Date: 5/27/2008 Patient: Elizabeth Test Date: 5/27/2008 Patient: Elizabeth Test

Chronic Obstructive Pulmonary Disease (COPD)

What is chronic obstructive pulmonary disease (COPD)?

Chronic obstructive pulmonary disease (COPD) is a condition in which some of your airways are permanently blocked. COPD makes it harder for you to breathe. It causes strain on and enlargement of your heart (cor pulmonale) and increased blood pressure in your lungs (pulmonary hypertension).

How does it occur?

There are 2 main types of COPD: chronic bronchitis (inflamed airways) and emphysema (damage to the lung tissue). Chronic bronchitis and emphysema result from irritation of your airways over a long time, usually by cigarette smoke and sometimes from air pollution. Other causes are on-the-job exposure to irritants and frequent lung infections.

Bronchitis and emphysema can occur separately but often develop together. In chronic bronchitis, the airways are narrowed by swelling. Excess mucus blocks the narrow airways and makes breathing difficult. In emphysema, the tiny air sacs in the lungs become damaged. The walls of the air sacs stretch and tear. This makes it harder for you to breathe out carbon dioxide after breathing in air. As the carbon dioxide accumulates in your lungs, there is less room for oxygen to be breathed in.

What are the symptoms?

COPD usually has symptoms of chronic bronchitis or emphysema. These symptoms include:

- deep, persistent cough that produces lots of mucus (sputum)
- thick phlegm that is hard to cough up
- wheezing
- shortness of breath, trouble breathing
- rapid breathing
- blue-purple color in the skin (cyanosis), especially of the hands, feet, and lips
- weight loss
- frequent lung infections
- swelling in the legs, ankles, and feet.

In the early stages of the disease you may not have any symptoms.

How is it diagnosed?

Your health care provider will ask you about:

- your symptoms and if you are less active because of the symptoms
- your smoking habits
- exposure to irritants such as aerosol sprays, industrial chemicals, and air pollution
- your medical history, for example, if you have had asthma.

Your health care provider will examine you. You may have the following tests:

- pulmonary function test (you breathe into a tube to measure airflow into and out of your lungs to see how well your lungs are working)
- chest x-ray
- blood tests
- electrocardiogram (ECG)
- lab tests of sputum.

How is it treated?

The damage to your lungs cannot be reversed, so treatment aims to relieve symptoms and prevent the condition from getting worse. For smokers the most important part of treatment is to quit smoking.

Your health care provider may prescribe:

- Medicine that relaxes and opens the airways (called a bronchodilator). This
 makes it easier to breathe. Some forms of this medicine are taken as pills
 or liquid. Some are inhaled. Some need to be used with a nebulizer. (A
 nebulizer is a machine used to inhale moisturized medicine through a face
 mask or breathing tube.)
- Steroid medicines to reduce inflammation.
- Antibiotics to treat bacterial infection.
- Medicine (called an expectorant) that loosens the mucus and helps you cough it up.
- Medicine (called a diuretic or water pill) that reduces leg swelling.

Ask your health care provider if you can help your symptoms with:

- regular exercise, such as walking or riding a stationary bicycle, according to your health care provider's recommendations
- breathing exercises
- oxygen therapy to make breathing easier
- a humidifier to increase air moisture
- changes in your work environment to reduce exposure to irritants.

Also ask your health care provider how much fluid you should drink every day.

If it is hard for you to cough up mucus, your health care provider may recommend one of the following methods to help clear your airways. These treatments may be done by a nurse or a respiratory therapist, or by a family member after training on how to do it.

- chest percussion: striking a part of your chest with short, sharp blows
- postural drainage: helping you get into a position that helps drain secretions from the lungs.

In rare cases of severe COPD, surgery may be an option. Surgery can remove the most diseased part of the lungs, or a lung transplant might be considered.

How long will the effects last?

COPD cannot be cured. Once you have COPD, it does not get better, but taking good care of yourself is the best way to prevent it from getting worse.

How can I take care of myself?

Follow these guidelines to take care of yourself:

- If you smoke, quit.
- Follow your health care provider's advice for treating COPD. Take all of your medicine according to your provider's instructions.
- Avoid other people's secondhand smoke, air pollution, and extreme changes in temperature and humidity.
- Ask about getting flu and pneumonia shots.
- Eat healthy foods.
- Eat high-calorie snacks between meals if you are underweight.
- Take vitamin and mineral supplements if recommended by your health care provider.
- Be as active as you comfortably can.
- Get plenty of rest and sleep.
- Consider lifestyle changes such as changing jobs or moving to a less polluted climate or lower altitude.

Call your health care provider if you have:

- chest pain
- fever
- phlegm that thickens or changes in color
- blood in the phlegm
- worsening shortness of breath
- shortness of breath when you are resting.

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