<table>
<thead>
<tr>
<th>Therapeutic Use</th>
<th>Administration</th>
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<tbody>
<tr>
<td>Treatment and prophylaxis of angina pectoris</td>
<td>Nitroglycerin available as sublingual tablets, sustained-release capsules or tablets, a translingual spray or transmucosal tablets, transdermal ointment or patch, and IV form</td>
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<tr>
<td>Longer acting forms such as regular tablets, immediate release or sustained release tablets/capsules are used to prevent attacks from occurring</td>
<td>Two types of isosorbide are available: isosorbide dinitrate (Isordil) available in regular, chewable, sublingual or sustained release tablets, isosorbide mononitrte (Ismo, Imdur) available in sustained release and immediate release tablets or capsules</td>
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<td>IV nitroglycerin is used for severe unstable angina attacks and to control blood pressure perioperatively and to treat heart failure after acute MI</td>
<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
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<td>Nitroglycerin available as sublingual tablets, sustained-release capsules or tablets, a translingual spray or transmucosal tablets, transdermal ointment or patch, and IV form</td>
<td>Sublingual sprays: Dose equals 1 or 2 sprays; as for sublingual tablets, no more than 3 doses in a 15 minute period</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>Patient should not swallow transdermal or transmucosal tablets; may need to moisten mouth to help tablet dissolve</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>Store tablets in a dark tightly closed container for no more than 24 months after opening.</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>Transdermal patches are for prevention only; apply to a hairless area and rotate sites.</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>Remove patches for 10-12 hours daily to prevent tolerance; apply patch in morning, remove at night.</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>Topical ointment: dosage measured as amount squeezed from tube (e.g. 2 inches = 30 mg); apply to dry skin and cover area with plastic wrap</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>When discontinuing long-acting forms, taper doses to prevent increased chest pain (vasospasm)</td>
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<td>Place sublingual tablets under tongue to dissolve when chest pain starts; if not relieved in 5 minutes, call 911, take a second tablet; take a third tablet 5 minutes later if no relief</td>
<td>IV form is infused continuously in a glass bottle with special tubing only</td>
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</table>

**Side/Adverse Effects**

- Headache (severe at first, reduced with treatment)
- Orthostatic hypotension
- Tachycardia
- Tolerance develops quickly to all forms (decreased effectiveness)
- Allergy or tolerance to nitroglycerin or isosorbide
- Head injury, increased intracranial pressure
- Severe anemia
- GI disease including hypermotility (sustained release isosorbide)
- IV nitroglycerin:
  - Hypertension
  - Hypovolemia
  - Hyperthyroidism
  - Liver disease
  - Conditions that cause dry mouth (sublingual and transmucosal forms)
  - Early MI
  - Older adults
- Increased hypotension may result when used with other antihypertensive drugs or with alcohol
- PDE5 inhibitors, such as sildenafil (Viagra) may cause severe hypotension
- Beta blockers and calcium channel blockers decrease tachycardia caused by nitroglycerin

**Interventions**

- Caregivers should avoid touching ointment when applying
- Monitor baseline orthostatic BP and pulse; check again when nitrate form reaches its peak effect (e.g. 1 hr for transdermal forms)
- Monitor heart rate in patients taking nitrates
- Monitor for drug tolerance
- Monitor drug tolerance
- Give beta blocker or calcium channel blocker, if prescribed, to suppress tachycardia
- Remove transdermal forms for part of each day
- Take over the-counter analgesic for unrelieved headaches (most subside spontaneously within 20 minutes)
- Report dizziness, syncope to provider
- Move slowly from lying down to sitting or standing to prevent injury
- Do not perform hazardous activity, such as driving, if dizziness occurs
- Take pulse and report tachycardia above prescribed parameters
- Take only as many sublingual tablets as needed

**Patient Instructions**

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