VIDEO PAPER

Sleep apnea is caused by the build up of fat that causes an obstruction where the back of the mouth connects to the throat and trachea. This leads to poor air flow to the lungs when sleeping leading to a decrease in your oxygen saturations. This sends a signal to the brain to arouse the body out of sleep and sometimes wake up completely. This leads to a tightening of the muscles around the obstruction allowing air into the lungs which then signals the brain that its ok to go back to sleep. This causes a pattern where the oxygen saturation continues to rise and fall throughout the night. Things can aggravate sleep apnea such as being in the supine position or being in REM sleep. Sleep apnea is more prevalent in men than it is in women. Men also tend to store fat in the neck more than women which contributes to this prevalence in men. Obesity also increases the risk of getting sleep apnea by 10-15 times. Race is also another risk factor in sleep apnea. Sleep apnea is more prevalent in non white people than it is in white people. Another risk factor is nasal obstructions such as allergic rhinitis. Lastly, genetics is also a risk factor for contracting sleep apnea. Another disease process that was discussed in the videos was COPD or Chronic Obstructive Pulmonary Disease. Some changes in the respiratory tract can cause a decrease in the volume of air inhaled or exhaled. In Emphysema the main damage is to the alveoli walls. This leads to the reduced surface area for gas exchange in turn reducing lung efficiency. With chronic bronchitis the air passages are clogged by mucus or phlegm. Emphysema and Chronic Bronchitis tend to go hand in hand so they are both referred to as COPD. Smoking is the most common cause of Chronic Obstructive Pulmonary disease. Other aspects such as exposure to air pollution, exposure to irritants, and genetics can play a factor in developing COPD. Signs and symptoms of COPD include a persistent cough, dyspnea, frequent respiratory infections, difficulty talking and breathing at the same time, cyanosis, weight loss, and more. Diagnosis of COPD is done by utilizing spirometry and other factors. A spirometer is used to conclude how much air is inhaled and exhaled and the speed of the air going in and out of the lungs. The damage of COPD is irreversible but changing your lifestyle can aid in relieving the symptoms. Medications are also useful in relieving symptoms. An example of one of these medications is a bronchodilator. A patient could also utilize oxygen devices that are very effective in relieving COPD symptoms. Pneumonia was another disease process that was discussed. People that are at risk of pneumonia include the really old, the really young, immunosuppressed individuals, and smokers. Pneumonia is essentially an infection that leads to fluids in the lungs. Pneumonia can be classified by the type of pneumonia and where the pneumonia was acquired. Other diseases can lead to pneumonia. An example of this is influenza that can cause pneumonia when severe. Pneumonia can also be caused by fungus, bacteria, and mycoplasma. Symptoms include sweating, fever and chills, chest pain, cyanosis, and more. Diagnosing pneumonia includes listening to patients lungs, checking history, blood test, and sputum test. A chest X-ray is also a useful tool to confirm the presence of pneumonia. However, an X-ray does not confirm what type of bacteria is causing the infection. Pneumonia is treated based on severity, type of infection, patients age, and overall health condition. The number one choice of treatment for pneumonia is the use of antibiotics. The type of bacteria or fungus causing the infection needs to be confirmed to decide which type of antibiotics would treat the infection. Ways to prevent pneumonia include exercise, healthy diet, vaccination, quitting smoking, and more. Another disease discussed in the youtube videos was Tuberculosis. Tuberculosis is a bacterial infection of the lungs that can spread to affect other areas of the body. TB affects ⅓ of the entire world and is highly contagious. TB can spread through the air and infect others. Risk factors for TB are being exposed to someone with the disease, being in a

certain area where TB is widespread, weak immune systems, and more. Signs and symptoms of TB differ depending on type and stage of the infection. TB can be active or inactive. Inactive TB can become active if a person's health status changes. Active TB can spread to other organs and will then be categorized as disseminated TB. Diagnosing TB involves chest X-ray, sputum exam, and a skin test. There is currently a vaccine for TB and antibiotics for the disease. There are other anti TB agents that are the base units for TB treatment. These medications are heavily toxic to the Liver. The last video that was presented was the lecture over chest tubes. A chest tube is inserted into the pleural space of the lung to remove air or fluid allowing the lung to re-expand the lung. Another tube is a mediastinal chest tube which is placed under the sternum to remove fluid around the heart after cardiac surgery. Other reasons for chest tubes include pneumothorax and fluid in the pleural space. There are chest tube drains with wet suction and dry suction. The biggest difference is that wet suction is regulated by the height of the water in the control chamber while dry suction is regulated by a dial that you can set the prescribed suction. You can get higher levels of suction with a dry suction due to no water evaporation. The water seal chamber on the suction devices creates a negative pressure in the space of the lungs. The nurse should note bubbling in the water seal chamber as it could indicate an air leak. If there are any complaints of dyspnea the nurse should watch the insertion site and monitor for subq emphysema where CO2 escapes into the tissue. Also have the patient cough and deep breath while repositioning them frequently.