



Prevalence, progression and impact of chronic cough on employment in Northern Europe

Henrik Johansson © 1,2,3, Ane Johannessen 4, Mathias Holm 5, Bertil Forsberg © 6, Vivi Schlünssen 7, Rain Jõgi © 8, Michael Clausen 9, Eva Lindberg 3, Andrei Malinovschi © 2 and Össur Ingi Emilsson 3,9

Affiliations: ¹Dept of Neuroscience, Uppsala University, Uppsala, Sweden. ²Clinical Physiology, Dept of Medical Sciences, Uppsala University, Uppsala, Sweden. ³Respiratory, Allergy and Sleep Research, Dept of Medical Sciences, Uppsala University, Uppsala, Sweden. ⁴Centre for International Health, Dept of Global Public Health and Primary Care, University of Bergen, Bergen, Norway. ⁵Occupational and Environmental Medicine, School of Public Health and Community Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden. ⁶Sustainable Health, Dept of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden. ⁷Dept of Public Health, Section for Environment, Occupation and Health, Danish Ramazzini Center, Aarhus University, Aarhus, Denmark. ⁸Lung Clinic, Tartu University Hospital, Tartu, Estonia. ⁹Faculty of Medicine, University of Iceland, Reykjavik, Iceland.

Correspondence: Össur Ingi Emilsson, Respiratory, Allergy and Sleep Research, Dept of Medical Sciences, Uppsala Universitet, Akademiska sjukhuset, Ingång 40, 5 tr, 751 85 Uppsala, Sweden. E-mail: ossur.emilsson@medsci.uu.se

@ERSpublications

In an adult general population, one in six reports chronic cough. Chronic cough, current and a decade earlier, is associated with increased sick leave days and decreased work ability in middle-aged adults from the general Northern European population. https://bit.ly/35Iz694

Cite this article as: Johannsson H, Johannessen A, Holm M, et al. Prevalence, progression and impact of chronic cough on employment in Northern Europe. Eur Respir J 2021; 57: 2003344 [https://doi.org/10.1183/13993003.03344-2020].

This single-page version can be shared freely online.

ABSTRACT We investigated the prevalence of chronic cough and its association with work ability and sick leave in the general population.

Data were analysed from the Respiratory Health In Northern Europe (RHINE) III cohort (n=13500), of which 11252 participants had also participated in RHINE II 10 years earlier, a multicentre study in Northern Europe. Participants answered a questionnaire on chronic cough, employment factors, smoking and respiratory comorbidities.

Nonproductive chronic cough was found in 7% and productive chronic cough in 9% of the participants. Participants with nonproductive cough were more often female and participants with productive cough were more often smokers and had a higher body mass index (BMI) than those without cough. Participants with chronic cough more often reported >7 days of sick leave in the preceding year than those without cough ("nonproductive cough" 21% and "productive cough" 24%; p<0.001 for comparisons with "no cough" 13%). This pattern was consistent after adjusting for age, sex, BMI, education level, smoking status and comorbidities. Participants with chronic cough at baseline reported lower work ability and more often had >7 days of sick leave at follow-up than those without cough. These associations remained significant after adjusting for cough at follow-up and other confounding factors.

Chronic cough was found in around one in six participants and was associated with more sick leave. Chronic cough 10 years earlier was associated with lower work ability and sick leave at follow-up. These associations were not explained by studied comorbidities. This indication of negative effects on employment from chronic cough needs to be recognised.