

Verapamil (Calan, Verelan, Calan SR, Isoptin) Considerations for Use*

US/FDA Approved Indication: Heart Rate Control for Atrial Fibrillation

Mechanism of Action	Blocks calcium-dependent contractions in cardiac and peripheral smooth muscle leading to vasodilation; slows cardiac conduction through SA node
Dosing[†]	<p><u>Acute setting:</u> 0.075 to 0.15 mg/kg (average 5 to 10 mg) IV over 2 minutes; 2nd dose of 10 mg IV may be given 15-30 minutes later if needed</p> <p><u>Non-acute setting or maintenance:</u> 120 to 480 mg daily, slow-release/extended release available and preferred</p> <p><u>Elderly:</u> In general, use lower adult dosage and administer over at least 3 minutes; adjust dosage based on clinical response</p> <p><u>Hepatic Impairment:</u> Use with caution; if possible reduce initial dosage to about 33% of the usual starting dosage and adjust based on clinical goals</p> <p><u>Renal Impairment:</u> Use with caution; no dosage adjustment needed</p>
Contraindications	<ul style="list-style-type: none"> • severe LV dysfunction • hypotension (SBP < 90) • cardiogenic shock • sick sinus syndrome without pacemaker • 2nd or 3rd degree AV block without pacemaker • A-Fib/flutter conducted via accessory pathway (ie, Wolff-Parkinson-White)
Major Side Effects	hypotension, heart block, HF
Dosage forms and Strengths	<p><u>PO:</u> 40 mg, 80 mg, 120 mg immediate-release tablets (Calan®) 120 mg, 180 mg, 240 mg sustained-release tablets (Isoptin® SR) 120 mg, 180 mg, 240 mg, 360 mg sustained-release capsules (Verelan®) 100mg, 200 mg, 300 mg extended-release (Verelan® PM) 180 mg, 240 mg extended-release tablets (Covera-HS®)</p> <p><u>IV:</u> 2.5 mg/mL solution for injection</p>
Special Notes	<p>Many verapamil products are not equivalent on a mg:mg basis; monitor response and side effects when interchanging between products.</p> <p>Covera-HS and Verelan PM are chronotherapeutic products; give at bedtime to blunt early morning surge in blood pressure</p>
Counseling	<p>Take with food or milk to minimize gastric irritation</p> <p>Sustained-release tablets may be broken and each piece swallowed whole; do not chew or crush</p> <p>Extended-release tablets should be swallowed whole</p> <p>Contents of sustained-release capsules may be sprinkled on food (eg, apple sauce); do not chew or crush capsule contents</p> <p>Empty tablets that appear in stool are not significant</p>

*Refer to prescribing information for more complete information.

†Dosages given in the table may differ from those recommended by the manufacturers.

Sources:

1. American College of Cardiology (ACC), American Heart Association (AHA), and the European Society of Cardiology (ESC). *ACC/AHA/ESC 2006 Guidelines for the Management of Patients With Atrial Fibrillation*. Washington, DC: American College of Cardiology.
2. Heart Rhythm Society. *AF360 Pocket Guide: Practical Rate and Rhythm Management of Atrial Fibrillation*. 2010, Washington, DC: Heart Rhythm Society.
3. *Tarascon Pocket Pharmacopoeia*®2012.