

# Nitroglycerin

## Classification

Antianginal

## Indications

- EMR: Relief from chest pain suggestive of acute coronary syndrome
- ACP: Reduction of blood pressure in acute cardiogenic pulmonary edema

## Contraindications

- Known allergy or hypersensitivity to nitroglycerin
- Use of Viagra (sildenafil) or Levitra (vardenafil) within the previous 24 hours
- Use of Cialis (tadalafil) within the previous 48 hours
- Hypotension or uncorrected hypovolemia
- Severe anemia
- Restrictive pericarditis or pericardial tamponade
- Documented right sided acute myocardial infarction

## Adult dosages

- EMR: Relief from chest pain suggestive of acute coronary syndrome
  - Requires ClinCall consultation if the patient has no prior prescription for nitroglycerin, or if more than 3 doses are needed
  - 0.4 mg SL every 3-5 minutes
    - Verify systolic blood pressure prior to administering each dose. Systolic blood pressure must be > 110 mmHg.
- ACP: Reduction of blood pressure in acute cardiogenic pulmonary edema
  - 0.4 mg SL every 3-5 minutes
- CCP: All indications
  - 10-200 mcg/min IV infusion

## Pediatric Considerations And Dosing

Not authorized

## Mechanism Of Action

Relaxes smooth muscle in vasculature. Nitroglycerin works primarily as a venodilator, but can also produce coronary and systemic arterial vasodilation, decreasing preload and lowering myocardial oxygen consumption.

## Pharmacokinetics

Sublingual

- Onset: 1-3 minutes

- Peak: uncertain
- Half-life: 1-4 minutes
- Duration: 30 minutes

## **Adverse Effects**

- Hypotension
- Headache
- Nausea

## **Warning And Precautions**

Do not administer to patients whose blood pressure is < 110 mmHg, or who are exhibiting signs of significant hypoperfusion.

Use with caution in patients with hepatic or renal insufficiency.

Exercise caution (and rule out right-sided involvement) in patients with documented inferior ischemia on 12-lead ECG.

## **Drug Interactions**

Antihypertensive agents may act synergistically with nitroglycerin.

