

Diagnosis and Management of Chronic Obstructive Pulmonary Disease: A Clinical Practice Guideline from the American College of Physicians

Summaries for Patients are a service provided by *Annals* to help patients better understand the complicated and often mystifying language of modern medicine.

The full reports are titled “Diagnosis and Management of Stable Chronic Obstructive Pulmonary Disease: A Clinical Practice Guideline from the American College of Physicians” and “Management of Stable Chronic Obstructive Pulmonary Disease: A Systematic Review for a Clinical Practice Guideline.” They are in the 6 November 2007 issue of *Annals of Internal Medicine* (volume 147, pages 633-638 and 639-653). The authors of the first report are A. Qaseem, V. Snow, P. Shekelle, K. Sherif, T.J. Wilt, S. Weinberger, and D.K. Owens, for the Clinical Efficacy Assessment Subcommittee of the American College of Physicians; the authors of the second report are T.J. Wilt, D. Niewoehner, R. MacDonald, and R.L. Kane.

Who developed these guidelines?

The American College of Physicians (ACP) developed these recommendations. Members of the ACP are internists, which are specialists in the care of adults.

What is the problem and what is known about it so far?

Chronic obstructive pulmonary disease (COPD) is a disease of the airways and lungs that usually occurs in cigarette smokers. People with COPD get short of breath. Damage to the lungs and symptoms slowly worsen over time. Spirometry is a breathing test that can diagnose COPD on the basis of a measurement called FEV_1 (forced expiratory volume in 1 second), which estimates the amount of air that a person exhales in 1 second compared with that of a typical healthy person of the same age and size. A person with a FEV_1 of 60% exhales about 60% the amount that a typical healthy person the same age and size exhales in 1 second.

Doctors treat COPD with drugs that widen the airways of the lungs (beta-agonist or anticholinergic drugs) and drugs that decrease inflammation (corticosteroids). These drugs come in inhalers that allow patients to breathe in the drugs. Oxygen therapy can help some people with COPD. Pulmonary rehabilitation, which involves patient education and exercise, is another COPD treatment.

How did the ACP develop these recommendations?

The authors reviewed studies about the benefits and harms of various tests and treatments for COPD published between 1966 and March 2007.

What did the authors find?

The authors found little evidence that spirometry helps to select treatment. They did find that spirometry can be helpful in diagnosing COPD in patients who present with breathing symptoms, but it is not helpful in patients without symptoms.

The authors found strong evidence for a benefit of inhaled beta-agonists, anticholinergics, and corticosteroids in reducing symptoms, hospitalization, and death due to COPD. However, the studies of these drugs were mostly done in patients with an FEV_1 less than 60% and might not apply to patients with less severe lung abnormality. Evidence for a benefit of oxygen therapy was found for patients with very low resting blood oxygen levels. Some weak evidence indicated that pulmonary rehabilitation may help patients with COPD symptoms and an FEV_1 less than 50%.

What does the ACP suggest that patients and doctors do?

The ACP strongly recommends that doctors and patients:

1. Use spirometry to diagnose COPD in patients with shortness of breath, but not to look for COPD in patients without symptoms.
2. Treat COPD with 1 of the following drugs if spirometry shows that the FEV_1 is less than 60% predicted: a long-acting beta-agonist, a long-acting anticholinergic, or a corticosteroid.
3. Consider oxygen therapy for patients with COPD who have very low blood oxygen levels at rest.

The ACP weakly recommends that doctors and patients should:

1. Consider a combination of inhaled drugs if the FEV_1 is less than 60% and symptoms continue during treatment with 1 drug.
2. Consider pulmonary rehabilitation for patients with COPD symptoms and an FEV_1 less than 50% predicted.

What are the cautions related to these recommendations?

Recommendations may change as new studies become available.

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