

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME _____

MEDICATION Norepinephrine

REVIEW MODULE CHAPTER _____

CATEGORY CLASS Adrenergic/ Vasopressor

PURPOSE OF MEDICATION

Expected Pharmacological Action

Stimulates alpha-adrenergic receptors located mainly in blood vessels, causing constriction of both capacitance and resistance vessels.
Also has minor beta-adrenergic activity (myocardial stimulation).

Therapeutic Use

Produces vasoconstriction and myocardial stimulation, which may be required after adequate fluid replacement in the treatment of severe hypotension and shock.

Complications

CNS: anxiety, dizziness, headache, insomnia, restlessness, tremor, and weakness.
Resp: dyspnea.
CV: arrhythmias, bradycardia, chest pain, and hypertension.
GU: Decreased urine output, and renal failure.
Endo: hyperglycemia.
Fluid and Electrolyte: metabolic acidosis.
Local: phlebitis at IV site.
Misc: fever.

Medication Administration

Intravenous

Contraindications/Precautions

Contraindicated in: Vascular, mesenteric, or peripheral thrombosis;
Obstetric: Decreased uterine blood flow; Hypoxia; Hypercarbia; Hypotension secondary to hypovolemia (without appropriate volume replacement); Hypersensitivity to bisulfites.

Use Cautiously in: Hypertension; Concurrent use of MAO inhibitors, tricyclic antidepressants, or cyclopropane or halothane anesthetics; Hyperthyroidism; Cardiovascular disease; Lactation: Safety not established.

Nursing Interventions

Monitor BP every 2–3 min until stabilized and every 5 min thereafter. Systolic BP is usually maintained at 80–100 mm Hg or 30–40 mm Hg below the previously existing systolic pressure in previously hypertensive patients. Consult physician for parameters.

Continue to monitor BP frequently for hypotension following discontinuation of norepinephrine.

ECG should be monitored continuously. CVP, intra-arterial pressure, pulmonary artery diastolic pressure, pulmonary capillary wedge pressure (PCWP), and cardiac output may also be monitored.

Monitor urine output and notify health care professional if it decreases to 30 mL/hr.

Assess IV site frequently throughout infusion. A large vein should be used to minimize risk of extravasation, which may cause tissue necrosis.

Interactions

Drug-Drug: Use with cyclopropane or halothane anesthesia, cardiac glycosides, doxapram, or local use of cocaine may result in increased myocardial irritability.

Use with MAO inhibitors, methyl dopa, doxapram, or tricyclic antidepressants may result in severe hypertension.

Alpha-adrenergic blockers can prevent pressor response.

Beta blockers may exaggerate hypertension or block cardiac stimulation.

Concurrent use with ergot alkaloids (ergotamine, ergonovine, methylexgonovine, or oxytocin) may result in enhanced vasoconstriction and hypertension.

Client Education

Instruct patient to report headache, dizziness, dyspnea, chest pain, or pain at infusion site promptly.

Evaluation of Medication Effectiveness

Increase in BP to normal range.
Increased tissue perfusion.