

**NITROGLYCERIN**  
**(Nitrostat®)(Nitro-Bid®)**

**Classification:** Vasodilator

**Actions:**

1. Dilates coronary vessels enhancing coronary perfusion
2. Reduces coronary vasospasm
3. Decreases myocardial workload and oxygen demand
4. Relaxes vascular smooth muscle, resulting in peripheral vasodilation
5. Produces venous pooling due to vasodilation
6. Reduces preload and afterload

**Indications:**

1. Chest pain of suspected myocardial origin
2. Acute pulmonary edema

**Contraindications:**

- Blood pressure less than 100 systolic and/or other signs of poor perfusion
- Right Ventricular Infarction
- Use of erectile dysfunction medications within previous 24 hrs
  - 36 hours for tadalafil (Cialis)

**Adverse Effects:**

**Cardiovascular**

Orthostatic hypotension  
Tachycardia  
Palpitations

**Neurological**

Throbbing headache  
Increased ICP  
Dizziness/syncope

**Other**

Flushed skin  
Sublingual burning

**Administration:**

**ADULT DOSE Sublingual**

**Persistent cardiac chest pain or pulmonary edema:** 0.4 mg SL tablets or spray, may repeat every 5 minutes. Titrate to pain, BP and signs of perfusion

**ADULT DOSE – with CPAP**

Administer first dose(s) of Nitroglycerine SL and apply 2% topical Nitroglycerin patch - 1 Gm pre-packaged single dose: apply to chest area once mask is applied

**Notes:**

- Do not administer if BP drops <-100 systolic and/or other signs of poor perfusion are present
- When BP < 100 consult the Base Hospital
- If at any time the BP drops <100 remove nitroglycerine patch
- Monitor BP trends. Administer with caution and consult with base physician if BP demonstrates significant decreases

**Onset:** SL - 1-3 minutes  
Topical – 15-60 minutes

**NITROGLYCERIN continued**

**Duration:** SL - 30-60 minutes  
Topical - 2-12 hours

**Notes:**

- Patients can develop a tolerance to Nitroglycerin.
- If administered via spray, hold can upright and do not shake can.
- Administering personnel must wear gloves to avoid inadvertent skin absorption.
- Nitroglycerin must be stored in a glass vial away from light, and tends to lose potency once exposed to air. The possibility that a patient's personal Nitroglycerin may have lost potency must be kept in mind when a patient takes Nitroglycerin for symptoms without relief.
- Avoid administering Nitroglycerin for patients with rales due to circumstances other than pulmonary edema/congestive heart failure (e.g. pneumonia).
- The impotence treatment drugs may have a cumulative vasodilatory effect when used in conjunction with Nitroglycerin. Pre-hospital providers should ask if the patient has taken any Viagra-like medications in the last 24 hours. The base hospital physician may still order Nitroglycerin if he/she feels that enough time has passed for the patient to have safely metabolized the drug.
- Use caution with defibrillation and/or cardioversion if topical Nitroglycerin patch is placed on the chest wall