

Epinephrine 1mg/1ml  
(Adrenalin)

McHenry Western Lake County  
EMS



# Objectives

- During this session we will discuss:
- Class
- Actions
- Indications
- Contraindications
- Dosing/Routes
- How supplied
- Precautions
- Side effects



# Class:

- Broncodilator-adrenergic



# Actions:

- Catecholemine with potent alpha and beta stimulating properties.
- Low dose: (<0.3 mcg/kg/min) Beta dominates;
- Bronchodilator
- Increased HR (+ chronotropic)
- Increased CO (+ inotropic)
- Increased AV conduction (+ domotropic)

# Conduction System

- Chronotropic = relates to heart rate
- Inotropy = relates to force of contraction
- Dromotropy = relates to conduction velocity



# Indications:

- 1mg/1ml
- Adult Emergent allergic reaction / critical asthma
- Anaphylaxis with no IV/IO (IM)
- Moderate to severe asthma
- Epiglottitis (neb)



# Dosing/Routes:

- Adults:
- 1mg/1ml
- Moderate allergic reaction/severe asthma:  
0.3 mg IM. May repeat x1 in 5-10 min.
- Anaphylaxis: with no IV/IO: 0.5 mg IM;  
Repeat X1

# Dosing/Routes

- Pediatrics
- 1mg/1ml
- Peds allergic reaction/severe asthma 0.01 mg/kg (0.01ml/kg)(max 0.3 mg) IM
- Peds anaphylaxis: 0.01 mg/kg (0.1 ml/kg) doses q 1 min to max total 1mg (IM/IVP/IO)





# How supplied:

- 1mg in 1ml ampule



# Contraindications:

- Hypersensitivity to sympathomimetics
- Sympathomimetic drugs mimic the effects of sympathetic activation on the heart and circulation.



# Precautions:

- Use with caution in patient with HR >100.



# Side effects/adverse reactions:

- CNS: Headache, dizziness, tremors, restless, anxiety, palpitations.
- CV: Increased HR, tachyarrhythmias
- GI: Nausea and vomiting
- Skin: Pallor
- Ref: MWLCEMS Protocol and 2000 Mosby's Nursing Drug Reference Book



# Case Study

- You have been called to the local park for a bee sting. Your patient is a 26 y/o female and is in moderate respiratory distress.
- She tells you that she is allergic to bee's but has never been given an Epi pen.



# Case Study

- She is very pale, coughing and having a hard time breathing.
- The correct dose of Epinephrine would be?



# Answer

- 0.3 mg IM

# Question

- What other medication would be given if the patients continues to have trouble.





# Answer

- May repeat the Epinephrine in 5-10 minutes.
- Benadryl 50mg IM