

## Oral Calcium Channel Blocker Comparison

Various calcium channel blockers (CCBs) have been periodically shorted. Below is a table of dosing comparisons. General notes:

- No dose equivalencies among the CCBs have been established; estimate an approximate dose using the dosing ranges.
- The contraindications and adverse effects of non-dihydropyridine (DHP) CCBs (diltiazem and verapamil) are quite different from DHP CCBs (amlodipine, felodipine, nifedipine). Consider staying with the same type of CCB if possible unless other considerations warrant changing types.
- Be sure to check for drug interactions if switching agents.

### Calcium Channel Blocker Comparisons<sup>1,2</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		• severe aortic stenosis
<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 <i>Verapamil</i></li> <li>• extreme bradycardia</li> <li>• severe heart failure and or EF&lt;40%</li> <li>• combination with drugs that affect cardiac conduction</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.			

**References:**

1. 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)
2. 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/>