

# Exacerbations of COPD accelerate lung-function loss

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Exacerbations of chronic obstructive pulmonary disease (COPD) accelerate the loss of lung function especially among patients with mild disease, according to researchers at National Jewish Health and other institutions. Barry Make, MD, professor of medicine at National Jewish Health and his colleagues in the COPDGene study presented their findings at the 2016 American Thoracic Society International Meeting in San Francisco.

"These findings confirm our suspicions that exacerbations of COPD accelerate [lung-function loss](#)," said Dr. Make, senior author of the study. "The surprise is that patients with mild disease suffer the greatest loss."

The researchers analyzed data from 2,000 current or former smokers who had been followed for five years as part of the COPDGene study. Thirty-five percent of the study subjects had experienced at least one exacerbation or acute respiratory event requiring antibiotics, [oral steroids](#) and/or hospitalization.

Lung function was measured as the amount of air a person can forcefully exhale in one second (FEV1). Exacerbations were associated with additional decline in FEV1 in COPD patients beyond losses due to aging and COPD without exacerbations. The effect was especially prominent among patients with mild COPD, known as GOLD 1. Exacerbations requiring oral steroids or antibiotics resulted in an additional 21 milliliters of lost lung function per year. Exacerbations requiring hospitalization more than tripled that consequence to 75 milliliters per year, by far the largest loss of lung function among any group of COPD patients. Study participants who did not have COPD experienced no additional lung-function loss following exacerbations.

"These findings indicate that patients with mild COPD are particularly susceptible to lung-function

loss following exacerbations," said Dr. Make. "We need to include more patients with mild COPD in our clinical trials to potentially reduce the risk of advancing to more severe lung disease."

Provided by National Jewish Health

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