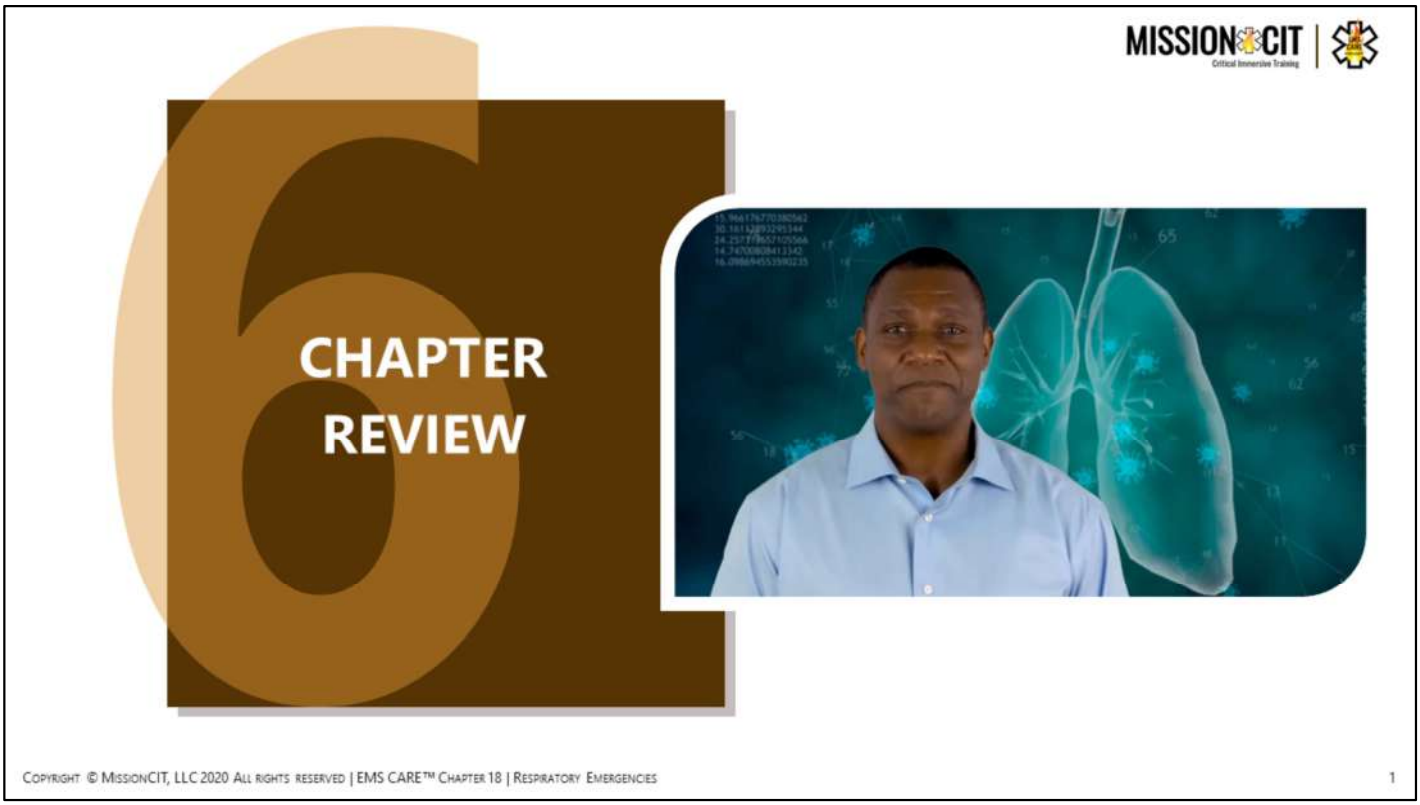
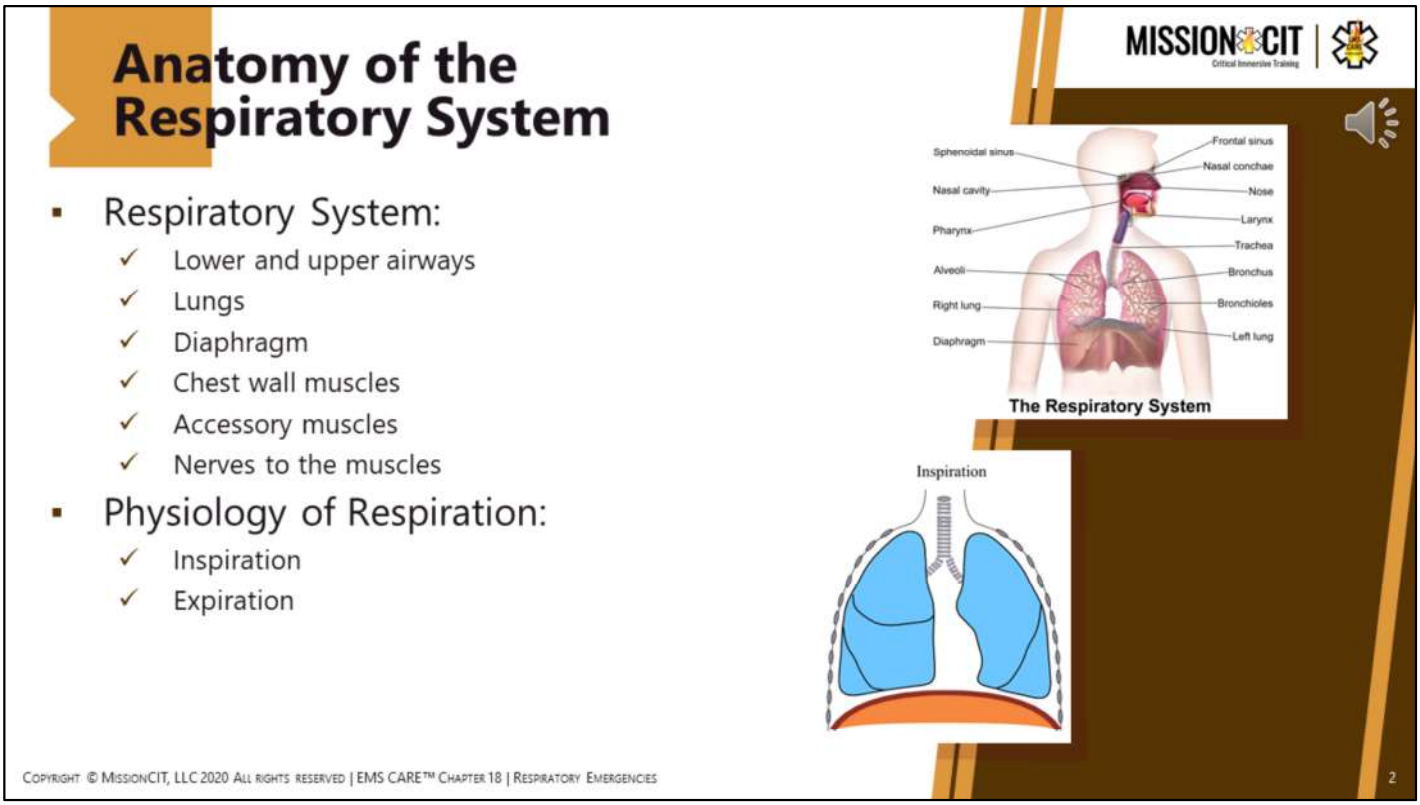


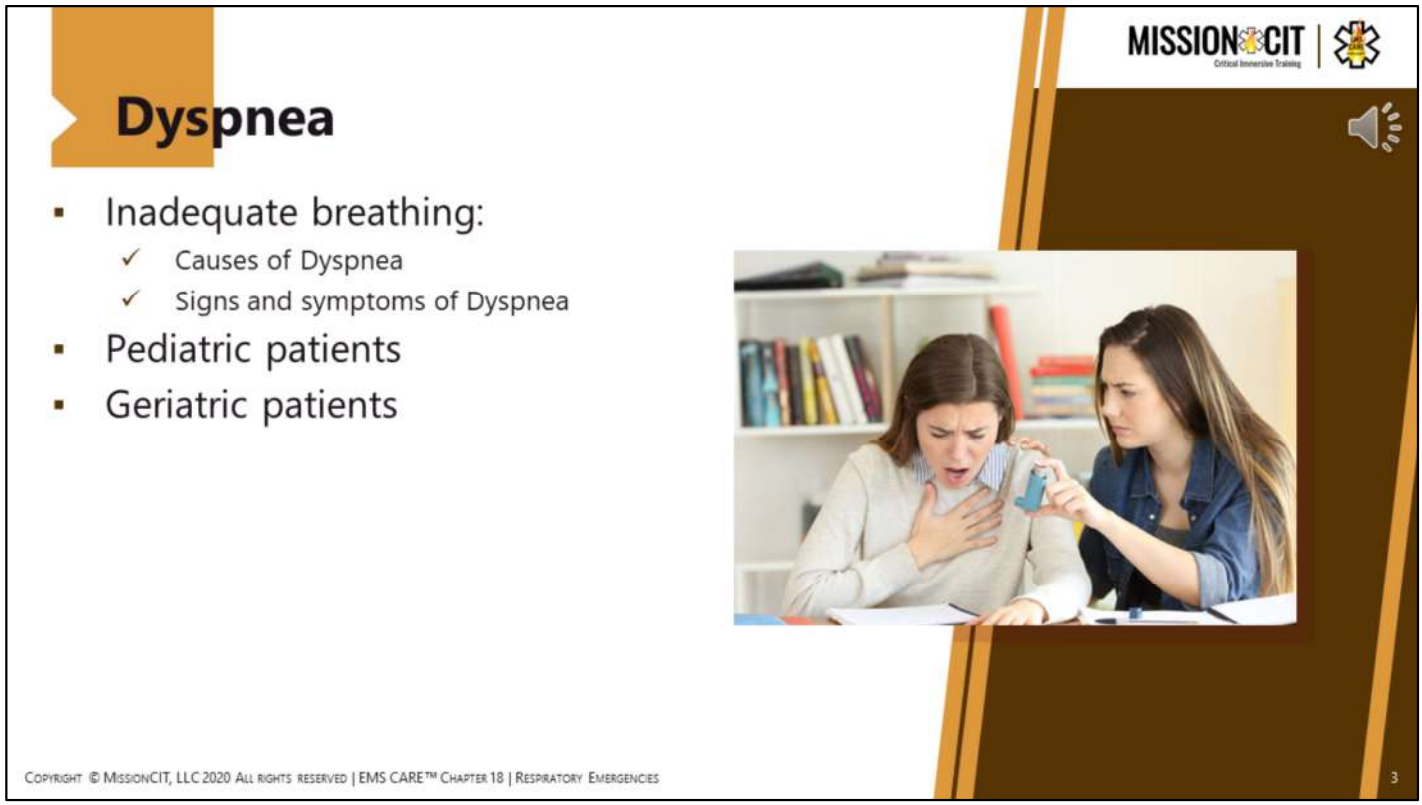
Thanks again Missah. And, now it's time for the review of this topic on Respiratory Emergencies. Remember, after this review, there will be a 15 question Quiz. You need to score 75% or better to receive credit for this chapter.

Good studying.



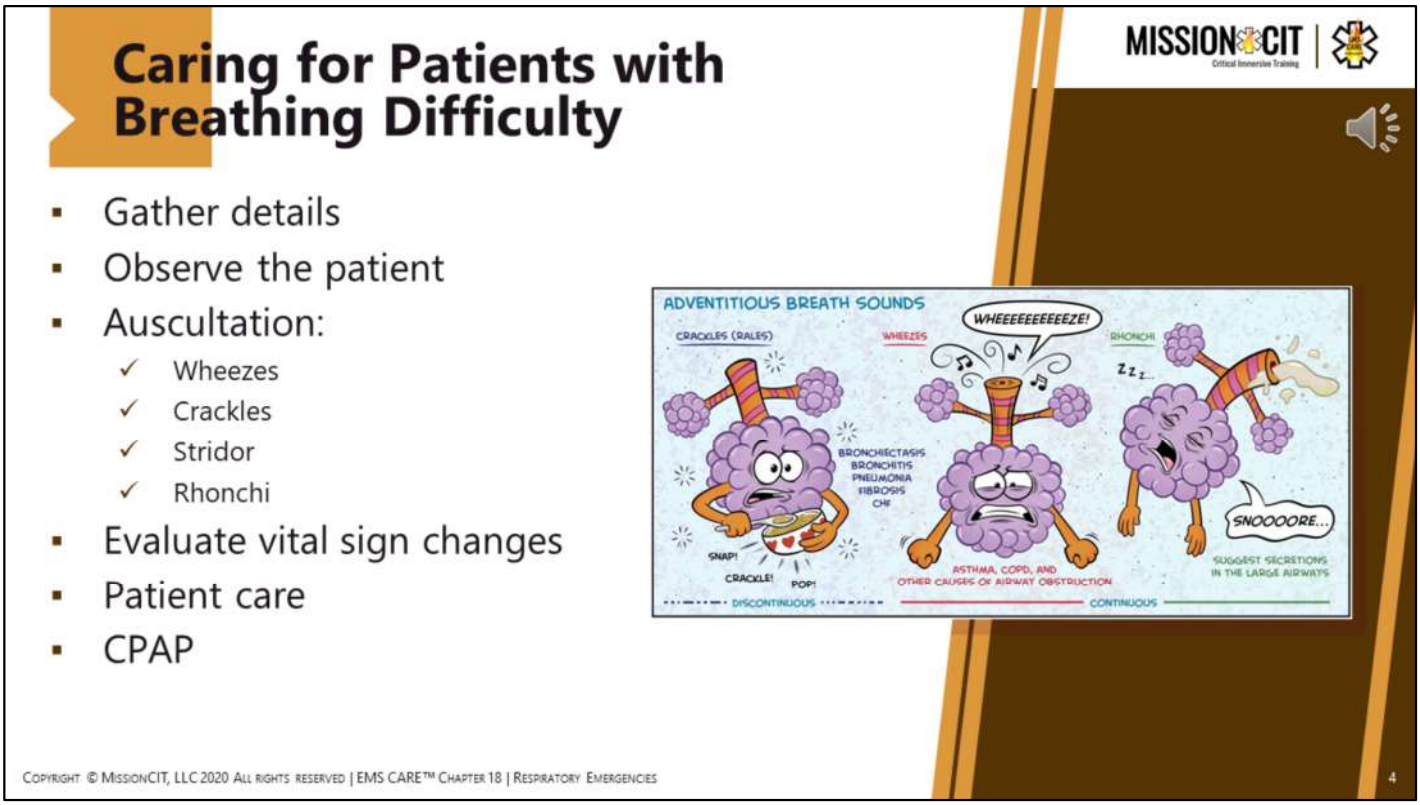
We began with the respiratory system which consists of all the structures and organs that are involved in breathing. The respiratory system includes, Lower and upper airways, Lungs, Diaphragm, Chest wall muscles, Accessory muscles, and Nerves to the muscles.

The respiratory system is divided into upper and lower airways. The upper airways consist of structures located above the vocal cords and the lower respiratory tract is the organs that are located below the vocal cords. There are two processes in respiration and they are inspiration and expiration. Inspiration is the process of taking in air. During this process, air travels through the trachea into the lungs. The expiration process is a passive one, where the rib muscles and diaphragm relax and the size of the chest cavity decreases. During respiration, oxygen is provided to the blood, and carbon dioxide is removed.



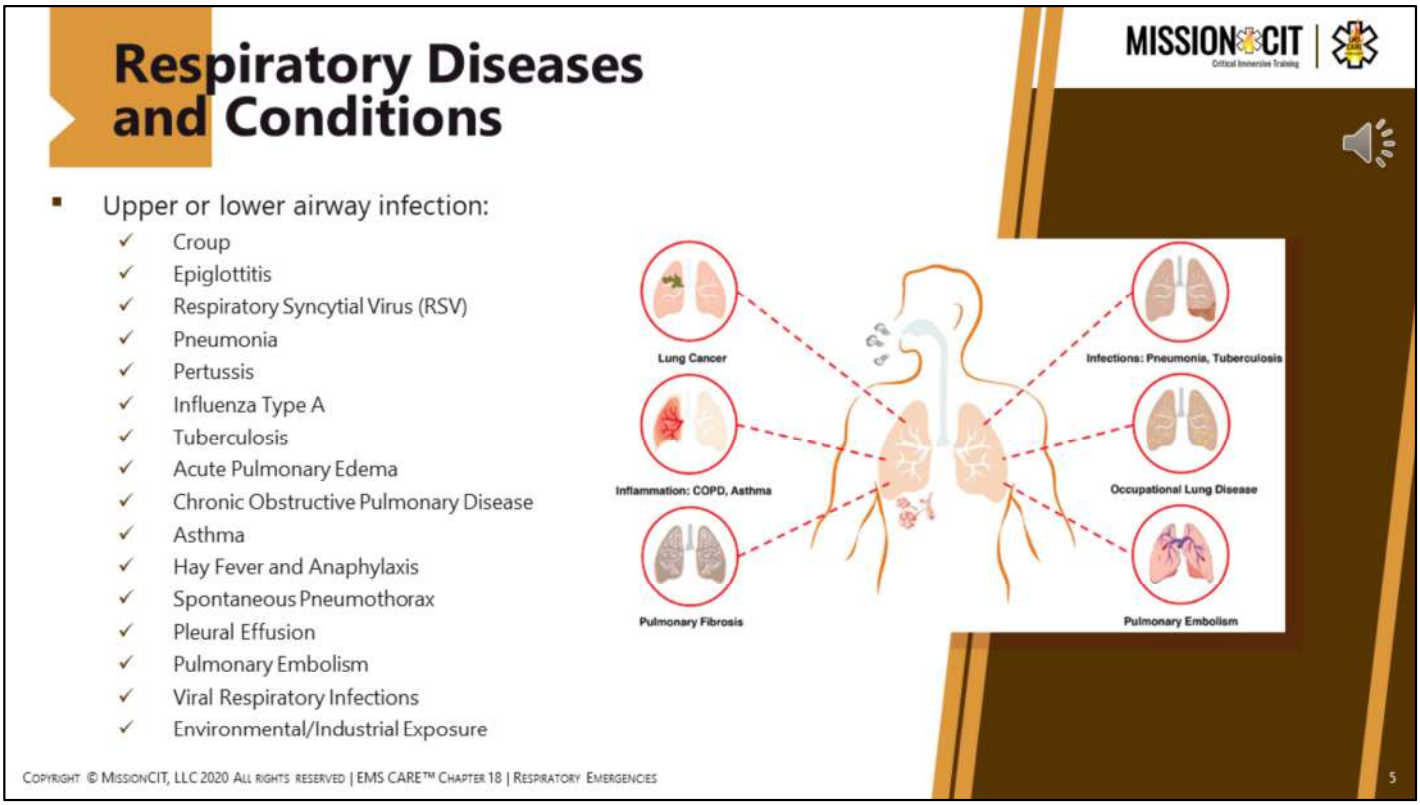
In the next lesson, we mentioned about dyspnea and its associated symptoms and causes. Dyspnea is the term used when someone experiences shortness of breath. Patients often have dyspnea when they have some type of respiratory condition or disease. Watch for the signs and symptoms of dyspnea to make sure you provide the right treatment. In the case of pediatric patients, the structure of an infant's and child's airways are very different from that of adults, so the possible diseases and treatment are different too. If you notice signs of inadequate breathing, provide assisted ventilation with supplemental oxygen.

On the other hand, the respiratory system undergoes various anatomical, physiological, and immunological changes with age. Older adults have decreased sensation of dyspnea and diminished ventilatory response to hypoxia and hypercapnia, making them more vulnerable to ventilatory failure. The most commonly reported pulmonary symptoms in the elderly include dyspnea, cough, and decreased exercise tolerance. Understanding these changes can help you provide the necessary interventions for geriatric patients.



Moving on, we talked about breathing difficulty and the possible care you can give to patients who are going through it. To provide the appropriate care, you need to zero in on the problem and take steps to help the patient. Firstly, gather as many details as possible from the dispatcher's call, bystanders, family members, and even the patient if he or she is in a position to say at least a few words. Next, observe the patient. Observing them for a few seconds can give you a lot of information on the patient's condition. Lung sounds can help you get more clues about the underlying condition. The prominent sounds you'll hear are wheezes, crackles, stridor, and rhonchi.

When you notice any of the above symptoms, evaluate the vital sign changes of the patient and then provide accurate patient care by ensuring that the patient is adequately ventilated to prevent further deterioration. If the patient's breathing is inadequate. On the other hand, if the patient's breathing is adequate but labored, use a non-rebreather mask at 15 liters per minute. You can also place the patient in a comfortable position and administer the prescribed inhaler. Also, consider CPAP if needed. While using CPAP, look out for contraindications and stop administering when you notice any of them.



Next, we discussed different respiratory diseases and conditions that the patients may be experiencing and what you can do in each of these situations. Infectious diseases can affect all parts of the airway. Here is a recap of the diseases discussed:

- Croup: An inflammation of the pharynx, larynx, and trachea, typically seen in children between the years of six months to three years.
- Epiglottitis: A bacterial infection that causes the swelling of the epiglottis.
- Respiratory Syncytial Virus (RSV): A common cause of illness in young children and often affects the lungs and passages.
- Pneumonia: It can be caused by both viruses and bacteria. It inflames the air sacs in one or both lungs.
- Pertussis: This is an airborne bacterial infection caused by the bacterium Bordetella pertussis.
- Influenza Type A: This disease can be dangerous and is known to cause outbreaks and increase the risk of disease.
- Tuberculosis: It is caused by bacteria (Mycobacterium tuberculosis) that most often affect the lungs.
- Acute Pulmonary Edema: It is a condition caused by excess fluid in the lungs. This fluid

collects in the numerous air sacs in the lungs, making it difficult to breathe.

- Chronic Obstructive Pulmonary Disease: It is a chronic inflammatory lung disease that causes obstructed airflow from the lungs.
- Asthma: It is a condition in which the airways narrow and swell and may produce extra mucus.
- Hay Fever and Anaphylaxis: Allergy symptoms, which depend on the substance involved, can affect the airways, sinuses and nasal passages, skin, and digestive system.
- Spontaneous Pneumothorax: It is the sudden onset of a collapsed lung without any apparent cause, such as a traumatic injury to the chest or known lung disease.
- Pleural Effusion: It is the build-up of excess fluid between the layers of the pleura outside the lungs.
- Pulmonary Embolism: It is a blockage in one of the pulmonary arteries in the lungs.
- Viral Respiratory Infections: Common viral respiratory diseases are illnesses caused by a variety of viruses that have similar traits and affect the upper respiratory tract.
- Environmental/Industrial Exposure: Exposure to chemicals released at home and in industries can lead to respiratory infections.



The last topic in this chapter was Assessment and Treatment. Always consider the possibility of infectious diseases and prepare yourself accordingly. During scene size-up, wear the appropriate personal protective equipment such as gloves, face masks, and shields.

As soon as you enter, look around for a few seconds to understand what the patient is going through and the possible causes. Talk to family members and bystanders to understand the nature of the illness. Next, conduct a primary assessment including life threats, check ABCs and decide if the patient needs transportation. Once you're done with the primary assessment, it's time for a more detailed examination. Start by taking the history of the patient to learn more about the medical condition. You can also use specific tools such as SAMPLE or OPQRST to get this information. Once you've noted down the history, move on to secondary assessment, which is a more detailed assessment of the body systems. Reassessment must continue throughout until the patient's care is handed over to another healthcare provider. Repeat the primary assessment and assess for any changes in vital signs. You can provide the necessary emergency medical care during transportation.

With this, we come to the end of the chapter review. You should now proceed to take the quiz.