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Case # 4 - Breathing Difficulty

Presentation: You and a friend are taking a brisk walk. Your friend is eating an apple when he suddenly starts to cough violently. He motions to you that he cannot breathe and that he feels as if he is choking. You try the Heimlich Maneuver but with no success. By this time your friend stops coughing but you can tell he is still having trouble breathing. Because of your knowledge of lung anatomy, you place your friend in a prone position with his head facing downward. You hit him on his back and a piece of apple comes flying out of his mouth. He is a bit shaken but his breathing is now a lot more relaxed. He states, however, that his abdomen and neck hurt.

Activities:

- I. Demonstrate on your cadaver the path that the piece of apple took from the trachea to the lung.
 - Identify the different levels of bronchi and name them correctly.
 - Identify and demonstrate the regions of lung tissue supplied by each level of bronchi. Point out any differences between the right and left lungs.
 - Discuss which portion of the bronchial tree is found distal to the smallest bronchus.
- II. Discuss the lung into which the piece of apple likely is to go and the anatomical reasons for this.
- III. Draw on your cadaver or a tablemate the surface anatomy of the lungs, being sure to include:
 - the location of the horizontal and oblique fissures.
 - the location of the lobes of each lung.
 - the location of the bronchopulmonary segments of each lung.
 - Indicate the place you hit on your friend's back to remove the object and why you chose that particular area.

Discussion and Demonstration:

Discuss and demonstrate the anatomy of breathing.

- I. Classify the costovertebral and costotransverse joints.
 - What types of movements occur at each joint?
 - How do these movements result in respiration?
- II. Demonstrate on your cadaver the muscles of respiration.
 - Show the attachments for each muscle.
 - Show/describe the action(s) of each muscle.
 - Show/describe the innervation of each muscle.
- III. Why does the patient's abdomen and neck hurt?