

## NITROGLYCERIN (Nitrolingual)

EMSAC FEBRUARY 2026

### ACTION: Nitrate/Vasodilator

- Dilates venous capacitance vessels, reducing blood return to the heart (reduced preload)
- Decreases systemic vascular resistance and facilitates cardiac emptying (reduced afterload)
- Decreases myocardial oxygen demand through coronary artery dilation

### INDICATIONS:

- Chest pain of suspected cardiac origin
- Acute pulmonary edema with suspected cardiogenic origin (SBP >180mmHg in addition to respiratory symptoms) and congestive heart failure

### CONTRAINDICATIONS:

- ~~Hypersensitivity~~ Allergy to medication
- Hypotension (SBP <90mmHg) and shock
- Recent (within past 48 hours) use of phosphodiesterase inhibitors (e.g. sildenafil, vardenafil, tadalafil). These are drugs commonly used to treat erectile dysfunction.

### POTENTIAL SIDE EFFECTS:

- Hypotension and syncope
- Headache and flushing
- Syncope
- Tachycardia

### ADULT DOSE/ROUTE:

- ⇒ **Cardiac Chest Pain:** 0.4 mg sublingual spray or tablet. Repeat q5 min for continued chest pain if SBP >90 mmHg, max of 3 doses (total 1.2mg)
- ⇒ **Pulmonary Edema (SBP ≥ 180mmHg):** 0.8mg sublingual spray or tablet. Repeat q5 min for continued respiratory symptoms if SBP >180 mmHg, max of 2 doses (total 1.6mg)

### PEDIATRIC DOSE/ROUTE:

- ⇒ Not indicated

### NOTES:

- Elderly patients and / or dehydrated patients are more vulnerable to hypotension caused by the vasodilation.
- Nitrolingual spray can be administered either on top of the tongue, or underneath the tongue. To administer, instruct patients to hold their breath and open their mouths. ~~Instruct them to hold their breath.~~ Paramedics then spray NTG lingually or sublingually, and then tell the patients that they can close their mouths and resume normal breathing.