

# 2 Chronic Obstructive Pulmonary Disease: Bronchitis/Emphysema

Patient name: \_\_\_\_\_ Admission: \_\_\_\_\_

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- I. **The client/caregiver has a basic understanding of anatomy and physiology of the lung and respiratory system.**
  - A. The lungs are two sac-like organs located in the chest cavity.
  - B. The main windpipe (trachea) breaks into right and left bronchi and then connects to each lung.
  - C. The bronchi are further divided into smaller branches called bronchioles.
  
- II. **The client/caregiver can define chronic obstructive pulmonary disease (COPD) and emphysema.**
  - A. COPD is the term used to describe several lung disorders, including chronic bronchitis and emphysema.
  - B. Both conditions are a result of obstruction to airflow that interferes with normal breathing.
  - C. Bronchitis is the inflammation of the bronchi caused by viral, bacterial or mycoplasmal infections. The inflammation and irritation stimulate the production of mucus.
  - D. Emphysema is caused by recurrent inflammations that result in destruction of lung tissue. Destruction and loss of elasticity of alveoli result in decreased air exchange. Bronchioles may collapse on expiration causing trapped air, which makes expiration more difficult.
  - E. Bronchitis can be acute or chronic. It is considered chronic if a recurrent cough persists at least 3 months of the year for at least 2 successive years.
  - F. Emphysema is a chronic disease and damage cannot be reversed.
  
- III. **The client/caregiver can list factors that increase risk of COPD.**
  - A. Positive family history
  - B. Recurrent respiratory infections

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- C. Continual exposure to harmful irritants
  - Occupational hazards
  - Air pollution
  - Cigarette smoking
- D. Allergies
- E. Most people with COPD are at least 40 years old or around middle age.
- F. Impaired immune system
  
- IV. **The client/caregiver can recognize signs and symptoms of COPD.**
  - A. The severity of the symptoms depend on how much of the lung has been destroyed. Destruction will continue faster if smoking is continued.
  - B. Symptoms
    - Cough
    - Sputum (mucus) production
    - Shortness of breath, especially with exercise
    - Wheezing
    - Chest tightness
    - Barrel chest (emphysema)
    - Loss of appetite and weight loss
  
- V. **The client/caregiver can list measures to prevent or manage COPD.**
  - A. Stop smoking
  - B. Avoid fatigue (energy conservation teaching guide)
  - C. Eat healthy foods such as lots of fruits and vegetables. Eat protein foods such as meat, fish, eggs, milk, and soy. Eat smaller, more frequent meals.
  - D. Take medications as ordered and make sure you refill them so you do not run out.
  - E. Avoid irritants and keep home clean.
    1. Avoid newly painted areas or after spraying for insects.
    2. Avoid wood or kerosene heaters.
    3. Keep windows closed and stay home when pollen count is high or air pollution is high.

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- F. Avoid smoking because it destroys ciliary action and increases secretions.
- G. Treat all respiratory infections promptly.
- H. Receive flu shots and pneumonia immunization.
- I. Consult with pulmonary rehabilitation program, which provides
  - 1. Exercise training
  - 2. Disease-management training
  - 3. Counseling
  - 4. Help with adjusting activities of daily living to disease
  - 5. Specific instruction with dietician, occupational therapist, respiratory therapist
- J. Oxygen therapy as needed or continuously. Oxygen may help
  - 1. Do activities with less shortness of breath
  - 2. Protect heart and other organs from damage
  - 3. Sleep more during the night
  - 4. Improve alertness during the day
- K. Avoid excessive heat, which increases oxygen requirements and avoid excessive cold, which increases possibility of bronchospasm.
- L. Use humidifier during winter months.
- M. Perform measures to thin or remove secretions to maintain patent airways.
  - 1. Drink 1.5 to 2 quarts of fluids daily to thin secretions.
  - 2. Use a humidifier to moisten air.
- N. Wear a Medic Alert bracelet.
- O. Get emergency help if you have the following symptoms:
  - Heart is beating very fast and irregularly.
  - Lips or fingernails are gray or blue.
  - You are not mentally alert.
  - You are having difficulty talking or walking.

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- VI. The client/caregiver is aware of possible complications.
  - A. Greater risk if respiratory infections and complications
  - B. Peptic ulcer disease
  - C. Right-sided heart failure
  - D. Need of oxygen therapy for hypoxia (lack of oxygen)
  - E. Need of lung surgery or transplant
  - F. Acute respiratory failure

**RESOURCES**

U.S. Office of the Surgeon General  
[www.surgeongeneral.gov/tobacco/](http://www.surgeongeneral.gov/tobacco/)

National Heart, Lung, Blood Institute (National Institutes of Health)  
[www.nhlbi.nih.gov/](http://www.nhlbi.nih.gov/)

National Lung Education Program  
[www.nlhep.org/resources](http://www.nlhep.org/resources)

*Clearing the Air.* (2003). An online guide to quitting.  
[www.smokefree.gov/quit-smoking/](http://www.smokefree.gov/quit-smoking/)

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