



## Lung function and bronchial reactivity in farmers.

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Abstract:

The purpose of this study was to evaluate the prevalence and type of lung function disorders in Danish farmers. Three samples of farmers were drawn from a group of unselected farmers who had participated in an epidemiological study. Group I (47 persons) was a sample of the 8% of all farmers who had reported that they had asthma; group II (63 persons) was a sample of the 28% of farmers who had had wheezing, shortness of breath, or cough without phlegm; and group III (34 persons) a sample of the farmers (64% of the total) who had no asthma and no respiratory symptoms. The farmers with symptoms (groups I and II) had low mean levels of FEV1 and high values for residual volume, whereas the symptomless farmers had normal lung function and no airways obstruction. The proportion of farmers with an FEV1 below the 95% confidence limit for predicted values was 43% in group I and 23% in group II; there were none in group III. Bronchial hyperreactivity to histamine occurred in 96% of asthmatic farmers, 67% of farmers with wheezing or shortness of breath, and 59% of symptomless farmers. A low level of FEV1 was associated with the number of years in pig farming and bronchial hyperreactivity in group II but not group I or III. Most of the bronchial hyperreactivity was explained in the multiple regression analysis by a low FEV1, though this was significant only for farmers in group II. Thus farmers who reported asthma, wheezing, shortness of breath, or a dry cough in general had airways obstruction with an increased residual volume, whereas symptomless farmers had normal lung function. Severe bronchial hyperreactivity was mostly explained by a diagnosis of asthma and poor lung function, though some farmers with normal lung function and no respiratory symptoms had increased bronchial reactivity.

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