

## Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Diseases (COPD)

**Condition:** Chronic obstructive pulmonary disease (COPD) is a lung disease that causes a feeling that it is difficult to breathe air in because of airway collapse, causing air trapping. This condition increases the risk of developing pneumonia and bronchitis, infection of the lungs and airways.

**Background:** The worldwide occurrence of COPD is high where air quality is poor and in people who smoke. In the US, COPD affects 5% of the population and causes approximately 120,000 deaths each year.

**Risk Factors:** In the US, tobacco smoking is the greatest risk factor for COPD, but occupational exposure to toxic dust, fumes and allergens as well as poor air quality in the home can be contributing factors.

**History and Symptoms:** Difficulty breathing, wheezing, chest tightness, a cough that does not go away, and coughing that produces mucus are symptoms associated with COPD. Usually, doctors ask about any history of smoking, such as, how long someone has been smoking, how many packs per day are smoked and if other people at home are smokers.

**Physical Exam:** The examination of the lungs will involve listening to the sounds of breathing and looking for signs of excessive effort to breathe. A small sensor on the finger will measure the level of oxygen in the blood. As lung tissue is lost, the chest cavity may increase outward to look like the shape of a barrel or downward past the diaphragm (the large muscle under the lungs) causing an abnormal inward movement at the lower ribcage.

**Diagnostic Process:** A chest x-ray is important to visualize the inside of the chest for anything that might be a risk to health. Lung function tests measure the amount of air in the lungs and how quickly the air moves in and out. Further testing might include a CT scan of the chest.

**Rehab Management:** A referral to a physical medicine and rehabilitation (PM&R) physician is a good idea because it is important to consider all the medical conditions that need attention and to have access to all the therapists that you may need. A program to stop smoking may help the patient who is having trouble to quit. There are many effective medications, some inhaled, that open the airways and reduce inflammation. Regular exercise that is within tolerance is advised. It should include some high intensity and low intensity exercise, using upper and lower limbs. Resistance exercise is especially helpful to patients who have lost muscle mass. Respiratory therapy to teach purse lip breathing techniques helps to keep airways open and reduce air trapping. Vibration and optimal body positioning can help to mobilize excessive mucus secretions. Occupational therapy is helpful to minimize the functional impact of COPD on daily activities and to provide comprehensive education to family members and caregivers

**Other Resources for Patients and Families:** The National Institute of Health's National Heart, Lung and Blood Institute [COPD Learn More Breathe Better<sup>®</sup>](#) campaign offers resources that may help.

## Frequently Asked Questions

### **What is PM&R?**

Physical medicine and rehabilitation (PM&R), also known as physiatry, is a primary medical specialty that aims to enhance and restore functional ability and improve quality of life to those with injuries, physical impairments or disabilities affecting the brain, spinal cord, nerves, bones, joints, ligaments, muscles and tendons. PM&R physicians, known as physiatrists, evaluate and treat the whole body, maximize patients' independence in their daily life and are experts in designing comprehensive, patient-centered treatment plans to empower patients to achieve their goals. By taking the whole body into account, they can accurately pin-point problems, decrease pain, assist in recovery from devastating injuries and maximize overall outcomes and performance with non-surgical and peri-surgical options. To learn more, visit [www.aapmr.org/aboutpmr](http://www.aapmr.org/aboutpmr).

### **What makes PM&R physicians unique?**

PM&R physicians' training focuses not just on treating medical conditions, but on enhancing the patient's performance and quality of life in the context of those medical conditions. They focus not only on one part of the body, but instead on the development of a comprehensive program for putting the pieces of a person's life back together – medically, socially, emotionally and vocationally – after injury or disease. PM&R physicians make and manage medical diagnoses, design a treatment plan and prescribe the therapies that physical therapists or other allied therapists perform or that are carried out by the patients themselves. By providing an appropriate treatment plan, PM&R physicians help patients stay as active as possible at any age. Their broad medical expertise allows them to treat disabling conditions throughout a person's lifetime.

### **Why see a PM&R physician?**

A PM&R physician will thoroughly assess your condition, needs, and expectations and rule out any serious medical illnesses to develop a treatment plan. By understanding your condition and goals, you and your PM&R physician can develop a treatment plan suited to your unique needs.

### **How do I find a PM&R physician near me?**

Visit [www.aapmr.org/findapmrphysician](http://www.aapmr.org/findapmrphysician) or contact your primary care physician for a referral.