

Moderate and severe exacerbations accelerate physical activity decline in COPD patients

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Man walking along the Seine with an aid. Credit: Public domain

A study led by researchers from the Barcelona Institute for Global Health (ISGlobal), a centre supported by the "la Caixa" Banking Foundation, has shown that both moderate and severe exacerbations in

COPD patients are associated with a decline in their physical activity level. These results have been recently published in the *European Respiratory Journal*.

"Previous research showed an acute drop in [physical activity](#) during a COPD [exacerbation](#). We now observed that this drop in physical activity has an important and lasting effect. Higher exacerbation frequencies were associated with more pronounced declines in physical activity", states Heleen Demeyer, first author of the study and researcher from KU Leuven and the Barcelona Institute for Global Health (ISGlobal).

"An unexpected finding was that two or more moderate exacerbations (treated without hospital admission) resulted in a long-term decline in physical activity equivalent to that of a severe event (with hospitalization), which confirms the importance of prevention and early management of exacerbations regardless of the severity", Dr Demeyer adds.

The study was based on data from 141 patients from five European healthcare centres (in Greece, Scotland, England, Belgium and The Netherlands). Researchers measured physical activity using accelerometers and retrieved the number and severity of exacerbations during a 12 month follow up. The patients' perception of their physical activity was also assessed.

Although the study does not identify the specific mechanisms responsible of the observed decline in physical activity, researchers present two hypotheses: the first one, which is not supported by the results of this study, suggests that the [decline](#) could be consequence of a loss in functional exercise capacity. The second hypothesis says that a worsening of symptoms during an exacerbation could lead to more inactivity, and thus brings patients in a vicious cycle of symptoms and inactivity.

"Patients with frequent exacerbations constitute a specific disease phenotype with a worse prognosis, specifically a faster loss in lung function, a greater worsening of health status and a substantial reduction in the amount of physical activity", explains Judith Garcia-Aymerich, ISGlobal researcher and coordinator of the study. "Our results support the promotion of interventions to increase physical activity after an exacerbation, such as behavioral programmes combined, when needed, with pulmonary rehabilitation", she adds.

More information: Heleen Demeyer et al, Both moderate and severe exacerbations accelerate physical activity decline in COPD patients, *European Respiratory Journal* (2018). [DOI: 10.1183/13993003.02110-2017](https://doi.org/10.1183/13993003.02110-2017)

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