THE STUDY VAULT

COPD

Respiratory

DISEASE / PATHOLOGY

- Chronic obstructive lung disease causes persistent airflow limitation.
- Primary process: chronic bronchitis and emphysema reduce ventilation and trap air.
- Why it matters: causes chronic hypoxemia, hypercapnia, and exacerbations.

RISK FACTORS

- *Who is most at risk?* Smokers and older adults.
- History / exposure: long-term smoke, pollutants, occupational exposure, recurrent infections.
- Genetics / lifestyle: alpha-1 antitrypsin deficiency and poor smoking cessation increase risk.

SIGNS AND SYMPTOMS

- *Hallmark findings*: chronic cough, sputum, dyspnea, wheeze, diminished breath sounds.
- Early: exertional shortness of breath, prolonged expiration.
- Late / urgent: barrel chest, cyanosis, confusion, severe respiratory distress.

DIAGNOSTIC TESTING

- *Tests, labs, imaging, procedures*: spirometry, pulse oximetry, ABGs, chest x-ray.
- Gold standard: spirometry.
- What confirms it: persistent airflow limitation with reduced FEV1/FVC.

TREATMENT

- First-line: assess breathing first; give bronchodilators and controlled oxygen as ordered.
- Inhaled corticosteroids, systemic steroids, antibiotics, and pulmonary rehab may be used.
- Encourage pursed-lip breathing and energy conservation.
- Nursing considerations: monitor breath sounds, SpO_2, mental status, and sputum changes.
- Nursing need-to-know: too much oxygen may worsen CO_2 retention in some patients.
- Nursing need-to-know: teach inhaler technique and smoking cessation.

PATIENT EDUCATION

- Home care: stop smoking, take inhalers correctly, and use oxygen safely.
- Stay current on vaccines and avoid respiratory irritants.
- When to call: increased sputum, fever, worsening dyspnea, or confusion.

ADDITIONAL NOTES:

- NCLEX must know: position in high Fowler to ease breathing.
- Red flag: drowsiness or confusion may signal CO_2 retention.
- Common exam trap: COPD is obstructive, not restrictive.
- Priority action: support ventilation and monitor oxygen response.