

## Levophed® (Norepinephrine)

### **Mechanism of Action:**

Norepinephrine functions as a potent peripheral vasoconstrictor and as an inotropic stimulator of the heart and dilator of coronary arteries by stimulating the alpha and beta-1 receptors.

### **Indications:**

1. Primary indication is cardiogenic shock.
2. Septic or neurogenic shock unresponsive to fluid challenge.

### **Precautions:**

1. Norepinephrine is a potent vasoconstrictor and may cause hypertension. The rate of flow should be carefully monitored and blood pressures should be taken every 2-3 minutes.
2. Extravasation of Levophed into tissue may cause tissue necrosis. The IV should be checked prior to administration for patency, and should be monitored frequently during administration. Should the IV infiltrate notify hospital staff ASAP for possible antidote treatment.
3. Use of a larger vein is recommended whenever possible to reduce the risk of necrosis.
4. Should not be given with patients with mesenteric or peripheral vascular thrombosis because of risk of increasing ischemia and extending the area of infarction.

### **Drug Interactions:**

Use with extreme caution in patients receiving monoamine oxidase inhibitors (MAO's), antihistamines, amphetamines or antidepressants of the triptyline or imipramine types because of the risk of severe, prolonged hypertension.

### **Administration:**

**Adult:** IV infusion ONLY – Mix 4mg in 250 ml D5W or D5NS (16mcg/ml). Begin infusion at 4mcg/min – (15 drops per min.) Then titrate to effect. Goal is blood pressure of 100mmHg systolic. Use a micro drip chamber or an IV pump to administer. Vasopressor response is rapid (onset 1-2 minutes) and duration is short (vasopressor action stops within 1-2 minutes).

**Pediatric:** Mix 2mg in 250 ml D5W (8mcg/ml). Begin infusion at 0.1mcg/kg/min. Then titrate to effect. Goal is minimum normal age specific blood pressure ( $70 + (2 \times \text{age})$ ). Use a micro drip chamber or an IV pump to administer.