

## EPINEPHRINE (Adrenaline)

### **ACTION: Sympathomimetic**

- Catecholamine (sympathomimetic) with alpha and beta adrenergic action.
- Results in increased heart rate, systemic vascular resistance, and blood pressure. It also causes bronchodilation due to its effects of beta-2 adrenergic receptors.

### **INDICATIONS:**

- All cardiac arrest patients, including V-Fib, pulseless V-Tach, asystole and PEA.
- Anaphylaxis.
- Severe bronchospasm.
- Refractory symptomatic bradycardia.

### **CONTRAINDICATIONS:**

- None in cardiac arrest.
- Tachydysrhythmias.
- Use with extreme caution for severe asthma or allergic reactions in patients >age 40 or in patients with coronary artery disease since myocardial ischemia may be precipitated.
- Intravenous Epinephrine should **only** be used in extreme emergencies or cardiac arrest. Use intramuscular initially for patients with anaphylaxis.

### **POTENTIAL SIDE EFFECTS:**

- Increased myocardial O<sub>2</sub> demand leading to chest pain and myocardial ischemia.
- Tachydysrhythmias including V-Tach and V-Fib.
- Headache and dizziness.
- Nausea and vomiting.

### **ADULT DOSE/ROUTE:**

- ⇒ **Anaphylaxis:** (1:1,000) 0.3mg IM. May repeat x 1. If hypotension not responding to IM Epinephrine x2 or IV fluid boluses, give Epinephrine (1:10,000) IV 0.1mg slow IV/IO over 5 minutes. Max dose 0.3mg.
- ⇒ **Cardiac Arrest:** (1:10,000) 1mg IVP/IO q 3 min during cardiac arrest.

### **PEDIATRIC DOSE/ROUTE:**

- ⇒ **Anaphylaxis:** (1:1,000) 0.01 mg/kg IM in anterolateral thigh. May repeat x1 in 5 minutes.
- ⇒ **Cardiac Arrest:** 0.01 mg/kg IVP/IO (1:10,000) q 3 min during cardiac arrest. May repeat x1 in 5 minutes.