

## Save Your Breath and Conserve Your Energy Living with COPD

Chronic obstructive pulmonary disease (COPD) is a prevalent and debilitating disease that affects the quality of life for many people. We will briefly review COPD etiology and medical management, and then focus on strategies that are easy to implement to improve the functional status and quality of life for people with COPD. The functional level and quality of life for people with COPD can be optimized by educating people, family and caregivers about energy conservation techniques.

### CHRONIC OBSTRUCTIVE PULMONARY DISEASE

- **COPD** is a term referring to two lung diseases, chronic bronchitis and emphysema. Both of these progressive and irreversible conditions frequently co-exist, hence the term COPD. They are characterized by obstruction and limitation of airflow which interferes with normal breathing.
  
- **Chronic bronchitis** is a condition that causes excessive mucus production within the bronchial tree in amounts that are sufficient enough to cause a productive cough for at least 3 months per year for 2 or more consecutive years.
  - The airway lumen may be partially blocked by excessive mucus secretions and enlargement of the mucus-secreting glands.
  - The cilia also become damaged and less effective as the mucus glands enlarge.
  - The narrowed airways and increased mucus cause congestion and coughing resulting in dyspnea.
  
- **Emphysema** is a condition characterized by the gradual destruction of alveoli, where oxygen from the air is exchanged for carbon dioxide in the blood.
  - Damage to the alveoli is irreversible and results in fewer alveoli to do the work of oxygen exchange.

- The lung's alveoli also lose their elasticity, making it difficult to maintain open airways, contributing to poor oxygen exchange.
  - The person experiences great difficulty exhaling.
  - The level of impairment and functional limitation is dependent on the degree of damage to the alveoli and lung tissue.
- Approximately 80-90 percent of COPD deaths are caused by smoking.
- Other risk factors of COPD include second-hand smoke, air pollution, occupational exposure to certain industrial pollutants, history of childhood respiratory infections and heredity.
- The quality of life for a person suffering from COPD diminishes as the disease progresses. A survey by the American Lung Association revealed that half of all COPD patients (51%) say their condition limits their ability to work. It also limits them in normal physical exertion (70%), household chores (56%), social activities (53%), sleeping (50%) and family activities (46%).
- In 2004, the cost to the nation for COPD was approximately \$37.2 billion.
- COPD is the fourth leading cause of death in America affecting more women than men.

### **MANAGEMENT OF COPD**

- There is no cure for COPD. The multidisciplinary health care team, including the physician, nursing staff, dietician, occupational therapist, physical therapist, pharmacist and direct caregiver staff, can be effective in assisting people manage their COPD.
- The goal of pharmacotherapy for COPD is to provide relief of symptoms, prevent complications, and slow the progression of the disease with minimal side effects.

- Bronchodilator medications are used to open airways and relieve dyspnea symptoms.
  - Corticosteroids are used to decrease airway inflammation; however side effects of long term use include osteoporosis.
  - Antibiotics are used for the treatment of infections.
  - Older adults should also be encouraged to get flu vaccine shots each year.
- Oxygen therapy is used to correct hypoxemia thereby improving sleep, increasing the level of alertness during the day and reducing the perceived level of dyspnea, or difficulty breathing.
- In severe cases of COPD, when other treatment options are not effective, there are three surgical options: a lung transplant, lung volume reduction surgery or a bullectomy.
- Residents with COPD should be encouraged to live a healthy lifestyle by avoiding cigarette smoke and other air pollutants, exercising and eating well.
- The multidisciplinary health care team can provide services and education addressing issues such as smoking cessation, nutrition, weight management, appropriate aerobic exercise, light resistance exercise, breathing exercises, task simplification and energy conservation.

## Energy Conservation

Energy Conservation is completing tasks in an efficient, healthy manner. It may involve adapting your present methods of doing things into more a streamlined manner. By practicing energy conservation strategies you will be able to continue to enjoy daily activities that have become difficult to perform. Energy conservation is like saving money in the bank. When you practice energy conservation you will be able to reserve energy to participate in meaningful activities that you may currently be neglecting.

### The Four P's of Energy Conservation

**Planning**  
**Pacing**  
**Prioritize**  
**Positioning**

#### **1. Planning**

- Organize yourself, your home and your working environment.
- List daily and weekly activities.
- Plan out each day to balance activities throughout the day: schedule rest between dressing, meals, chores and exercise. Do difficult chores at your best time of day, when you have the most energy.
- Plan out the week to balance the amount of heavy work: schedule shopping one day, laundry another, cleaning another.
- Utilize your mental energy before you expend your physical energy: Think about what you are about to do, what items you will need, and plan your trip between two points to eliminate any unnecessary trips.

#### **Planning Ideas in the Home**

Put items that you frequently use in a convenient place. Store your everyday clothes in the top drawers. Store frequently used foods on the top or middle shelf of the refrigerator where

- you will not have to bend to reach them. Store commonly used objects at arm level near the front of shelves, drawers or cabinets.
- Keep duplicates of frequently used items in several convenient locations. For example, have 2 vacuum cleaners or 2 sewing kits, one for upstairs and one for downstairs. Have a small trash can in every room.
- Utilize a bag, basket or rolling utility cart to carry things in one trip.
- Organize your kitchen into specific areas and put everything for the same task together in one area.
- Use pull-out shelves or lazy Susan's for easier storage.
- Avoid stacking items when you put them away because this takes extra energy to get them out from the bottom of the pile.
- In the kitchen, use the counter to slide things to where you need them.
- Prepare extra food and freeze portions to be used at a later date.
- Discard things that are seldom used.

## 2. Pacing

- Space difficult and strenuous chores evenly throughout the week.
- Do difficult chores at your best time of the day when you have the most energy.
- Allow yourself ample time to complete the task, without being rushed.
- Allow plenty of time for rest and relaxation.
- Allow for flexibility and leisure in your routine.
- It is better to feel well and be able to participate in family life than to feel tired and sore with attempting to get all of your daily chores finished?

## 3. Prioritize

- Can I change my role with my family, friends and community to something that is satisfying but more realistic?
- Set limits for yourself. Make a realistic activity plan.

- Do the tasks that are most important. Delegate the tasks that are not crucial to someone else. Are there some tasks that would be better for someone else to do, such as moving heavy furniture or scrubbing the floor?
- Be aware of when you need help. Ask for help.
- Eliminate unnecessary tasks.

#### **4. Positioning**

- Good posture will save you energy. Use good posture during all activities including sitting, standing, walking, lifting, or carrying.
- Sit rather than stand when possible for activities such as combing hair, dressing, and cooking.
- Use a shower seat and hand held shower head while bathing.
- Use a tall stool when working at the counter or cooking. Open the doors of the lower cupboard to get closer to the working surface and to allow for additional leg room and support for your feet.
- Check to see if the kitchen sink is the appropriate height. You should be able to put your palms flat in the bottom of the sink while keeping your back and arms straight. Build up the height of the sink if needed by putting an overturned basin or a baking dish in the bottom of the sink.
- When standing for prolonged periods take pressure off the lower back by resting one foot on a platform about two to four inches in height (about the height of a phone book) – occasionally shift weight from one foot to another.
- Use long handled equipment to reduce bending such as a long handled sponge to clean up small spills on the floor.
- Invest in energy saving appliances such as a dishwasher, clothes washer and dryer with easy to turn knobs, and a lightweight, self-propelling vacuum cleaner

## ENERGY CONSERVATION

### **What is energy conservation?**

- Completing tasks in an efficient, healthy manner. It may involve adapting your present method to a more streamlined one.

### **How can you use energy conservation techniques during your daily activities?**

- Look at your lifestyle in terms of the “4 P”s:  
                                  Planning      Pacing  
                                  Prioritize     Positioning

#### **Planning**

- Organize yourself, your home and your working environment
- List daily and weekly activities
- Utilize your mental energy before you expend your physical energy: Think about what you are about to do, what items you will need, and plan your trip between any two points to eliminate any unnecessary trips
- Put items you frequently use in a convenient place
- Keep duplicates of frequently used items in several convenient locations, for example keep a pair of scissors both upstairs and downstairs to save steps
- Consider using a bag, basket or rolling utility care to carry things in one trip.
- In the kitchen, use the counter to slide things to where you need them

#### **Pacing**

- Space difficult and strenuous chores evenly throughout the week
- Allow plenty of time for rest and relaxation
- Do difficulty chores at your best time of the day when you have the most energy
- Allow for flexibility and leisure in your routine: It is better to feel well and be able to participate in family life than to feel tired and sore with all of your chores done?

#### **Prioritize**

- Can I change my role with my family, friends and community to something that is satisfying but more realistic?
- Are there some tasks that would be better for someone else to do?
- Eliminate unnecessary tasks

#### **Positioning**

- Good posture will save you energy
- Sit when possible: make sure your work surface is an appropriate height
- Use a shower seat and hand held shower head to sit and rest in the shower
- Use long-handled assistive devices to reduce bending such as a long handled sponge to clean up small spills on the floor