

# Dopamine

## Formulary

Douglas County Kansas EMS System

March 2021

**Approved Provider:** Paramedic

**Referenced Protocols:** [Chest pain](#), [CHF](#), [Dysrhythmias](#), [Sepsis](#), [Shock](#)

### Dosing and Administration

#### ADULT Medications:

- 400 mg / 250 cc NS infused at 5-20 mcg/kg/min (titrated to effect) IV/IO

#### PEDIATRIC Medications: Refer to HandTevy

- 400 mg / 250 cc NS infused at 5-20 mcg/kg/min (titrated to effect) IV/IO

### Drip Rates Estimates for 400mg in 250cc NS with 60 gtt/cc set

<i>Patient weight</i>	<i>5mcg/kg/min</i>	<i>10mcg/kg/min</i>	<i>15mcg/kg/min</i>
50kg	10 gtt/min	20 gtt/min	40 gtt/min
100kg	20 gtt/min	40 gtt/min	75 gtt/min
150kg	30 gtt/min	55 gtt/min	110 gtt/min

### Pharmacology and Actions:

- Chemical precursor of norepinephrine, occurring naturally in the body, stimulating both alpha and beta receptors. This allows for cardiac stimulation and blood pressure support which improves the pumping strength of the heart (myocardial contractility)
- A "cardiac dose" of 5-10 mcg/kg/min acts through the sympathetic nervous system to increase heart muscle contraction force and heart rate, increasing cardiac output and blood pressure
- A "pressor dose" of 10-20 mcg/kg/min also causes vasoconstriction which further increases blood pressure, but can produce kidney function impairment and cardiac arrhythmias

### Indications:

- Hypotension in suspected cardiogenic shock
- Hypotension in sepsis refractory to IVF administration
- Neurogenic shock
- Hypotensive patients with bradycardia that is non-responsive to atropine

### Contraindications:

- None

### Precautions:

- Dopamine is inactivated when added to sodium bicarbonate
- Tissue Necrosis may occur with infiltration

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### **Administration:**

- IV/IO via micro drip (60 gtts) admin set

### **Side Effects:**

- Myocardial Irritability S/S-
  - Ectopy
  - Tachycardia
  - Angina
- GI S/S-
  - Nausea
  - Vomiting