

Medication: Nitroglycerin	PDN: 6963.07	Last Updated: August 21 2025	PMD: Andrew Travers*	PDC: Teena Robinson*	Page 1 of 2
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NITROGLYCERIN

1.0 Classification

- Nitrate
- Vascular smooth muscle relaxant

2.0 Mechanism of Action

- Reduces peripheral vascular resistance, blood pressure, venous return, and cardiac workload.

3.0 Indications

- Ischemic chest discomfort (or other signs of acute coronary syndrome)
- Heart failure/pulmonary edema

4.0 Contraindications

- Systolic blood pressure less than 90 mmHg
- Bradycardia (less than 50 bpm)
- Tachycardia (greater than 150 bpm)
- Known hypersensitivity
- Patients who have used a phosphodiesterase inhibitor for erectile dysfunction (Viagra within previous 24 hours; Cialis, Levitra, Staxyn within previous 36 hours)
- Right ventricle infarction (1mm of ST elevation in V4R)

5.0 Precautions

- A modified 12 lead should be acquired when elevation has been noted in any one of the inferior leads (II, III or aVF) to rule out right ventricular involvement (which has preload dependence).
- Patients should be sitting or lying when nitroglycerin is administered.

6.0 Route

- May be given SL

7.0 Dosage

Adult

- 1 spray SL, q 3-5 minutes as needed.

8.0 Supplied

- 0.4 mg per metered dose

9.0 May Be Given By

- EMR (for ischemic chest pain only and only if patient has been previously prescribed nitroglycerin). Consult the M CCP if exceeding 3 doses/sprays.
- PCP/ACP/CCP

10.0 Adverse Effects

- Hypotension
- Dizziness
- Decreased LOC

- Headache

11.0 Special Notes

- Nitroglycerin is not contraindicated for all inferior STEMIs, only inferior STEMIs with right ventricular involvement. Anytime ST elevation is noted in any one of the inferior leads (II, III or aVF), the V4 electrode should be moved to the 5th intercostal space on the patients' right side to become V4R. After acquiring a modified 12 lead, if 1mm or more of ST elevation is noted in V4R nitroglycerin should not be administered.
- It is important to check a blood pressure before and after nitroglycerin administration. Hypotension may be more pronounced in a patient who has not previously taken nitroglycerin.
- Pregnancy category C [if the patient will benefit from a Category C drug, it is generally used]

12.0 References

- Adult Respiratory Distress Clinical Practice Guideline
- Chest Pain Clinical Practice Guideline
- Compendium of Pharmaceuticals and Specialties (CPS)

*Electronically Signed

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