

**Class**

Calcium Channel Blocker, Antidysrhythmic

**Pharmacologic Properties**

Diltiazem is a calcium channel blocking agent that inhibits the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle. Its action is to slow AV nodal conduction and increase the AV nodal refractory period. Diltiazem slows the ventricular rate in patients with a rapid ventricular response during atrial fibrillation or atrial flutter, potentially converts supraventricular tachycardia to normal sinus rhythm, and decreases total peripheral resistance in both systolic and diastolic blood pressure.

**Indications**

- Narrow complex atrial fibrillation/flutter with rapid ventricular rate ( $\geq 150$  bpm) [Protocol 9](#).
- PSVT refractory to adenosine [Protocol 9](#).

**Contraindications**

- Patients with pulmonary edema or severe heart failure/cardiogenic shock
- 2<sup>nd</sup> degree or complete heart block
- Hypotension (SBP < 90) or cardiogenic shock
- Recently (within past 1 hour) received IV  $\beta$ -blocker
- Patients with a history of Wolff-Parkinson-White Syndrome (WPW)
- Sick sinus syndrome
- Ventricular tachycardia or wide complex tachycardia

**Precautions**

- Cautious use in patients with congestive heart failure, monitor for signs of pulmonary edema
- Cautious use in patients who are already taking antihypertensive medications, monitor for hypotension
- If possible, it is recommended that diltiazem hydrochloride be infused in its own intravenous line.

**Side Effects/Adverse Reactions**

- Hypotension
- Bradycardia
- Heart block

## Dosage and Administration

### Adult

- 0.25 mg/kg slow IVP bolus over 2 minutes (MAX 20 mg).
  - If rhythm does not convert after 15 minutes, may repeat once at 0.35 mg/kg slow IVP over 2 minutes (MAX 25 mg).

### Pediatric

- Not indicated for pediatric management.