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Gas Exchange YouTube Videos Reflection

From taking Anatomy and Physiology I and II in my prerequisite courses, I was already aware of the basic anatomy of the respiratory system and how the physiology of all of it works. However, I did learn a few specific things about the topics discussed in the videos.

In the first video over Tuberculosis, I learned that this disease is a bacterial disease that can infect and damage more than just the lungs. This bacterium first infects the lungs but can reach any organ of the body through lymph nodes and the bloodstream. TB is an airborne illness, meaning that it can be spread from person to person by mucous or saliva that leaves the infected person's body and enters a healthy person. Also, TB can be inactive or latent in a person's body and at that time they are not contagious, however at any time the disease can begin to grow, and they can become contagious.

I found the second video over COPD interesting because I was unaware that COPD is two different chronic lung diseases, Emphysema and Bronchitis. Emphysema is the damage of the alveoli, while bronchitis is characterized as the inflammation of the bronchial tube walls. These usually go hand in hand, which is why they are both considered COPD. The main cause of COPD is the inhalation of pollutants.

I enjoyed the video on sleep apnea most of all because I used to work at the Sleep Disorder Center of Lubbock in the office, but I was never educated on the disease that was being treated there. Sleep Apnea is diagnosed when a patient has 5 or more episodes of apnea in an hour of sleep, along with daytime sleepiness. These periods of apnea are caused by the enlargement of the throat at the top of the trachea. This area is a high-fat area, meaning that fatty tissue accumulates here. When a person's body realizes that they are not getting enough oxygen, signals are sent to the brain and the brain sends signals to the obstructed airway and the muscles tighten and the obstruction is no longer there. This happens multiple times throughout the night and cannot occur during REM sleep, which is why the patient's never feel well-rested and experience daytime sleepiness.

Pneumonia is when the alveoli in the lungs become infected and fill up with fluid. This disease is classified one of two ways, either by the area of the infection, or by where the infection was contracted. Pneumonia can be caused by other viral, bacterial, or fungal infections. Each type of pneumonia can have a slightly different set of signs and symptoms. For example, bacterial pneumonia produces sputum that is red, green, or brown, while viral pneumonia produces thin and white sputum. A healthy person can recover from pneumonia well, but the elderly and babies are at a higher risk of complications due to pneumonia.

The last video was all about chest tubes. On my very first day of clinicals in IM1 I got to watch chest tube be extracted and this video made me understand more of the procedure. Chest tubes are inserted to drain air or fluid from the pleural space in between the visceral pleura and the parietal pleura. This means that the tube does not actually enter the lung itself but does its job from the cavity that surrounds the lung. Whenever this cavity has fluid or air in it, it disrupts the pressure system that allows the lung to expand upon inhalation and contract upon exhalation. This disruption causes the lung to collapse, which is why the chest tube's job is to drain the cavity of anything that is not supposed to be in there.

