

Preconference Form

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Medical Diagnosis/Disease: COPD- chronic obstructive pulmonary disease

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

Divided into two parts the upper and lower respiratory tracts. The parts of the upper respiratory tract are the nose, mouth, pharynx, epiglottis, larynx, and trachea. The nasal cavity connects with the pharynx. It is a tubular passageway that is subdivided into 3 parts being the nasopharynx, oropharynx, and laryngopharynx. Air moves through the oropharynx to the laryngopharynx. Then travels through the epiglottis to the larynx then heads into the trachea. The trachea divides into the right and left main stem bronchi at the carina. Once the air gets through the carina it is then into the lower respiratory tract. The lower respiratory tract consists of bronchi, bronchioles, alveolar ducts, and alveoli. The right lung is divided into 3 lobes and the left lung is divided into 2 lobes. The trachea and bronchi act as a pathway to conduct gases to and from the alveoli. The alveoli are the final part of the respiratory tract. They are small sacs in the lungs that are a primary site of gas exchange of oxygen and carbon dioxide. The lungs have pulmonary and bronchial circulation. Pulmonary circulation provides the lungs with blood that takes part in gas exchange (oxygen moves from lungs to the bloodstream at the same time carbon dioxide passes from the blood to the lungs). Bronchial circulation starts with the bronchial arteries, which arise from the thoracic aorta (part of aorta that carries oxygen-rich blood throughout the body). Bronchial circulation does not take part in gas exchange but does provide oxygen to the bronchi and other lung tissues. The diaphragm is a major muscle of respiration. The diaphragm is used to help with inspiration and expiration. It sits below your lungs and heart and is attached to your sternum and to the bottom of your rib cage and spine.

Pathophysiology of Disease

COPD is the airflow limitation that is not fully reversible. Airflow limitation is progressive and associated with an abnormal inflammatory response of the lungs to gases and is characterized by chronic inflammation throughout the airways. Airway limitation caused by airway narrowing or obstruction. Abnormal inflammatory response in the lungs. Cigarette smokers have some inflammation in their lungs, but people who have COPD have an abnormal response to inhaling the chemicals. It results in mucous hypersecretions, tissue destruction, and disruption of normal repair.

NCLEX IV (7): Reduction of Risk

Anticipated Diagnostics

Labs

ABG (Arterial blood gases) - shows best clues to severity

Additional Diagnostics

Spirometry- confirms the diagnosis
Pulse oximetry-useful tool for screening and monitoring disease progression, COPD patients usually range between 88-92%
Chest X-Rays- changes in COPD including signs of hyperinflation

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors

-Smoke Exposure

Signs and Symptoms

Shortness of Breath

NCLEX IV (7): Reduction of Risk

Possible Therapeutic

Procedures

Prevention of

Complications

(What are some potential

- Second Hand Smoke
- History of Childhood Respiratory Infections
- History of Asthma
- Those who are 40 or older

Wheezing
Cough- can be dry or with mucous
Chest Pain
Fatigue

Non-surgical
-Non-Invasive Ventilation
-Oxygen Therapy

complications associated with this disease process)
-Pneumonia
-Lung Cancer
-Respiratory Failure
-Depression

NCLEX IV (6): Pharmacological and Parenteral Therapies

Anticipated Medication Management
-Short Acting Bronchodilator inhalers
-Oxygen
-Steroid Inhalers-can help to reduce the inflammation in your airways
-Antibiotics- (Chest Infection)

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
-Quitting Smoking
-Breathing Exercises (Using Incentive Spirometer)
-Oxygen Therapy

NCLEX III (4): Psychosocial/Holistic Care Needs

What stressors might a patient with this diagnosis be experiencing?
-May blame themselves if they were a smoker
-Could be scary if they are having a hard time breathing
-May feel isolated because you may not feel up to going out and doing things all the time

Client/Family Education

List 3 potential teaching topics/areas
-Teaching the importance of not smoking
-Teaching them how to use their IS when they are at home along with deep breathing exercises
-Making sure they are using their oxygen appropriately

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
(Which other disciplines do you expect to share in the care of this patient)
-Respiratory Therapist
-Respiratory Consultant
-Nurses
-Pulmonologists
-Social Workers
-Dieticians