYL
	60 mg	02321149	
Nifedipine ER	30 mg	02418630	PMS
	60 mg	02416301	

### Management:

- Immediate release nifedipine is available in Canada but is not recommended as a substitute for modified release products<sup>2,3</sup>; it is preferable to switch to a different calcium channel blocker.
- Consider increasing nifedipine dose to 30 mg daily if feasible; 30 mg is the typical starting dose.<sup>2,3</sup>
- If higher dose is not tolerated, switch to an alternate calcium channel blocker (CCB) – see Table 2. **Note:** the usual starting dose of extended release nifedipine is 30 mg; a lower than usual starting dose may be required for the alternate CCB.
- Should other strengths of extended release nifedipine become unavailable, switch to an alternate CCB using Table 2. **Note:** no dose equivalencies among the CCBs have been established. Estimate an approximate dose using the dosing range. For those taking nifedipine 90 mg, it would be prudent to switch to a mid-high dose (i.e. not the maximum daily dose) of the alternate agent and titrate up.
- The contraindications and adverse effects of non-dihydropyridine (DHP) CCBs (diltiazem and verapamil) are quite different from DHP CCBs (amlodipine, felodipine, nifedipine). Consider switching to amlodipine or felodipine if possible rather than a non-DHP CCB unless other circumstances warrant use of diltiazem or verapamil.
- Be sure to check for drug interactions if switching agents.

**Table 2: Calcium Channel Blocker Comparison<sup>2,3</sup>**

CCB	Doses		Contraindications
	Hypertension	Stable angina	
<b>DHP</b>			
<b>Adverse Effects:</b> pedal edema, flushing, palpitations, headache			
<b>Nifedipine MR</b>	30-60 mg up to 90 mg daily		<ul style="list-style-type: none"> <li>• severe aortic stenosis</li> </ul>
<b>Amlodipine</b>	5-10 mg daily	2.5-5 mg to 10 mg daily	
<b>Felodipine</b>	2.5-10 mg to 20 mg daily	May be useful but not indicated	
<b>Non-DHP</b>			
<b>Adverse Effects:</b> angina, heart failure; constipation, especially with verapamil			
<b>Diltiazem MR</b>	120-240 mg to 360 mg daily	120-180 mg to 360 mg daily	<ul style="list-style-type: none"> <li>• post myocardial infarction with ejection fraction (EF) &lt;40%</li> <li>• 2<sup>nd</sup> or 3<sup>rd</sup> degree AV block, or sick sinus syndrome (unless functioning ventricular pacemaker)</li> <li>• atrial flutter/atrial fibrillation and accessory bypass tract (e.g. Wolff-Parkinson-White syndrome, Lown-Ganong-Levine syndrome)</li> <li>• combination with ivabradine</li> </ul>
<b>Verapamil MR</b>	80-240 mg once daily to 180-240 mg BID	180 mg to 480 mg daily in one or two doses	
CCB= calcium channel blocker; DHP= dihydropyridine; MR=modified release such as XL, CD, SR, etc.			

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**References:**

1. McKesson Canada. PharmaClik [Internet]. 2018 [cited 30 Aug 2018]. Available from <http://clients.mckesson.ca> Account required.
2. Regier L, Jensen B. Calcium channel blocker: comparison chart. RxFiles drug comparison charts. Saskatoon, SK: Saskatoon Health Region. [updated 01 May 2018; accessed 29 Aug 2018]. Available from: [www.RxFiles.ca](http://www.RxFiles.ca)
3. RxTx [Internet]. Ottawa (ON): Canadian Pharmacists Association; 2018. CPS online: CPhA Calcium Channel Blockers; [updated May 2018; cited 29 Aug 2018]. Available from: <https://www.e-therapeutics.ca/>