

## Simple Test Can Help Detect Common Lung Disease

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### Early Detection of Chronic Obstructive Pulmonary Disease Key to Longer, More Enjoyable Life

If you are a smoker or former smoker you should have a simple lung-function test, called [spirometry](#). That is the advice E. Rand Sutherland, MD, M.P.H., and Reuben Chorniack, MD, pulmonologists at National Jewish Medical and Research Center, offer in a review article published in the June 24 issue of the [New England Journal of Medicine](#). Spirometry can help detect chronic obstructive pulmonary disease (COPD), a disease caused primarily by smoking tobacco and the fourth leading cause of death in the United States.

"Chronic obstructive pulmonary disease is a treatable and preventable disease," said Dr. Sutherland, Assistant Professor of Medicine at National Jewish. "Because people do not generally recognize symptoms of COPD until their lungs are functioning about half as well as normal, lung-function testing, or spirometry, is crucial to detecting the disease before extensive lung damage has occurred."

COPD is a progressive loss of airflow in lungs caused primarily by chronic inflammation in the airways and lung tissue. Chronic bronchitis and emphysema are two common forms of COPD. About 85% of COPD cases in the United States are caused by tobacco smoke. Approximately 10 to 20 percent of smokers develop COPD.

About 125,000 people per year die of COPD in the United States. COPD is the only common cause of death in the United States whose prevalence has risen in the past 20 years. COPD is also a large and growing cause of death around the world.

There is no cure for COPD. Early detection of COPD, however, can lead to changes that slow the progressive loss of lung function, improve symptoms and quality of life and prevent flare-ups that can land a person in the hospital or even cause death.

Smoking cessation is the only known method to alter the loss of lung function seen in this disease. If the disease is detected in relatively early stages, a person who quits smoking can stop the accelerated loss of lung-function associated with the disease.

"Smoking is an addictive habit that is very difficult to stop," said Dr. Sutherland. "But a person with COPD is almost certain to live longer if he or she can kick the habit. Both drug therapy and counseling have been shown to help patients quit."

Medications and pulmonary rehabilitation can reduce symptoms of the disease and improve a person's quality of life. Medications known as bronchodilators can open the airways and help relieve the shortness of breath that is the hallmark symptom of COPD. Inhaled corticosteroids can be helpful for some patients, with evidence that they reduce exacerbations of the disease.

Pulmonary rehabilitation, involving aerobic physical training, education, psychosocial counseling and nutritional support, reduces shortness of breath, improves patients' exercise capacity and quality of life, and reduces hospitalizations associated with the disease.

"Many people don't consciously recognize that COPD is limiting the activities they pursue," said Dr. Sutherland. "But over time, they slowly give up many enjoyable activities, such as golf, dancing or walking, because they want to avoid feeling like they can't get enough air. Medications and pulmonary rehabilitation can both help people return to many activities they have abandoned over the years."

Spirometry, the key to early detection of the disease, involves blowing hard into a machine that evaluates air flow in and out of a person's lungs. Drs. Sutherland and Cherniack recommend that smokers and former smokers should ask their physicians to give them a spirometry test or refer them to a pulmonologist who can.

"COPD is widely underdiagnosed. Millions of people are walking around today unaware that they have early stage disease," said Dr. Sutherland. "Spirometry is an extremely valuable and simple test that can help people feel better and live longer."

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## Media Contacts

Our team is available to arrange interviews, discuss events and story ideas.

**William Allstetter**

303.398.1002

allstetterw@njhealth.org

**Adam Dormuth**

303.398.1082

dormutha@njhealth.org