

Drug Information Table

Nitrates – nitroglycerin, isosorbide (Isordil)

Therapeutic Use	Administration	
<ul style="list-style-type: none"> • Treatment and prophylaxis of angina pectoris <ul style="list-style-type: none"> ◦ Rapid-acting forms (only transmucosal tablets, translingual spray and sublingual tablets treat an angina attack) ◦ Longer acting forms such as regular tablets, immediate release or sustained release tablets/capsules are used to prevent attacks from occurring • IV nitroglycerin is used for severe unstable angina attacks and to control blood pressure perioperatively and to treat heart failure after acute MI 	<ul style="list-style-type: none"> • Nitroglycerin available as sublingual tablets, sustained-release capsules or tablets, a translingual spray or transmucosal tablets, transdermal ointment or patch, and IV form • Two types of isosorbide are available <ul style="list-style-type: none"> ◦ isosorbide dinitrate (Isordil) available in regular, chewable, sublingual or sustained release tablets. ◦ isosorbide mononitrate ((Ismo, Imdur) available in sustained release and immediate release tablets or capsules • 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 • Sublingual sprays: Dose equals 1 or 2 sprays; as for sublingual tablets, no more than 3 doses in a 15 minute period • Patient should not swallow transdermal or transmucosal tablets; may need to moisten mouth to help tablet dissolve • Store tablets in a dark tightly closed container for no more than 24 months after opening. • Transdermal patches are for prevention only; apply to a hairless area and rotate sites. • Remove patches for 10-12 hours daily to prevent tolerance; apply patch in morning, remove at night. • 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 • When discontinuing long-acting forms, taper doses to prevent increased chest pain (vasospasm) • IV form is infused continuously in a glass bottle with special tubing only 	
Side/Adverse Effects	Interventions	Patient Instructions
<ul style="list-style-type: none"> • Headache (severe at first, reduced with treatment) 	<ul style="list-style-type: none"> • Caregivers should avoid touching ointment when applying • Monitor length and severity of patient headache 	<ul style="list-style-type: none"> • Take over-the-counter analgesic for unrelieved headaches (most subside spontaneously within 20 minutes)
<ul style="list-style-type: none"> • Orthostatic hypotension 	<ul style="list-style-type: none"> • Monitor baseline orthostatic BP and pulse; check again when nitrate form reaches its peak effect (e.g. 1 hr for transdermal forms) 	<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Tachycardia 	<ul style="list-style-type: none"> • Monitor heart rate in patients taking nitrates • Give beta blocker or calcium channel blocker, if prescribed, to suppress tachycardia 	<ul style="list-style-type: none"> • Take pulse and report tachycardia above prescribed parameters
<ul style="list-style-type: none"> • Tolerance develops quickly to all forms (decreased effectiveness) 	<ul style="list-style-type: none"> • Monitor for drug tolerance • Give any nitroglycerin form in smallest needed amount; use intermittent scheduling for transdermal and long-acting forms 	<ul style="list-style-type: none"> • Remove transdermal forms for part of each day • Take only as many sublingual tablets as needed
Contraindications	Precautions	Interactions
<ul style="list-style-type: none"> • Allergy or tolerance to nitroglycerin or isosorbide • Head injury, increased intracranial pressure • Severe anemia • Glaucoma (sustained release forms) • GI disease including hypermotility (sustained release isosorbide) • IV nitroglycerin: <ul style="list-style-type: none"> ◦ hypotension ◦ hypovolemia (correct before administering) ◦ Constrictive pericarditis 	<ul style="list-style-type: none"> • Hypotension • Hypovolemia • Hyperthyroidism • Liver disease • Conditions that cause dry mouth (sublingual and transmucosal forms) • Early MI • Older adults 	<ul style="list-style-type: none"> • 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