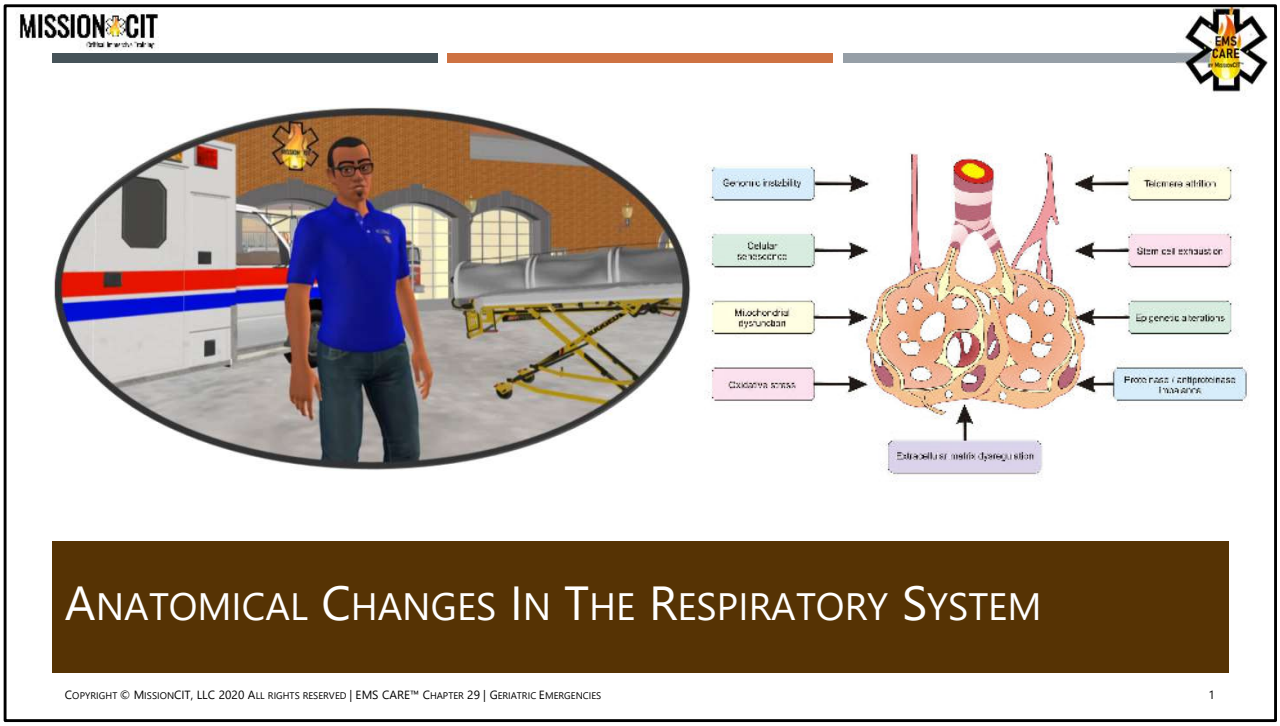
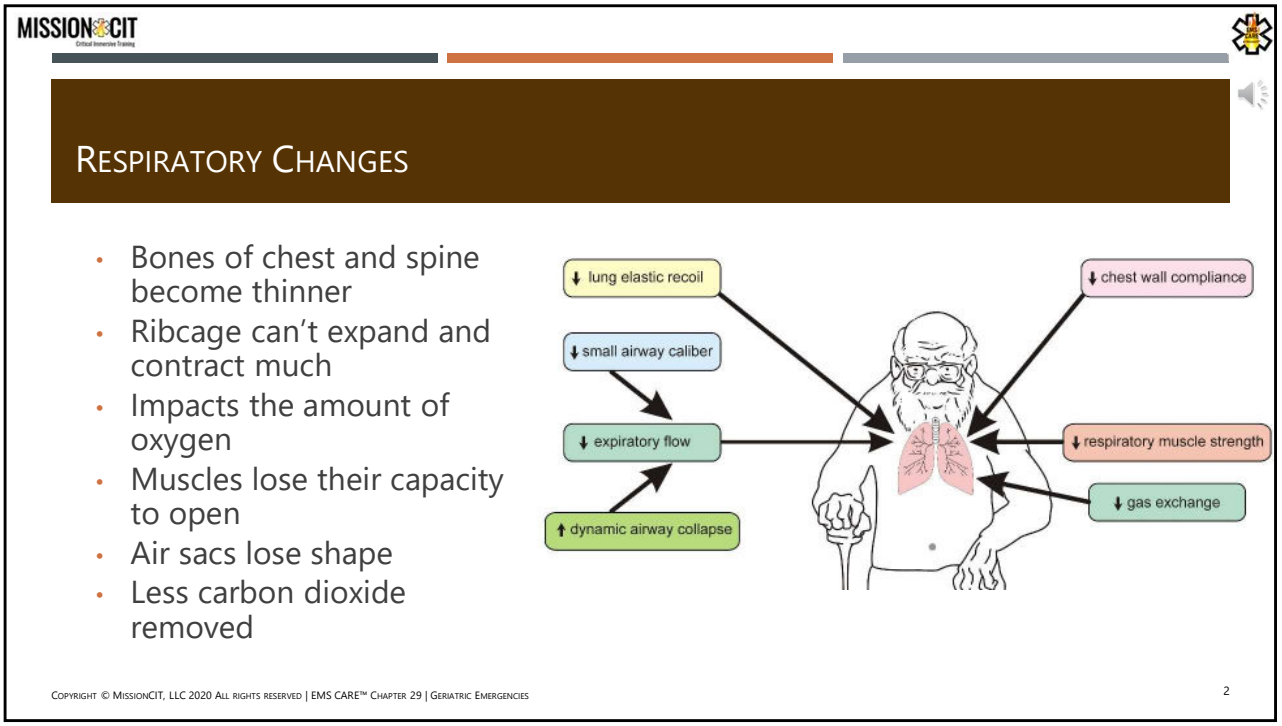


Thank you Missah!

Welcome to the second lesson, where we review anatomical changes that take place in the respiratory system of the geriatric population. We look at the possible conditions that come due to these changes, along with pneumonia and pulmonary embolism.

Good studying



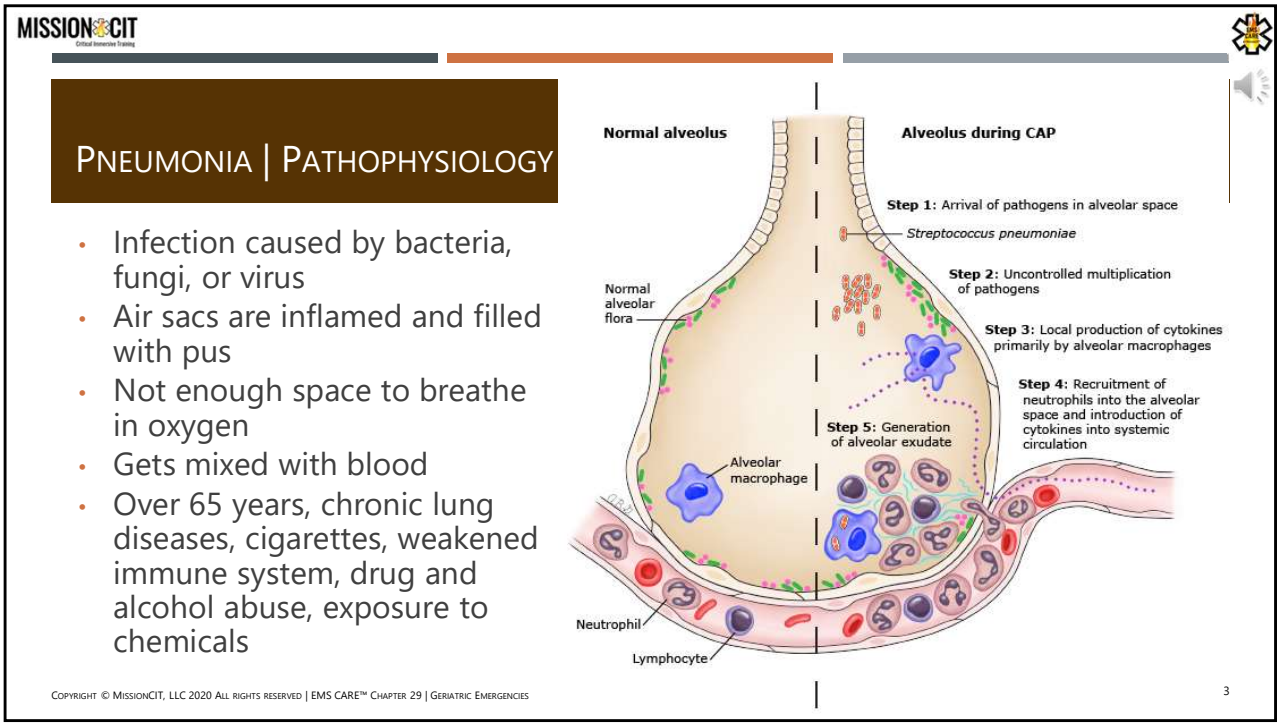
Many changes happen to the respiratory system as people age.

First off, the bones of the chest and spine become thinner and tend to change shape, so the shape of the ribcage becomes altered. In turn, the ribcage cannot expand and contract much during breathing, and this impacts the amount of oxygen that reaches the lungs.

Next, the muscles and other tissues in the airways may lose their capacity to keep the airways open at all times. Also, air sacs will lose their shape and become baggy. Both these changes cause the air to get trapped in your

lungs, so the amount of oxygen that mixes with the blood reduces. Likewise, less carbon dioxide will be removed from the blood.

All these changes make it hard to breathe.



According to the American Lung Association, pneumonia is an infection of the lungs caused by bacteria, viruses, or fungi. This infection causes the air sacs or alveoli to become inflamed and filled with pus or fluid.

As a result, there isn't enough space to breathe in oxygen, so a lot less of it gets mixed with the blood.

Many factors can turn a mild infection into a serious one, and some of them are as follow.

- Typically, people who are over 65 years of age and young children are at a higher risk because their

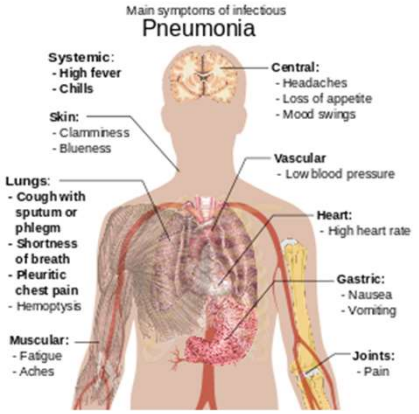
lungs are either worn out or not developed enough.

- Chronic lung diseases such as COPD or cystic fibrosis that make the lungs even more vulnerable
- Weakened immune system due to conditions like HIV/AIDS, chemotherapy, etc.
- Stroke, dementia, Parkinson’s Disease, and neurological conditions that can cause aspiration of food
- Cigarette smoking
- Drug and alcohol abuse
- Exposure to chemicals

MISSION CIT

PNEUMONIA | SYMPTOMS

- Intense cough
- Greenish, yellowish or even bloody mucus
- Fever, sweating, and chills
- Shortness of breath
- Rapid and shallow breathing
- Stabbing chest pain
- Loss of appetite
- Low energy and fatigue
- Confusion

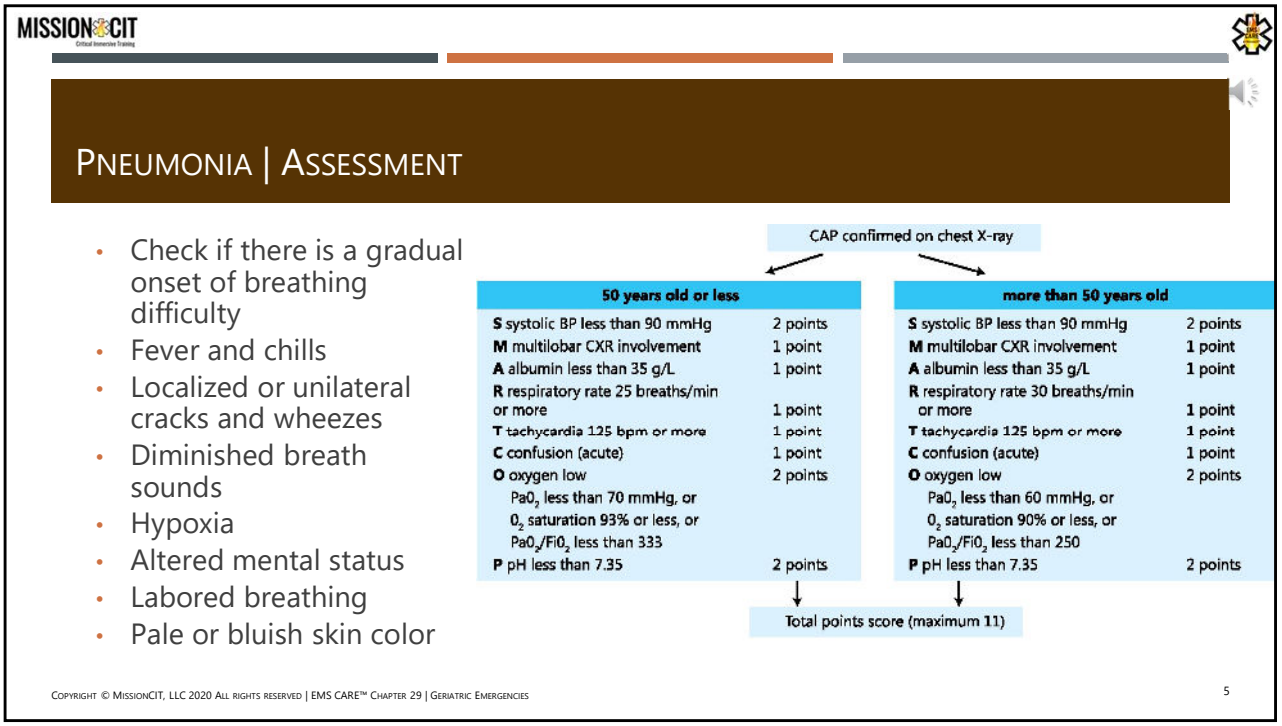


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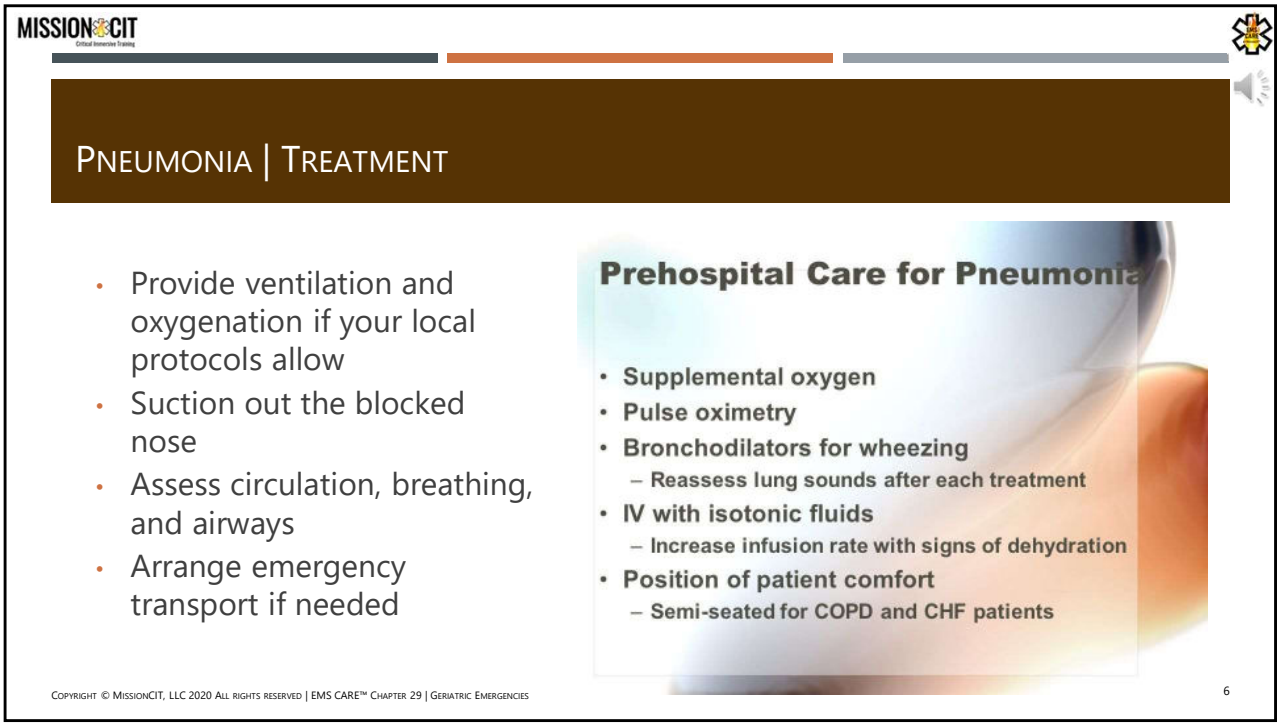
Some of the symptoms of pneumonia are:

- Intense cough
- Greenish, yellow, or even bloody mucus
- Fever, sweating, and chills
- Shortness of breath
- Rapid and shallow breathing
- Sharp stabbing chest pain
- Loss of appetite
- Low energy and fatigue
- Nausea and vomiting
- Confusion



To determine if a patient is suffering from pneumonia, check if there is a gradual onset of breathing difficulty accompanied by fever and chills. Localized or unilateral crackles, wheezes, or diminished breath sounds around the lungs area.

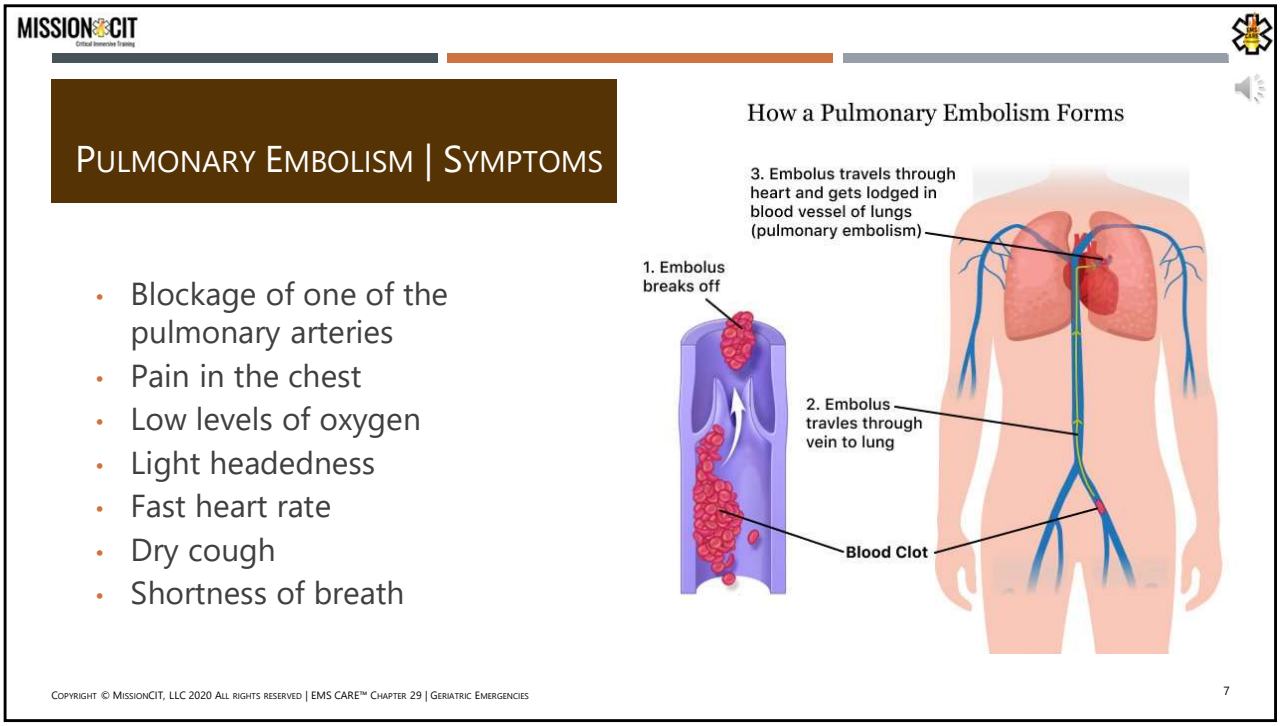
Altered mental state, hypoxia, the increased effort for breathing, and pale or bluish skin color are some of the other signs that indicate pneumonia.



For patients who are awake, C-PAP will help as it increases ventilation and oxygenation. But check with your local protocols to know if you can administer it.

Consider suctioning out the blocked nose to make it easy for patients to breathe. Assess the airways, breathing, and circulation for possible problems, and see how best you can support them.

In the meantime, arrange for emergency transportation.



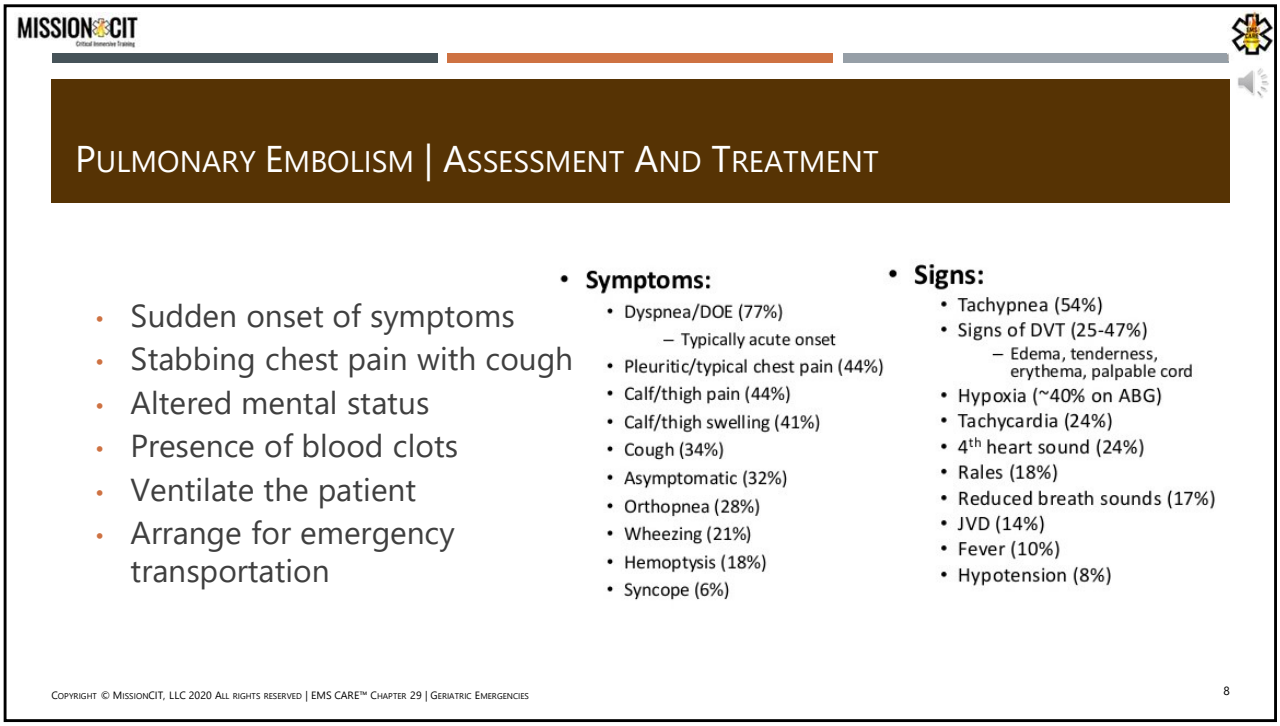
Pulmonary embolism is the blockage of one of the pulmonary arteries in your lungs.

Most times, it happens when blood clots that form in the deep veins in the legs travel to the lungs. Sometimes, it can also happen when a foreign body gets lodged in a pulmonary artery and obstructs the flow of oxygen to the lungs.

Some of the possible symptoms of pulmonary embolism are:

- Pain in the chest while breathing

- Low levels of oxygen in the body
- Lightheadedness
- Fast heart rate or palpitations
- Dry cough
- Shortness of breath



Assessing pulmonary embolism is not as easy as the symptoms are similar to other related conditions. However, examining the patient history for the onset of the symptoms can give you a clue. If the onset was sudden, it could be a pulmonary embolism.

Stabbing chest pain that increases with cough and an altered mental status are your other clues. Specifically, look for the presence of blood clots all over the body as these could indicate possible embolism.

Ventilate the patient and arrange for emergency

transportation.

With this, we have come to the end of this lesson, and in the next one, Missah will take you through the geriatric Neurovascular system.