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Life-course socioeconomic disadvantage and lung function: a multicohort study of 70 496 individuals

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This multicohort study of 70 496 individuals from four European countries shows that life-course socioeconomic disadvantage is associated with a lower lung function and is an important predictor of years of lung function loss during adulthood and older ages https://bit.ly/3huxpOX

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ABSTRACT

Background: Lung function is an important predictor of health and a marker of physical functioning at older ages. This study aimed to quantify the years of lung function lost according to disadvantaged socioeconomic conditions across the life-course.

Methods: This multicohort study used harmonised individual-level data from six European cohorts with information on life-course socioeconomic disadvantage and lung function assessed by forced expiratory volume in 1 s (FEV_1) and forced vital capacity (FVC). 70 496 participants (51% female) aged 18–93 years were included. Socioeconomic disadvantage was measured in early life (low paternal occupational position), early adulthood (low educational level) and adulthood (low occupational position). Risk factors for poor lung function (*e.g.* smoking, obesity, sedentary behaviour, cardiovascular and respiratory diseases) were included as potential mediators. The years of lung function lost due to socioeconomic disadvantage were computed at each life stage.

Results: Socioeconomic disadvantage during the life-course was associated with a lower FEV_1. By the age of 45 years, individuals experiencing disadvantaged socioeconomic conditions had lost 4–5 years of healthy

lung function *versus* their more advantaged counterparts (low educational level −4.36 (95% CI −7.33–−2.37) for males and −5.14 (−10.32–−2.71) for females; low occupational position −5.62 (−7.98–−4.90) for males and −4.32 (−13.31–−2.27) for females), after accounting for the risk factors for lung function. By the ages of 65 years and 85 years, the years of lung function lost due to socioeconomic disadvantage decreased by 2–4 years, depending on the socioeconomic indicator. Sensitivity analysis using FVC yielded similar results to those using FEV_1.

Conclusion: Life-course socioeconomic disadvantage is associated with lower lung function and predicts a significant number of years of lung function loss in adulthood and at older ages.