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Summary of research

Key words: Cognition, COPD, lung function, physical activity

Chronic obstructive pulmonary disease (COPD) is a progressive disease, characterized by a gradual decline in lung function. It is a major cause of morbidity and mortality worldwide. Patients with COPD often suffer from co-morbidities, such as cardiovascular disease, osteoporosis, and psychological symptoms. Previous studies suggest that cognitive functioning might be impaired in patients with COPD and may even predict mortality and disability. However, the exact relationship between lung function and cognitive functioning remains unknown. Results of existing studies concerning this relationship are inconsistent. Several studies suggest that physical activity is associated with the maintenance and improvement in cognitive function in COPD. Further studies are needed to explore this relationship. Understanding of the relationship between lung function, physical activity and cognitive functioning may help to prevent, to recognize and to develop optimal care programs for patients with impairment in lung function and cognitive impairment. Therefore, the aims of this study are:

- 1) to compare cognitive functioning between patients with and without COPD;
- 2) to analyse the relationship between severity of impairment in lung function and severity of cognitive impairment;
- 3) to study the relationship between cognitive functioning and the level of physical activity in persons with and without COPD.

This project requires the use of data only (relating to medical conditions at baseline, cognitive function and physical activity) on the full cohort. This project will help us to understand how cognitive impairment is related to COPD, which may have important consequences for the management of the condition.