

V. Nitroglycerin

- I. Classification
 - Vasodilator
- II. Actions
 - Causes venous pooling by dilating arteries and veins
 - Increases myocardial perfusion by dilating coronary arteries and relieving coronary vasospasm
 - Decreases the workload of the heart and myocardial oxygen demand by reducing preload and after load
- III. Indications
 - Chest pain of suspected myocardial origin
 - Cardiogenic pulmonary edema
- IV. Contraindications
 - Poor systemic perfusion
 - Signs/symptoms of cerebral hemorrhage or increased intracranial pressure
- V. Adverse effects
 - A. Cardiovascular
 - Hypotension*
 - Bradycardia
 - Reflex tachycardia*
 - Rebound hypertension*
 - B. Gastrointestinal
 - Nausea/vomiting
 - Dry mouth
 - C. Neurological
 - Throbbing headache*
 - Dizziness/faintness*
 - Confusion
 - Blurred vision
 - D. General
 - Flushed skin
 - Sublingual burning*
- VI. Administration
 - A. Adult
 - Lingual Spray : 1 spray (0.4 mg) SL. May repeat every 3 minutes if SBP \geq 100 mmHg.
 - Tablet : 1 tablet (0.4 mg) SL. May repeat every 3 minutes if SBP \geq 100 mmHg.
 - B. Pediatric
 - Not recommended for prehospital use.
- VII. Onset
 - 1 - 3 minutes

VIII. Duration

- 30 - 60 minutes

IX. Precautions

- Nitroglycerin may cause hypotension due to vasodilation or produce a synergistic hypotensive effect with alcohol, beta and calcium channel blockers and phenothiazines. If hypotension does not resolve, place the patient in a shock position and consider a fluid challenge if the breath sounds are clear.
- All patients (male or female) who receive nitroglycerin must be questioned about taking Viagra® (sildenafil citrate) or similar drugs (ie. Levitra®, Cialis®). Any patient that has taken these medications within the last 24 hours should not receive any form of nitroglycerin as irreversible hypotension may occur. It is imperative that the patient be questioned (in a confidential manner) about the use of these medications. The fact that the patient was questioned as well as their answer must be recorded in the patient care record. Contact on-line physician for further orders in this case.
- Do not administer nitroglycerin if the blood pressure is below 100 systolic. Always take a blood pressure before and 5 minutes after administrations of nitroglycerin.
- If unable to establish an IV, obtain on-line medical control approval before administration of nitroglycerin.
- One spray delivers 0.4 mg of nitroglycerin. If the container is shaken, it will alter the dose delivered. Do not shake the container.
- Inhaling the spray affects the absorption rate. Instruct the patient not to inhale spray.
- Nitroglycerin can precipitously drop the blood pressure in Right Ventricular Infarctions. It is to be given only with On-Line Medical Direction order.