

### 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

### CLIENT 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