

**Seminole Community College**  
**Medication Handout #18a**  
**Isoproterenol / Aminophylline**

**Isoproterenol (Isuprel) Sympathomimetic**

**Description-**Isoproterenol is a synthetic sympathomimetic that results in increased cardiac output by increasing the strength of cardiac contraction and somewhat increasing rate. It also reduces peripheral venous resistance and venous return.

**Indications-** Bradycardia refractory to atropine when pacing is not available and for severe status asthmaticus.

**Contraindications-** Cardiogenic Shock

**Precautions-** Tachydysrhythmias and those associated with digitalis and acute myocardial infarction.

**Dosage / Route-** Bradycardia:

Adult: 2 to 10 mcg / minute titrated to cardiac rate.

Pediatric: 0.1 mcg / kg / minute titrated to cardiac rate.

Status Asthmaticus:

Adult: 1 to 2 sprays, metered dose inhaler

Pediatric: Same as Adult

## **Aminophylline (Aminophylline / Somophyllin) Methylxanthine Bronchodilator**

**Description-** Aminophylline is a Methylxanthine that prolongs bronchodilation and decreased mucus production and has mild cardiac and CNS stimulating effects.

**Indications-** Bronchospasm in asthma and COPD refractory to sympathomimetics and other bronchodilators and in CHF.

**Contraindications-** Hypersensitivity to methylxanthines or uncontrolled cardiac dysrhythmias.

**Precautions-** Cardiovascular disease, hypertension, or taking theophylline, hepatic impairment, diabetes, hyperthyroidism, young children, glaucoma, peptic ulcers, acute influenza or influenza immunizations, and the elderly. Watch for PVCs or tachycardia. May cause hypotension.

**Dosage / Route-** Adult: 250 to 500 mg IV over 20 to 30 minutes.  
Pediatric: 6 mg / kg over 20 to 30 minutes. (Max 12 mg / kg / day)