

COPD

Encompasses pulmonary emphysema and chronic bronchitis

Not reversible

PULMONARY EMPHYSEMA

Destruction of alveoli, narrowing of bronchioles, and trapping of air resulting in loss of lung elasticity

CONTRIBUTING FACTORS

Cigarette smoking (main causative factor) Exposure to air pollution

Passive smoke inhalation Alpha-antitrypsin deficiency (inability to break down pollutants)

Advanced age Occupational dust and chemical exposure

MANIFESTATIONS

Dyspnea w/ productive cough Fatigue

Difficult exhalation, use of pursed lip breathing Clubbed fingernails

Wheezing Weight loss

Crackles Respiratory acidosis w/ hypoxia

Barrel chest Shallow, rapid respirations

CHRONIC BRONCHITIS

Inflammation and hyper secretions of mucus in the bronchi and bronchioles caused by chronic exposure to irritants

CONTRIBUTING FACTORS

Cigarette smoking (main causative factor)

Exposure to air pollution and other environmental irritants

MANIFESTATIONS

Productive cough Thick, tenacious sputum

Hypoxemia Respiratory acidosis w/ hypoxia

DIAGNOSTIC PROCEDURES FOR COPD

Chest x-ray

Pulmonary function tests: air remains trapped in lungs

Pulse oximetry: often less than 90%

ABGs: Chronic respiratory acidosis

Computed tomography (CT)

NURSING INTERVENTIONS

Monitor respiratory status

Monitor cardiac status for signs of right-sided failure

Position pt upright and leaning forward

Schedule activities to allow for frequent rest periods

Administer oxygen therapy as prescribed

Use incentive spirometry, breathing techniques, & effective coughing

Encourage fluids 2-3 L/day unless contraindicated

Encourage a high calorie diet

Provide emotional support

Reinforce teaching about immunizations for pneumonia & influenza

MEDICATIONS

Bronchodilators Beta-adrenergic agents

Cholinergic antagonists Corticosteroids

Methylxanthine Anti-inflammatory agents

Mucolytic agents

THERAPEUTIC MEASURES

Chest physiotherapy/pulmonary drainage

Lung reduction surgery

CLENT EDUCATION & REFERRAL

Breathing techniques

Oxygen therapy

Medications

Nutrition

Refrain from smoking

Infection prevention measures

Pulmonary rehabilitation

Activity pacing

COMPLICATIONS OF COPD

Cor pulmonale

Carbon Dioxide Toxicity

Pneumonia

Tuberculosis

Laryngeal Cancer

Lung Cancer

