

# **RESPIRATORY EMERGENCIES**

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**Updated: 1-01-10**

## **RESPIRATORY EMERGENCIES**

### **CPAP Inclusion:**

#### **Respiratory distress (2 or more of the following)**

- Shortness of breath
- Retractions or accessory muscle usage
- Respiratory rate > 25
- Pulse ox < 92%

#### **Presumed pulmonary edema**

- History of CHF
- JVD
- Rales
- Ankle edema
- Flash pulmonary edema

### **Exclusions:**

- Respiratory or cardiac arrest
- BP < 90 systolic
- Unresponsive to speech
- Inability to maintain airway patency
- Major trauma
- Vomiting or active upper GI bleed

## **RESPIRATORY EMERGENCIES**

### **PULMONARY EDEMA (CONGESTIVE HEART FAILURE)**

1. Maintain airway, breathing and circulation
2. Position patient in high fowler's position
3. Pulse Oximetry, high flow oxygen, **CPAP**
4. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols)
5. IV Normal Saline TKO rate, blood draws
6. If wheezing, administer DuoNeb. HR < 120. May repeat DuoNeb nebulized if necessary.  
DuoNeb = Albuterol (Proventil, Ventolin) Mixed with Ipratropium (Atrovent) in nebulizer
7. Administer Nitroglycerin (Nitro Stat) (if not hypotensive) 0.3-0.4 SL
8. If Systolic BP is greater than 200, administer 3 Nitros
9. Administer Furosemide (Lasix) 1 mg/kg or double the daily maintenance dose, or 100 mg IV PUSH. Look for Evidence of Peripheral edema
10. Consider Morphine Sulfate 2 - 4 mg SLOW IV PUSH
  - o Follow Morphine with Zofran 4mg to with nausea
11. Transport
12. Monitor ABC's

If the patient has a rash, intense itching, closing off of throat, swelling of tongue or other reasons to suspect anaphylaxis, go to anaphylaxis protocol.

**REMINDER TO ASK PATIENT ABOUT MALE ENHANCEMENT DRUG USE  
WHEN IN DOUBT, CALL MEDICAL DIRECTION**

### **CROUP-EPIGLOTTITIS**

The acute onset of this complex symptom usually represents croup or epiglottitis. In a child less than 3 years of age, a relatively slow onset of these symptoms associated with a low-grade fever and runny nose most likely represents croup.

In a child over age 3 with a more rapid onset, you must consider epiglottitis.

Evaluation of these patients should include observations for drooling, cyanosis, and signs of fatigue or use of accessory muscles.

**DO NOT ATTEMPT TO LOOK IN THE THROAT!  
KEEP PATIENT SITTING UPRIGHT  
KEEP PATIENT CALM**

1. Maintain airway, breathing and circulation
2. Pulse Oximetry, oxygen via mask or blow-by
3. Transport

Lights and sirens may increase agitation and thereby produce deterioration in these patients and should be avoided if possible.

## **RESPIRATORY EMERGENCIES**

### **PULMONARY EMBOLISM**

1. Maintain airway, breathing and circulation.
2. Assist ventilations (as needed).
3. Pulse Oximetry, high flow oxygen.
4. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols).
5. IV Normal Saline TKO rate, blood draws.
6. Adults: 500 ml NS fluid bolus if hypotensive.
7. Rapid transport.
8. Monitor ABC's.

### **TENSION PNEUMOTHORAX**

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. Support ventilations (as needed).
4. IV Normal Saline TKO rate, blood draws.
5. Treat for shock (if needed).
6. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols).
7. Rapid transport.
8. Decompress chest.  
Site - Midclavicular 2nd intercostal space  
Above the 3rd rib with large bore IV catheter.
9. Monitor ABC's.

### **HEMOTHORAX**

1. Maintain airway, breathing and circulation.
2. Assess for tension pneumothorax.
3. Pulse Oximetry, high flow oxygen.
4. Support ventilations (as needed).
5. IV Normal Saline TKO rate, blood draws.
6. Treat for shock (if needed).
7. Rapid transport.
8. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols).
9. Monitor ABC's.

**CONSIDER IMMOBILIZATION FOR TRAUMATIC INJURIES**

## **RESPIRATORY EMERGENCIES**

### **FLAIL CHEST**

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. Support ventilations (as needed).
4. Immobilize flail segment.
5. Consider C-spine immobilization.
6. IV Normal Saline TKO rate, blood draws.
7. Treat for shock (if needed).
8. Transport.
9. Monitor ABC's.

### **WATCH FOR PNEUMOTHORAX**

### **SIMPLE PNEUMOTHORAX**

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. Support ventilations (as needed).
4. IV Normal Saline TKO rate, blood draws.
5. Treat for shock (if needed).
6. Transport.
7. Monitor ABC's.

### **WATCH FOR TENSION PNEUMOTHORAX CONSIDER IMMOBILIZATION FOR TRAUMATIC INJURIES**

### **OPEN PNEUMOTHORAX**

1. Maintain airway, breathing and circulation.
2. Close sucking wound immediately, cover with non-porous occlusive dressing. Re-open if patient develops tension pneumothorax.
3. Pulse Oximetry, high flow oxygen.
4. Support ventilations (as needed).
5. IV Normal Saline TKO rate, blood draws.
6. Treat for shock (if needed).
7. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols).
8. Transport.
9. Monitor ABC's.

### **WATCH FOR TENSION PNEUMOTHORAX CONSIDER IMMOBILIZATION FOR TRAUMATIC INJURIES**

## **RESPIRATORY EMERGENCIES**

### **TRAUMATIC ASPHYXIA**

1. Maintain airway - Intubation preferred.
2. Pulse Oximetry, high flow oxygen.
3. Full C-spine immobilization.
4. IV Normal Saline Wide Open rate, blood draws.
5. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols).
6. Treat for shock (if needed).
7. Rapid Transport.

### **WATCH FOR PNEUMOTHORAX /HEMOTHORAX CONSIDER FLAIL CHEST POSSIBILITIES**

### **ACUTE RESPIRATORY INSUFFICIENCY IN C.O.P.D.**

1. Maintain airway, breathing and circulation
2. Pulse Oximetry, high flow oxygen, **CPAP**
3. Administer DuoNeb
4. Solumedrol (Methylprednisolone) 125mg slow IVP
5. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocols)
6. IV Normal Saline TKO rate, blood draws
7. Transport

### **DO NOT GIVE SEDATIVES ENCOURAGE PATIENT TO COUGH**

### **NEAR DROWNING**

1. Maintain airway, breathing and circulation.
2. Consider C-spine immobilization based on history.
3. Artificial respirations (even before removed from water).
4. External cardiac compressions (if needed).
5. Early intubation.
6. Pulse Oximetry, high flow oxygen.
7. 12-Lead EKG monitor (begin appropriate ACLS protocol).
8. IV Normal Saline TKO rate, blood draws.
9. Rapid transport, **ALWAYS TRANSPORT**

## RESPIRATORY EMERGENCIES

### ACUTE ASTHMA

Remember, wheezing may be found in the presence of pneumonias, pulmonary emboli, emphysema, foreign body aspiration and pulmonary edema. **In pulmonary edema, Epinephrine (Adrenaline) is absolutely contraindicated.**

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, obtain peak flow reading.
3. High flow oxygen.
4. Administer DuoNeb nebulized. May repeat DuoNeb nebulized if necessary.  
DuoNeb = Albuterol (Proventil, Ventolin) Mixed with Ipratropium (Atrovent) in nebulizer
  - a. Aerosols may be given by mouthpiece or mask.
  - b. Small children may be held in the lap with mask held near face.
  - c. This same dose is given to children and adults alike. Children have smaller tidal volumes and will actually breathe in a much smaller amount.
5. IV Normal Saline TKO rate, blood draws.
6. 12-Lead EKG monitor (if dysrhythmias, begin ACLS protocol).
7. Administer Magnesium Sulfate 45mg/kg to a total of 75mg/kg max

Approx Mag Dose	
Child < 10	1 gram
Child 10 - 16	1 to 2 grams
Adult	3 to 4 grams

7. Administer Solumedrol (Methylprednisolone)  
**Adults: 125mg slow IVP**  
**Pediatrics: 2mg/kg slow IVP**

Contact medical direction if pulse > 130 or diastolic BP > 100 or if you wish to administer Epinephrine (Adrenaline) to persons > 50 years of age or person with a history of heart disease.

**DO NOT GIVE ASPIRIN  
DO NOT GIVE SEDATIVES**

**IF NO HEART FAILURE, RUN IV WIDE TO HYDRATE**

Epinephrine (Adrenaline) should be used with caution

Administration of Epinephrine (Adrenaline) 1:1000.

**Child < 10 yrs.:** Epinephrine (Adrenaline) 0.01 cc/kg subQ

**Child 10-16 years:** Epinephrine (Adrenaline) 0.3 cc subQ

**Adults > 16 and < 50:** Epinephrine (Adrenaline) 0.3-0.5 cc subQ

## **RESPIRATORY EMERGENCIES**

### **ACUTE ANAPHYLAXIS**

Recognition is of paramount importance. The initial onset is usually diffuse itching, redness and/or urticaria (welts). The patient may experience shortness of breath, closing off of the throat and swelling of the tongue. This may be rapidly followed by shortness of breath and/or shock.

### **MILD ANAPHYLAXIS**

1. Maintain airway, breathing and circulation
2. Pulse Oximetry, high flow oxygen
3. IV Normal Saline TKO rate, blood draws
4. 12-Lead EKG monitor
5. Administer Epinephrine (Adrenaline) 1:1,000
  - Under age 10 yrs.:** 0.01 mg/kg (SubQ as per protocol)
  - Age 10-16 yrs.:** 0.3 mg (SubQ as per protocol)
  - Adults:** 0.3-0.5 mg (SubQ as per protocol)
6. Administer Benadryl (Diphenhydramine).
  - Under age 16 yrs:** 1-2 mg/kg slow IVP to a max of 25 mg.
  - Adults:** 50 mg IV over 2 minutes. May be deep IM if no IV access.
7. Administer Solumedrol (Methylprednisolone)
  - Adults: 125mg slow IV PUSH**
  - Pediatrics: 2mg/kg slow IV PUSH**
8. Transport.
9. Monitor ABC's.

**DO NOT CONFUSE EPINEPHRINE (ADRENALINE) 1:1,000 WITH  
EPINEPHRINE (ADRENALINE) 1:10,000  
MONITOR RESPIRATORY STATUS**

## RESPIRATORY EMERGENCIES

### **ANAPHYLACTIC RESPIRATORY DISTRESS WITH SHOCK (SEVERE)**

1. Maintain airway, breathing and circulation.
2. Pulse Oximetry, high flow oxygen.
3. IV Normal Saline Wide Open rate, blood draws.
4. 12-Lead EKG monitor.
5. Administer Epinephrine (Adrenaline) 1:10,000  
**Under age 10 yrs:** 0.01 mg/kg IV/IO PUSH over 5 minutes  
**Age 10-16 yrs:** 0.3 mg IV/IO PUSH over 5 minutes  
**Adults:** 0.1-0.5 mg IV/IO PUSH over 5 minutes
6. Administer Solumedrol (Methylprednisolone)  
**Adults 125mg slow IVP**  
**Pediatrics 2mg/kg slow IVP**
7. Rapid Transport.
8. Monitor ABC's

### **ANAPHYLAXIS ARREST**

1. Maintain airway - intubation preferable
2. Begin ACLS protocols
3. Pulse Oximetry
4. Administer Epinephrine (Adrenaline) 1:10,000  
**Under age 15 yrs:** 0.01 mg/kg IV/IO PUSH  
**Adults:** 1.0 mg (10 cc) IV/IO PUSH
5. Rapid Transport
6. Monitor ABC's

**DO NOT CONFUSE EPINEPHRINE (ADRENALINE) 1:1,000 WITH EPINEPHRINE (ADRENALINE) 1:10,000**

### **RESPIRATORY ARREST/NON-OBSTRUCTED**

1. Maintain airway - intubation preferable.
2. Begin ACLS protocols.
3. Pulse Oximetry, high flow oxygen.
4. IV Normal Saline TKO rate, blood draws.
5. EKG monitor (if dysrhythmias, begin ACLS protocol).
6. Treat underlying cause.
7. Rapid Transport.
8. Monitor ABC's.
9. Versed may be utilized to assist in intubation if the patient has a gag reflex.

**OXYGEN THERAPY:** Oxygen should never be withheld from a patient