Nitroglycerine (NTG)
McHenry Western Lake County EMS
Objectives

• During this session we will discuss:
• Class
• Actions
• Indications
• Contraindications
• Dosing/Routes
• How supplied
• Precautions
• Side effects
Class:

- Coronary vasodilator
- Chemical Class: Nitrate
Actions:

- Dilates coronary vessels
- Relieves vasospasm and ↑ coronary collateral blood flow to ischemic myocardium.
- Vascular smooth muscle relaxant; dilates veins to ↓ preload
- Higher doses dilate arterioles = ↓ afterload
Indications:

- Acute coronary syndromes with suspected ischemic pain
- Pulmonary edema
- Hypertensive crisis with chest pain/pulmonary edema
Dosing/Routes:

- 0.4 mg tabs SL or spray.
- May repeat q 3-5 minutes up to 3 doses for ACS and unlimited doses for pulmonary edema as long as B/P >90
- If B/P 90-100 start IV prior to 1st NTG
- Let tab dissolve naturally; may need to drop NS over tab if mouth is very dry.
Dosing/Routes

• With evidence of AMI: Limit B/P drop to 10% if normotensive, 30% if hypertensive, and avoid drop below 90.
• Pt should sit or lie down when receiving the drug.
How supplied:

- Bottle with 0.4g tabs
- Metered Spray Bottle
Contraindications:

• If patient has taken Viagra or Levitra within 24 hours or Cialis within 48 hours; Contact medical control for risk/benefit analysis
Contraindications

- Hypotension (SPB<90) or more than 30 mmHg below baseline.
- Severe bradycardia
- Tachycardia (P>100)
- Hypoglycemia
- ↑ ICP; Glaucoma
- Peds <12
Precautions:

• Use NTG with caution or not at all in patients with inadequate RV preload or those that are preload dependant (RV infarct)

• Contact medical control for orders
Side effects/adverse reactions:

- CNS: Headache
- CV: Hypotension (postural often transient and will respond to NS)
- CNS: Flushed skin
- CNS: Dizziness, syncope
- CV: Ringing in the ears
- Burning under the tongue
- GI: Nausea/vomitting
Case Study

• You have been called to the scene of a 54 y/o male that is having chest pains. He rates the pain at an 8/10. He has no past medical history and tells you he takes no meds daily. What question should you still ask this patient before giving him the first NTG.
Answer

• Have you taken Viagra, Levitra or Cialis in the past 24-48 hours?
• If he has not taken it, what is the dose of NTG he should be given for his chest pain.
Answer

- 0.4 mg tab SL or a spray.
- May repeat q 3-5 minutes up to 3 doses.
- Monitor the patients B/P
- If B/P 90-100 start IV prior to 1st NTG