

Tuberculosis also known as TB is an infection of the lungs caused by the bacteria named mycobacterium tuberculosis. Tuberculosis begins in the lungs and can rapidly pass to any organ in the body. It travels via the lymph nodes and blood stream. Tuberculosis is spread through airborne droplets making it highly contagious. If the droplets containing tuberculosis are large, they become embedded in the proximal airways and do not cause any infection. The infection happens when the particles are small enough to cross the upper respiratory defense and reach the lungs. People with a weak immune system are at a higher risk of contracting TB. Healthy people are able to fight the infection and stop the bacteria from growing and multiplying, so they are less prone to TB even when infected. This is called inactive or latent form as they are not contagious. However, a person that has inactive TB can become active at any time. Signs and Symptoms of TB are productive cough for 3 weeks or more with green or yellow sputum when waking up in the morning, chest pain mainly while breathing and coughing and night sweats. TB is diagnosed by chest x-ray and sputum culture. Chronic obstructive pulmonary disease is a term used for two different chronic lung diseases, which obstruct breathing by limiting lung airflow. Emphysema and Chronic Bronchitis are the two types of COPD. In emphysema, the main damage takes place in the alveolar walls. In chronic bronchitis, the lining of air passages is clogged with mucus or phlegm. The cause of COPD is inhaling pollutants and sometimes genetics can play a role. However, smoking is the most common cause. COPD is a progressive disease and in the early stages the symptoms are mild to none. With progression, symptoms include dyspnea especially during demanding activities and high carbon dioxide levels in blood. COPD is diagnosed with a spirometry test. Although COPD is irreversible, medications and changing lifestyle can slow down the progression. Sleep Apnea is when a person stops breathing due to an obstruction. The problem is in the back of the mouth where the tongue is and fat gets stored. Big fat tissue cause obstruction. Males tend to store fat more in the neck When a person sleeps, the muscles goes to sleep and the tongue can fall back and cause no airflow due to obstruction. Some factors that make sleep apnea worse is sleeping supine and REM sleep. Other risk factors are obesity which increases risks 10-14 times, race, nasal obstruction, genetic factors and age. Pneumonia is when the alveoli is filled with pus or fluid making it difficult to breathe. Pneumonia is classified by lungs infected and how it was acquired. Signs and Symptoms differ on the type of infection and the person's state of health. Some commons signs and symptoms are coughing with sputum either green yellow or red brown is bacterial and thin and white is viral, sweating, fever, shortness of breath, tachypnea, pleuritic pain. Pneumonia is diagnosed by sputum test, and there will be diminished or crackling lung sounds. When antibiotics are not effective, a bronchoscopy may be performed. Pneumonia is treated based on severity, type of infection, patient's age, health condition. Chest Tubes are inserted into the pleural space to remove air or fluid to help lung re-expand, or a tube inserted in mediastinum space to drain fluid from around the heart after cardiac surgery. Pneumothorax, pleural effusion, hemothorax, infection in pleural space due to emphysema, cardiac surgery are reasons for a chest tube. The two types of chest tube drainage systems are wet suction and dry suction. The drainage system must be kept below patient's chest and the tubing needs to be free of kinks, drains properly, and connections are sealed. The nurse must monitor and document the drainage. Nurse also needs to monitor the patient's lung sounds, respiratory rate, insertion site and subcutaneous crepitus. Along with having the patient cough, turn, and deep breathe to move fluid. If a patient's test tube becomes dislodged cover it with a sterile dressing and tape on 3 sides. Only tape 3 sides to allow air to escape and prevent tension pneumothorax. Never clamp a chest tube without physician's order. The removal of a chest tube is done at the bedside and the nurse will assist the physician.