

# Protocol 3-11

**SECTION:** Adult General Medical Emergencies

**PROTOCOL TITLE:** Medical - Respiratory Distress/Asthma/  
COPD/Croup/Reactive Airway  
*(Respiratory Distress – Asthma / COPD)*

**REVISED:** 06/2015

## OVERVIEW:

Respiratory distress, or dyspnea, is one of the most common medical complaints witnessed in pre-hospital medicine. Most patients describe it as a sensation of shortness of breath or a feeling of “air hunger” accompanied by labored breathing. Dyspnea may be caused by pulmonary or cardiac disease or by any mechanism that causes hypoxia. It may be mild, manifesting only on exertion, or severe, occurring at rest. The most common causes of non-cardiac dyspnea in the pre-hospital environment involve asthma, chronic obstructive pulmonary disease (COPD), pneumonia, and bronchitis. The wheezing patient may present in different ways, some may not even complain of wheezing, but rather just of shortness of breath, cough, or chest tightness. Wheezing patients are often apprehensive and distressed, at times, so severe that they may not be able to speak in complete sentences. Oxygenation may be compromised to the point that there is a decrease in the patient’s level of consciousness. These signs are clues that the patient needs immediate and aggressive therapy. Treatment is aimed at maintaining the patient’s SpO<sub>2</sub> to > 90%. Remember, **not all wheezing is from asthma.**

HPI	Signs and Symptoms	Considerations
<ul style="list-style-type: none"> <li>Asthma, COPD, chronic bronchitis, emphysema, heart failure</li> <li>Home treatment (oxygen, inhaler, nebulizer)</li> <li>Medications (Theophylline, steroids, bronchodilators)</li> <li>Toxic exposure, smoke inhalation</li> </ul>	<ul style="list-style-type: none"> <li>Shortness of breath</li> <li>Purse lip respirations</li> <li>Decreased ability to speak</li> <li>Increased respiratory rate and effort</li> <li>Use of accessory muscles</li> <li>Tripoding</li> <li>Wheezing, rhonchi, rales</li> <li>Fever, cough</li> <li>Tachycardia</li> </ul>	<ul style="list-style-type: none"> <li>Asthma</li> <li>Anaphylaxis</li> <li>Aspiration</li> <li>COPD (emphysema, bronchitis)</li> <li>Pleural effusion</li> <li>Pulmonary embolism</li> <li>Pneumothorax</li> <li>Cardiac (MI, HF)</li> <li>Pericardial Tamponade</li> <li>Upper respiratory infection</li> <li>Hyperventilation, anxiety</li> <li>Inhaled toxins</li> </ul>

	EMR	EMT	A	I	P
1. Perform general patient management.	•	•	•	•	•
2. Support life-threatening problems associated with airway, breathing, and circulation.	•	•	•	•	•
3. Administer oxygen to maintain <u>SPO<sub>2</sub></u> 94 - 99%. Support respirations as necessary with a BVM.	•	•	•	•	•
4. Place patient in a position of comfort, typically sitting upright.	•	•	•	•	•

**RESPIRATORY DISTRESS - Asthma / COPD**

## RESPIRATORY DISTRESS - Asthma / COPD

	EMR	EMT	A	I	P
5. Monitor <u>Capnography</u> , if available.			•	•	•
6. Assist patient with prescribed BRONCHODILATOR METERED DOSE INHALER (MDI). If no dosing schedule is prescribed, repeat in 5 to 10 minutes as needed.		•	•	•	•
7. If in critical respiratory distress, provide BVM ventilation with patient's spontaneous efforts. If patient becomes unresponsive, perform BVM ventilation with an airway adjunct. If BVM ventilation is inadequate, secure airway with a definitive airway (Supraglottic / glottic / dual lumen) or ENDOTRACHEAL TUBE [Level I and P only].	•	•	•	•	•
<b><i>For patients in respiratory distress:</i></b>					
8. Give <u>ALBUTEROL</u> 2.5 to 5.0 mg and <u>IPRATOPRIUM</u> 0.5 mg via small volume nebulizer.		•	•	•	•
a. Repeat <u>ALBUTEROL ONLY</u> every 10 minutes up to 4 treatments if respiratory distress persists and no contraindications develop. <b>Note:</b> <u>IPRATOPRIUM</u> bromide is only administered with the <u>first</u> treatment.		•	•	•	•
9. Establish venous access as needed.			•	•	•
10. Administer <u>DEXAMETHASONE</u> IV / IM / PO 10 mg.		•	•	•	•
11. Administer <u>CPAP</u> with 5 – 10 cm H <sub>2</sub> O PEEP for moderate to severe dyspnea. For levels I and P, if the CPAP device allows, begin at 5.0 mmHg and titrate to effect.		•	•	•	•
12. In the asthmatic patient, for severe respiratory distress that is non-responsive to standard medications, consider administration of <u>MAGNESIUM SULFATE</u> 40 mg / kg IV over 20 minutes (max dose of 2 grams).				•	•
13. In the asthmatic patient, for severe respiratory distress that is non-responsive to standard medications, contact Medical Control to consider administration of <u>EPINEPHRINE 1:1,000</u> 0.01 mg / kg up to 0.3 mg IM.				MC	MC
14. Place on cardiac monitor and obtain <u>12 lead ECG</u> per assessment.		•	•	•	•
15. Transport and perform ongoing assessment as indicated.		•	•	•	•

**PEARLS:**

1. Status asthmaticus is defined as a severe prolonged asthma attack, non-responsive to therapy.
2. A silent chest in respiratory distress is a pre-respiratory arrest sign.
3. Magnesium Sulfate and Epinephrine should only be used for patients in severe, non-responsive distress that is refractory to initial treatments.
4. Patients with COPD, emphysema, and chronic bronchitis usually have a lowered baseline level of pulmonary function. These patients often have a history of chronic cough, sputum production, and dyspnea on exertion.
5. The classic presentation of a patient with emphysema is the appearance of the “*pink puffer*,” with rapid, shallow breathing through pursed lips, with a thin body habitus, a barrel chest, and the use of accessory muscles with respirations. The classic presentation of a patient with bronchitis is the appearance of the “*blue bloater*”, with slow, deep, and labored breathing, an overweight body habitus, and, at times, cyanotic.

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