

**\*\*Diltiazem is a calcium channel blocker used to treat high blood pressure, angina (chest pain), and certain heart rhythm disorders. It works by relaxing blood vessels and reducing the heart's workload.\*\***

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## **## 🧪 Chemical Composition**

- **\*\*Active Ingredient:\*\*** \*Diltiazem hydrochloride\*
- **\*\*Molecular Formula:\*\***  $C_{22}H_{26}N_2O_4S \cdot HCl$
- **\*\*Drug Class:\*\*** Calcium channel blocker (non-dihydropyridine)
- **\*\*Formulations:\*\***
  - Tablets: Immediate-release (30 mg, 60 mg)
  - Extended-release capsules: 120 mg, 180 mg, 240 mg, 300 mg
  - Injection: 5 mg/mL
  - Brand Names: Cardizem, Cartia XT, Tiazac, Dilt-XR, Matzim LA

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## **## 💉 Dosage & Administration**

- **\*\*Route:\*\*** Oral or intravenous
- **\*\*Typical Adult Dosage:\*\***
  - \*Hypertension:\* 180-240 mg once daily (extended-release)
  - \*Angina:\* 30 mg 4 times daily (immediate-release) or 120-180 mg once daily
  - \*Arrhythmia (IV):\* Initial 0.25 mg/kg IV bolus over 2 minutes; may repeat or follow with infusion
- **\*\*Pediatric Use:\*\*** Rare; used under specialist supervision
- **\*\*Administration Tips:\*\***
  - Take extended-release capsules whole; do not crush or chew
  - Monitor blood pressure and heart rate regularly

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## **## 🏥 Medical Uses**

- **\*\*Primary Indications:\*\***
  - \*Hypertension\* (high blood pressure)
  - \*Angina pectoris\* (chronic stable and vasospastic)
  - \*Atrial fibrillation\* and \*supraventricular tachycardia\* (IV use)
  - \*Anal fissures\* (topical use in some cases)
- **\*\*Mechanism of Action:\*\***
  - Inhibits calcium ion influx into cardiac and smooth muscle cells
  - Reduces myocardial oxygen demand and dilates coronary arteries

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## **## ⚠️ Side Effects**

- **\*\*Common:\*\***
  - Headache
  - Dizziness
  - Nausea
  - Edema (swelling of hands/feet)

- Fatigue

**\*\*Serious:\*\***

- Bradycardia (slow heart rate)
- Hypotension (low blood pressure)
- Heart block
- Liver enzyme elevation
- Allergic reactions (rash, itching)

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**## ⚠ Risks & Precautions**

- **\*\*Contraindications:\*\***
  - Severe hypotension
  - Sick sinus syndrome or AV block (without pacemaker)
  - Acute myocardial infarction with pulmonary congestion
- **\*\*Pregnancy & Breastfeeding:\*\***
  - Use only if clearly needed; consult a physician
- **\*\*Drug Interactions:\*\***
  - May interact with beta-blockers, digoxin, statins, and CYP3A4 inhibitors
- **\*\*Monitoring:\*\***
  - Regular ECG, liver function tests, and blood pressure checks recommended

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**## 💬 Patient Feedback & Complaints**

- \*\*Positive Feedback:\*\***
- Effective in controlling blood pressure and angina
  - Convenient once-daily dosing (extended-release)
  - Fewer side effects compared to some other heart medications

- \*\*Common Complaints:\*\***
- Swelling in legs or ankles
  - Fatigue or dizziness
  - Slow heart rate
  - Occasional constipation or nausea

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**## 📄 Summary Table**

Category	Details
Drug Name	Diltiazem
Active Ingredient	Diltiazem hydrochloride
Use	Hypertension, angina, arrhythmia

Dosage arrhythmia		180-240 mg once daily (ER); 30 mg 4x/day (IR); IV for
Common Side Effects		Headache, dizziness, swelling, nausea
Serious Risks		Bradycardia, hypotension, heart block, liver issues
Patient Feedback		Effective; swelling, fatigue, slow heart rate
Contraindications		Severe hypotension, AV block, sick sinus syndrome

Sources: [Drugs.com](https://www.drugs.com/diltiazem.html), [Mayo Clinic](https://www.mayoclinic.org/drugs-supplements/diltiazem-oral-route/description/drg-20071775), [1mg](https://www.1mg.com/medicines/diltiazem-232289)

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