

NITROGLYCERIN

Class: Antianginal Agent; Antidote, Extravasation; Vasodilator

Indications: Treatment or prevention of angina pectoris

Intravenous (I.V.) administration: Treatment or prevention of angina pectoris; acute decompensated heart failure (especially when associated with acute myocardial infarction); perioperative hypertension (especially during cardiovascular surgery); induction of intraoperative hypotension

Intra-anal administration : Treatment of moderate-to-severe pain associated with chronic anal fissure

Unlabeled : Short-term management of pulmonary hypertension (I.V.); esophageal spastic disorders; uterine relaxation; treatment of sympathomimetic vasopressor extravasation injury (alternative to phentolamine)

Available dosage form in the hospital: 10MG PATCHES, 5MG PATCHES, 1MG/ML 10 ML AMP, 50MG/50ML VIAL, LOTION.

Dosage:

Note: Hemodynamic and antianginal tolerance often develop within 24-48 hours of continuous nitrate administration. Nitrate-free interval (10-12 hours/day) is recommended to avoid tolerance development; gradually decrease dose in patients receiving NTG for prolonged period to avoid withdrawal reaction.

-Angina/coronary artery disease:

-*Oral:* 2.5-6.5 mg 3-4 times/day (maximum dose: 26 mg 4 times/day)

-*I.V.:* 5 mcg/minute, increase by 5 mcg/minute every 3-5 minutes to 20 mcg/minute. If no response at 20 mcg/minute, may increase by 10-20 mcg/minute every 3-5 minutes (generally accepted maximum dose: 400 mcg/minute)

-*Topical 2% ointment:* $\frac{1}{2}$ " upon rising and $\frac{1}{2}$ " 6 hours later; if necessary, the dose may be doubled to 1" and subsequently doubled again to 2" if response is inadequate. Doses of $\frac{1}{2}$ " to 2" were used in clinical trials. Recommended maximum: 2 doses/day; include a nitrate free-interval ~10-12 hours/day.

-*Topical patch, transdermal:* 0.2-0.4 mg/hour initially and titrate to doses of 0.4-0.8 mg/hour.

Tolerance is minimized by using a patch-on period of 12-14 hours/day and patch-off period of 10-12 hours/day.

-*Sublingual:* 0.3-0.6 mg every 5 minutes for maximum of 3 doses in 15 minutes; may also use prophylactically 5-10 minutes prior to activities which may provoke an attack.

-*Translingual:* 1-2 sprays onto or under tongue every 3-5 minutes for maximum of 3 doses in 15 minutes, may also be used prophylactically 5-10 minutes prior to activities which may provoke an angina attack

-Anal fissure, chronic (0.4% ointment): Intra-anal: 1 inch (equals 1.5 mg of nitroglycerin) every 12 hours for up to 3 weeks

Esophageal spastic disorders (unlabeled use): Sublingual: 0.3-0.6 mg .

Extravasation (sympathomimetic vasopressors), treatment (alternative to phentolamine; unlabeled use): Based on limited data in neonates; optimal dosing has not been established:

Topical 2% ointment: 4 mm/kg applied as a thin ribbon to the affected area has been reported in a case series; after 8 hours, if no improvement, the dose may be reapplied to the affected site .

Application of a 1-inch strip on the affected site has also been described to be successful , may also be considered for adults as an alternative to phentolamine .

Uterine relaxation (unlabeled use): I.V. bolus: 100-200 mcg; may repeat dose every 2 minutes as necessary .

Renal Impairment:

No dosage adjustment provided in manufacturer's labeling.

Hepatic Impairment :

No dosage adjustment provided in manufacturer's labeling.

Common side effect: Cardiovascular: Flushing, hypotension, orthostatic hypotension, peripheral edema, syncope, tachycardia. Central nervous system: Headache (common), dizziness, lightheadedness. Gastrointestinal: Nausea, vomiting.

Neuromuscular & skeletal: Paresthesia, weakness. Respiratory: Dyspnea, pharyngitis, rhinitis

Pregnancy Risk Factor: C