

**Publication****Absolute values of lung function explain the sex difference in breathlessness in the general population****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 3844634**Author(s)** Ekström, Magnus; Schiöler, Linus; Grønseth, Rune; Johannessen, Ane; Svanes, Cecilie; Leynaert, Benedicte; Jarvis, Deborah; Gislason, Thorarinn; Demoly, Pascal; Probst-Hensch, Nicole; Pin, Isabelle; Corsico, Angelo G.; Forsberg, Bertil; Heinrich, Joachim; Nowak, Dennis; Raherison-Semjen, Chantal; Dharmage, Shyamali C.; Trucco, Giulia; Urrutia, Isabel; Martinez-Moratalla Rovira, Jesús; Sánchez-Ramos, José Luis; Janson, Christer; Torén, Kjell**Author(s) at UniBasel** [Probst Hensch, Nicole](#) ;**Year** 2017**Title** Absolute values of lung function explain the sex difference in breathlessness in the general population**Journal** The European respiratory journal**Volume** 49**Number** 5**Pages / Article-Number** 1602047

Activity-related breathlessness is twice as common among females as males in the general population and is associated with adverse health outcomes. We tested whether this sex difference is explained by the lower absolute forced expiratory volume in 1s (FEV1) or forced vital capacity (FVC) in females. This was a cross-sectional analysis of 3250 subjects (51% female) aged 38-67 years across 13 countries in the population-based third European Community Respiratory Health Survey. Activity-related breathlessness was measured using the modified Medical Research Council (mMRC) scale. Associations with mMRC were analysed using ordered logistic regression clustering on centre, adjusting for post-bronchodilator spirometry, body mass index, pack-years smoking, cardiopulmonary diseases, depression and level of exercise. Activity-related breathlessness (mMRC  $\geq 1$ ) was twice as common in females (27%) as in males (14%) (odds ratio (OR) 2.21, 95% CI 1.79-2.72). The sex difference was not reduced when controlling for FEV1 % predicted (OR 2.33), but disappeared when controlling for absolute FEV1 (OR 0.89, 95% CI 0.69-1.14). Absolute FEV1 explained 98-100% of the sex difference adjusting for confounders. The effect was similar within males and females, when using FVC instead of FEV1 and in healthy never-smokers. The markedly more severe activity-related breathlessness among females in the general population is explained by their smaller spirometric lung volumes.

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