

Chronic obstructive pulmonary (lung) disease (COPD)

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The lungs are the largest two spongy organs which are protected in the rib cages of the chest. Approximately 90% of the lung is filled with air. When person inhales, the air will pass through the millions of terminal microscopic sacs called alveoli where the oxygen and carbon dioxide from the blood capillaries can be exchanged. The oxygenated blood will then be carried to the heart where the blood will be pumped off to nourish the whole body again. Any condition which fails to facilitate the blood oxygen-carbon dioxide exchange, we cannot survive.

Chronic obstructive pulmonary (lung) disease (COPD) usually is an acquired condition characterized by limitation of the airflow in the lung, which develop over time and is not totally reversible. Two major diseases in this category are emphysema and chronic bronchitis. These conditions are totally different from common cold or pneumonia which is acute respiratory infection and condition is reversible if properly treated.

Emphysema is a disease marked by destruction and damage of the walls of the tiny alveoli or air sacs at the end of the smallest airway. They will loose elasticity causing the formation of dead-spaced air bullae or pockets in the injured areas and impairing the ability to exhale properly.

Chronic bronchitis is a chronic inflammatory disease of the airway in the lungs causing the structural damages that lead to obstruction and impair air flow. Chronic cough and overproduction of the mucus are the major symptoms.

Usually, both conditions develop together but the symptoms generated depending on what condition is dominant. These symptoms include; chronic cough, spitting or coughing mucus, breathlessness upon exertion and progressive reduction in the ability to exhale.

Cigarette smoking is the major cause accounting for 80-90% of all cases of COPD. It contains irritants that inflame the air passages and alveoli. Other minor causes include air dust and chronic exposure of particular industrial chemicals.

According to Professor, Dr. Arth Nana, Chief of the Division of Respiratory Disease and Tuberculosis, Faculty of Medicine Siriraj Hospital, COPD is ranking the fourth among the major causes of death worldwide and will become the third in the year 2020 if not properly prevented. About 14 million people in the United States have COPD with a prevalence of more than 6% in the age between 25-75 years. As survey by our faculty in 1999 in the Bangkoknoi district among people over 60, the prevalence of mild to moderate COPD was 7.1 and 3.6% respectively.

Since the process of the disease is slow progressive, most people are not aware of this illness. The affected people are among elderly over 40 years or who smoke more than 20 pack-year. This means that COPD will likely to develop in the one who smoke a pack of cigarette in a day for 20 years or 2 packs a day in 10 years. Smokers who are at risk will have a sign of progressive cough and short of breath on most days. However, do not wait until the full-blown signs develop or else it might be too late to remedy.

A special test is available to confirm your condition by having a breathing test with a machine. The machine measures how deeply you can breathe and how fast you can move air in and out of your lungs. Chest X-ray can also show signs of COPD.

Actually COPD can not be cured, however, the treatment aims to relieve symptoms and prevent condition from getting worse; such as using bronchodilator drugs, expectorants, nebulizer, steroid, antibiotics to treat bacterial infection, oxygen supplement devices, mechanical ventilation, etc. In rare cases of severe COPD, surgery may be an option by performing tracheotomy or removing of the most diseased part of the lungs or a lung transplant might be considered.

Stop smoking is the key success to prevent this irreversible and awful disease. If you quit smoking sooner, you will have a better chance of living longer and having a good quality of life. In some people who quit, lung function stabilizes or may even improve slightly and eventually declines at about the rate of nonsmoker in the same age group.

Dr. Arth adds that other life style change is also quite needed; keep staying in a well ventilated area most of the time; avoid exposure to the airborne contaminants or allergens such as hair spray, aerosol products, insecticides, house dust, pollen, etc.

Keep yourself healthy by regular exercise and good hygiene. This will prevent upper respiratory tract infection that may aggravate your symptoms. Influenza vaccination is recommended each year at least six weeks before flu season. Breathing exercise should be trained by your physicians to improve lung function. Regular walking exercise, 3-4 times daily for 5 to 15 minutes each time, is also helpful and is the best for people with emphysema.

As this preventable disease is more prevalent than previously thought, the awareness of the hazard of cigarette smoking as well as the consequence of this habit should be publicized.