

Preconference Form

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Medical Diagnosis/Disease: COPD

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

Normal Structures of Respiratory System:

- Nose
- Nasal Cavity
- Pharynx
- Larynx
- Trachea
- Bronchi
- Bronchioles
- Alveoli
- Right Lung (Upper, Middle, Lower Lobes)
- Left Lung (Upper and Lower Lobes)
- Diaphragm
- Cilia lining in lungs

Oxygenation:

-Process of obtaining oxygen from the atmospheric air to then circulate it in the blood to oxygenate organs and tissues. You can measure this through oxygen saturation. This is how much oxygen is bound to hemoglobin and is measured through a percentage.

Normal Ventilation:

-Your diaphragm first contracts, which makes it pull downward. This creates more space in your pleural cavity for the lungs to expand in. Air then flows into your lungs, to exchange O₂ and CO₂ in the alveoli sacs. The diaphragm then relaxes to push the air back out.

Compliance:

This is the ability of the lungs expanding. When there is good compliance, your lungs can expand and have adequate recoil of the chest wall. When you have bad compliance, it is harder for your lungs to inflate, because they are less elastic.

Pathophysiology of Disease (COPD)

-A progressive lung disease that is characterized by persistent air flow limitation due to a chronic inflammatory response in the lungs and airways

-Loss of elastic recoil in lung tissue which causes air to be trapped in lungs and air exchange to worsen.

-The main causes are from smoking and the inhalation of toxic gases and particles

-Due to constant exposure to toxic particles and gases (such as cigarette smoke), this causes chronic inflammation in the lungs which then causes tissue damage. This tissue damage reconstructs the lungs and can cause the interruption to gas exchange.

-Has systemic effects, such as hypoxia

NCLEX IV (7): Reduction of Risk

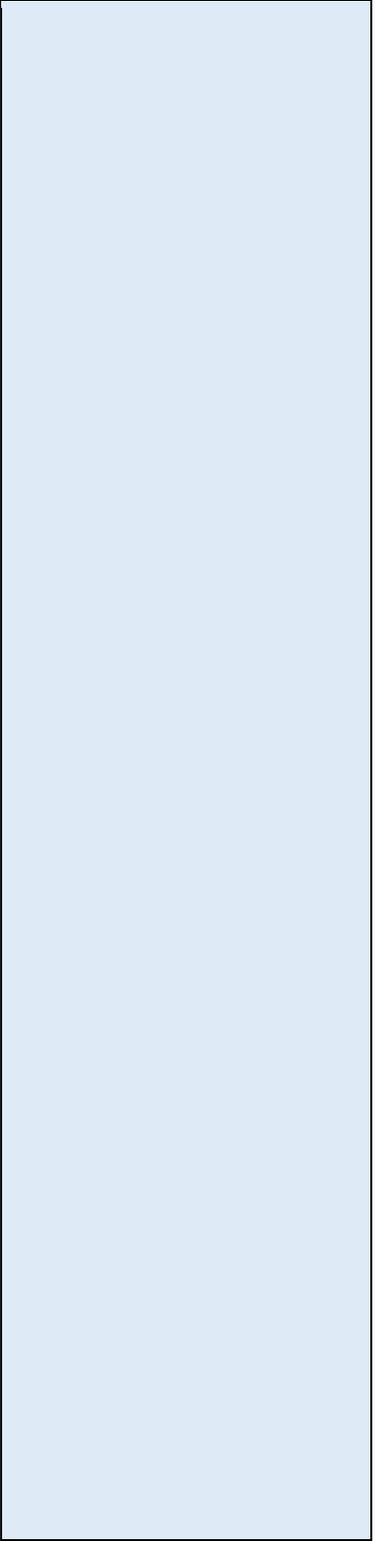
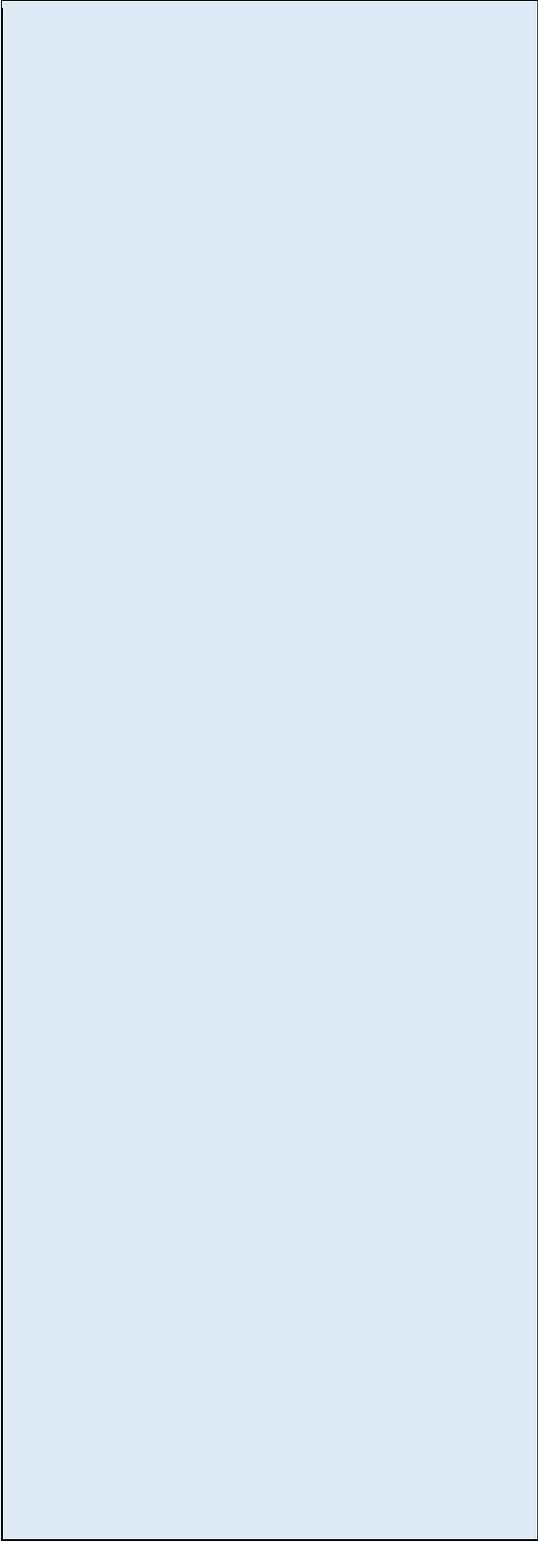
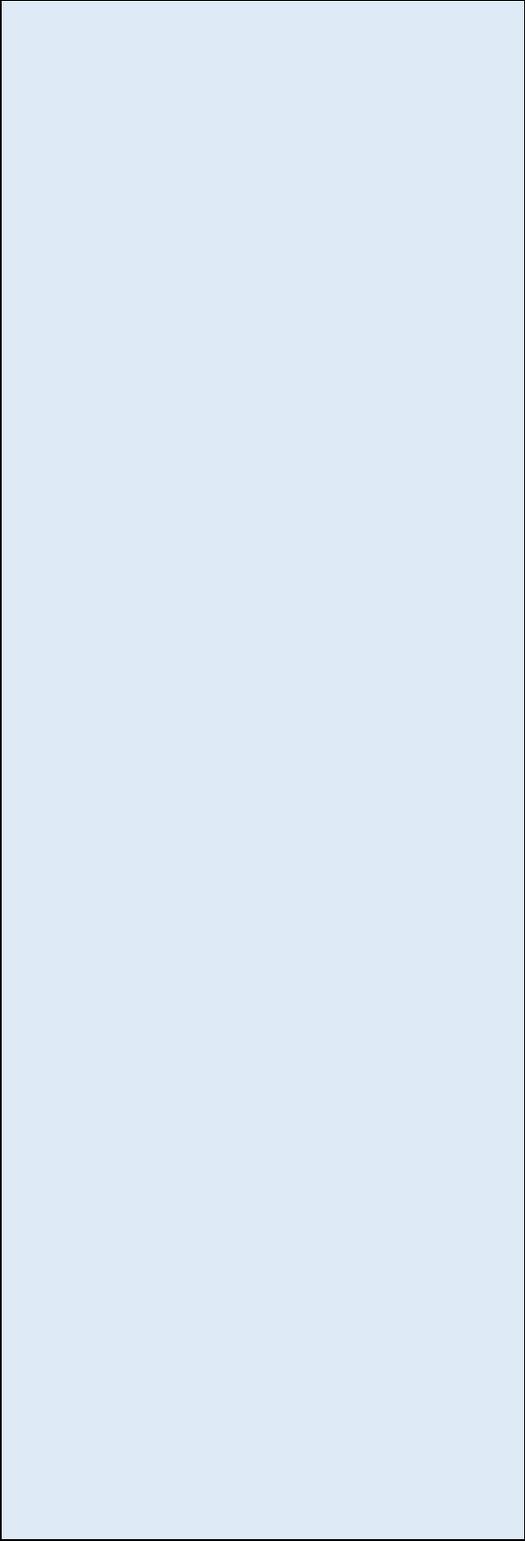
Anticipated Diagnostics

Labs

- ABG (Checks CO₂ levels)
- CBC (Checking white blood cell count)

Additional Diagnostics

- History
- Chest X-ray
- Walk study
- Pulmonary function test
- Sputum culture
- ECG
- Spirometry



NCLEX II (3): Health Promotion and Maintenance

NCLEX IV (7): Reduction of Risk

<u>Contributing Risk Factors</u>
-Cigarette Smoking
-Recurring respiratory infections
-Asthma
-Air pollution
-Occupational exposure to chemicals and dusts
-Aging
-Genetics

<u>Signs and Symptoms</u>
-Chronic intermittent cough
-Dyspnea
-Chest heaviness
-Wheezing
-Fatigue
-Weight loss
-Use of accessory muscles
-Diminished lung sounds

<u>Possible Therapeutic Procedures</u>
<u>Non-surgical</u>
-Oxygen therapy
-Drug therapy
-Nutrition therapy (for advanced stages of COPD)
-Respiratory Care (Deep breathing exercises)
<u>Surgical</u>
-Lung volume reduction surgery (removes diseased portion of lung so healthy lung tissues can work better)
-Bronchoscopic lung volume reduction (placing of a one-way valve in airway leading to diseased lung)
-Lung transplant (for advanced stages)

<u>Prevention of Complications</u>
(What are some potential complications associated with this disease process)
-Pulmonary hypertension
-Pain
-Acute respiratory failure
-Constant hospital admission for exacerbation
-Heart failure
-Pneumonia
-Weight loss

NCLEX IV (6): Pharmacological and Parenteral Therapies

<u>Anticipated Medication Management</u>
-Bronchodilators
-Drug Therapy
-Corticosteroids

NCLEX IV (5): Basic Care and Comfort

<u>Non-Pharmacologic Care Measures</u>
-Deep breathing exercises
-Rest periods
-Positioning
-Avoiding irritants such as cigarette smoke
-Pulmonary rehab centers

NCLEX III (4): Psychosocial/Holistic Care Needs

<u>What stressors might a patient with this diagnosis be experiencing?</u>
-Inability to perform daily activities
-Feelings of isolation
-Changes in lifestyle
-Financial stressors
-Depending on others
-Anxiety



Client/Family Education

List 3 potential teaching topics/areas

- Avoiding irritants such as smoking cigarettes
- Rest periods in between activities
- Deep breathing exercises such as pursued lip breathing

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 Therapy
- Physical Therapy
- Occupational Therapy
- Case management
- Pulmonologist
- Pharmacy