

# Phosphodiesterase 4 inhibitors have only marginal benefits for people with COPD

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Giving patients with chronic obstructive pulmonary disease (COPD) newly available oral phosphodiesterase 4 (PDE4) inhibitors, roflumilast or cilomilast, improves lung function and reduces the likelihood of a flareup, but does not increase general quality of life. These are the findings of a new systematic review by Cochrane researchers.

COPD is one of the leading causes of global morbidity and mortality, resulting in a growing social and economic burden (GOLD 2005). In 2002, research published by the WHO estimated that it was the fifth leading cause of death worldwide, responsible for approximately 4.8% of total deaths worldwide, and predicted that it would become the fourth leading cause of death by 2030.

COPD reduces lung function, quality of life and life expectancy. Apart from stopping smoking, there are no other treatments that slow the decline of lung function.

Roflumilast and cilomilast are members of a new class of medicines, and trials have now evaluated their safety and performance. Led by Dr Phillippa Poole of the University of Auckland, New Zealand, a team of researchers looked at data from nine trials of roflumilast and 14 trials of cilomilast involving over 15,000 patients.

Treatment with a [PDE4](#) inhibitor was associated with a reduced likelihood of COPD exacerbation, but more participants in the treatment groups experienced non-serious adverse events compared with controls,

particularly [gastrointestinal symptoms](#) and headache. Roflumilast was associated with weight loss during the trial period.

"Phosphodiesterase 4 inhibitors join an increasing list of treatments for COPD that improve [lung function](#) slightly and reduce [exacerbations](#), but have not yet been shown to increase life expectancy," says Dr Poole.

She points out that so far trials have only run for one year or less, and that there is a need to look at longer-lasting effects. However there could be a problem in gathering that data. "Encouraging people with COPD to continue to take these medicines in the absence of symptomatic relief may be challenging," says Dr Poole.

Provided by Wiley

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