

NITROGLYCERIN INFUSION - ICU

- PURPOSE:** To outline the management of the patient receiving a nitroglycerin (NTG) infusion.
- SUPPORTIVE DATA:** Nitroglycerin is a venodilator resulting in decreased preload and coronary artery dilation. It is indicated for the treatment of chest pain and to prevent post-coronary artery bypass graft vasospasm. Due to its vasodilatory properties it is not used for patients with increased intracranial pressure (ICP), glaucoma, or any preload dependent cardiac condition e.g., tamponade, right ventricular infarction or aortic/mitral stenosis.
- ASSESSMENT:**
1. Assess the following immediately prior to initiation of infusion, 5 minutes post initiation and every rate change, every 10 minutes until stable, then then every hour:
 - Vital signs
 - Hemodynamic values (as applicable)
 - Level of chest pain (if being administered for chest pain)
 2. Determine NTG concentration and verify dosage upon initiation, within one hour of assuming care of the patient or earlier as clinically appropriate, and with bag changes. In addition, verify accurate dosage with every rate change.
- ADMINISTRATION:**
3. Use non-polyvinyl tubing.
 4. Ensure order includes dose and titration parameters.
 5. Administer as ordered (preferably through a central line)
Usual dosage:
 - Adult:
 - Initial dose: 5-20 mcg/minute
 - Titrate by 5-20 mcg/minute every 3-5 minutes according to ordered parameters
 - Hold NTG per ordered blood pressure parameters
 - Maximum: 200 or 400 mcg/min (depending on indication for NTG)
 - Pediatric:
 - Initial infusion: 0.25-0.5 mcg/kg/minute.
 - Titrate by 0.5-1 mcg/kg/minute every 3-5 minutes
 - Usual doses: 1-3 mcg/kg/minute
 - Usual maximum: 5 mcg/kg/minute (20 mcg/kg/minute may be used)
- REPORTABLE CONDITIONS:**
6. Notify provider for:
 - Headache
 - Hypotension
 - Electrocardiogram changes, dysrhythmias
 - Chest pain
 - Inability to achieve ordered blood pressure parameters
- PATIENT/ FAMILY TEACHING:**
7. Instruct on the following:
 - To report chest pain, headache, dizziness
 - Rationale for NTG usage and need for frequent monitoring
 - To avoid sudden orthostatic changes
- ADDITIONAL STANDARDS:**
8. Refer to the following as indicated:
 - Arterial Line – ICU
 - Pulmonary Artery Catheter – ICU
 - Chest Pain

DOCUMENTATION: 9. Document in accordance with documentation standards.

Initial date approved: 11/94	Reviewed and approved by: Professional Practice Committee Pharmacy & Therapeutic Committee Nurse Executive Committee Attending Staff Association Executive Committee	Revision Date: 10/00, 03/05, 03/14, 05/16, 07/19
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