

ACTIVE LEARNING TEMPLATE: System Disorder

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DISORDER/DISEASE PROCESS COPD

REVIEW MODULE CHAPTER _____

Alterations in Health (Diagnosis)
 COPD: emphysema

Pathophysiology Related to Client Problem
 α₁-antitrypsin (AAT) antiprotease enzyme deficiency
 serine elastase (protease) digests elastic fibers in the lung → loss of elastic recoil in alveoli

Health Promotion and Disease Prevention
 Smoking prevention
 Health hazards

ASSESSMENT

Risk Factors
 Tobacco smoke
 Vaping
 Occupational dusts + chemicals
 Air pollution

Expected Findings
 - loss of lung capacity + abnormal enlargement of air spaces
 - hyperinflation of lungs → ↑ in lung capacity
 - non productive cough
 - accessory muscle + pursed lip breathing
 - barrel chest
 - ↓ breath sounds, ↑ RR

Laboratory Tests
 - ABG'S
 - Alpha 1 antitrypsin deficiency

Diagnostic Procedures
 - chest x-ray
 - pulmonary function studies
 • lung volumes
 • lung capacities
 • rates of air flow
 • gas exchange
 - chest radiography

SAFETY CONSIDERATIONS

- avoid infections
- give up smoking
- use O₂ appropriately
- take medication

PATIENT-CENTERED CARE

Nursing Care
 - assess + monitor RR, breath sounds.
 - auscultate breath sounds
 - monitor + graph ABG's, pulse oximetry, chest x-ray

Medications
 bronchodilators (albuterol B₂ agonist)
 Anticholinergics (ipratropium bromide)
 O₂ therapy

Client Education
 - give up smoking
 - eat right + exercise
 - taking medications properly
 - lung cancer screening
 - breathing techniques
 - O₂ therapy

Therapeutic Procedures
 - assist patient to assume comfortable position (elevating head)
 - keep environmental pollution to a minimum (dust, smoke, feather pillows)
 - encourage abdominal or pursed lip breathing
 - increase fluid intake
 - suction secretions
 - ambulate patient
 - smoking cessation
 - patient advocacy groups

Interprofessional Care
 - primary care
 - pulmonologist
 - respiratory therapist
 - pharmacist
 - mental health therapist
 - thoracic surgeon (severe)

Complications

- respiratory infections
- heart problems
- lung cancer
- HBP in lung arteries
- depression