

## Beta-blockers may be associated with benefits in patients with lung disease

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Patients with chronic obstructive pulmonary disease (COPD) may have fewer respiratory flare-ups and longer survival if they take beta-blocker medications, according to a report in the May 24 issue of *Archives of Internal Medicine*.

By the year 2020, COPD—a diagnosis that includes emphysema and chronic bronchitis—is expected to become the third leading cause of death in the Western world, according to background information in the article. Patients with the condition are also prone to develop and die from cardiovascular diseases. Medications known as [beta-blockers](#), used to treat [high blood pressure](#) and heart rhythm disorders, are known to improve the survival of patients with cardiovascular disease. However, clinicians avoid use of beta-blockers in patients with COPD because of concerns about adverse effects on the lungs.

Frans H. Rutten, M.D., Ph.D., of University Medical Center Utrecht, the Netherlands, studied data from electronic medical records of 2,230 patients (average age 64.8) with COPD who visited 23 general medical practices between 1996 and 2006. Of these, 560 had COPD at the start of the study and 1,670 developed it during the study period; 665 used beta-blockers and 1,565 did not.

During an average of 7.2 years of follow-up, 686 patients (30.8 percent) died, including 27.2 percent of those who used a beta-blocker compared with 32.3 percent of those who did not use a beta-blocker. In addition, 1,055 patients (47.3 percent) had at least one exacerbation of COPD,

including 42.7 percent of those who had used a beta blocker and 49.3 percent of those who did not use a beta-blocker.

Among the subgroup of 1,229 patients without overt cardiovascular disease, 520 (42.3 percent) experienced at least one exacerbation of COPD and 241 (19.6 percent) died. These outcomes were both less likely among the 239 patients (19.4 percent) who used beta-blockers.

"To our knowledge, this is the first observational study that shows that long-term treatment with beta-blockers may improve survival and reduce the risk of an exacerbation of COPD in the broad spectrum of patients with a diagnosis of COPD, including those who have COPD with but, importantly, also without overt cardiovascular comorbidities," the authors write.

"Whether beta-blockers can also cause beneficial pulmonary [lung] activity and therefore are truly 'cardiopulmonary' drugs remains to be proved," the authors write. Randomized controlled trials to assess the use of beta-blockers in patients with COPD are necessary, they conclude.

**More information:** Arch Intern Med. 2010;170[10]:880-887.

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