The adult incidence of asthma and respiratory symptoms by passive smoking in uterus or in childhood.

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The effects of pre- or postnatal passive smoking on the adult incidence of asthma have not been reported previously. Between 1985 and 1996/1997, we conducted an 11-year community cohort study on the incidence of asthma and respiratory symptoms in Western Norway. The cohort included 3,786 subjects aged 15 to 70 years, of which 2,819 were responders at both baseline and follow-up. The incidence of asthma and five respiratory symptoms by self-reported exposure to maternal smoking in utero and in childhood, as well as smoking by other household members in childhood, was examined. After adjustment for sex, age, education, hay fever, personal smoking, and occupational exposure, maternal smoking was associated with asthma, phlegm cough, chronic cough, dyspnea grade 2, attacks of dyspnea, and wheezing, with odds ratios (95% confidence intervals [CI]) of 3.0 (1.6, 5.6), 1.7 (1.1, 2.6), 1.9 (1.2, 3.0), 1.9 (1.2, 3.0), 2.0 (1.3, 3.0), and 1.4 (0.9, 2.2), respectively. The adjusted attributable fractions (95% CI) of the adult incidence of asthma were 17.3% (5.2, 27.9) caused by maternal smoking and 9.3% (95% CI, -23.2, 33.2) caused by smoking by other household members. Exposure to pre- and postnatal smoking carries a substantial risk for developing adult asthma and respiratory symptoms.

Changes in respiratory symptoms and health-related quality of life.

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Abstract:
For a number of chronic diseases, health-related quality of life (HRQoL) has become an important outcome measure. Little data are available on how incidence, remission, or persistence of respiratory symptoms affect HRQoL.

The Hordaland County Cohort Study was conducted between 1985 and 1997, and comprised 3,786 subjects, randomly selected, and aged 15 to 70 years in 1985. Respiratory symptoms were assessed both in 1985 and 1996/1997, and HRQoL was measured by the Short-Form 12 questionnaire in 1996/1997. Robust linear regression analysis was used to examine the relationship between changes in six respiratory symptoms and the physical component score (PCS) and mental component score (MCS).

Among subjects with incidence or persistence of any of the six examined respiratory symptoms, PCS and MCS were significantly lower than among subjects without symptoms. The PCS was more reduced than the MCS in symptomatic subjects; however, this trend was reduced after adjustment for the confounder’s gender, age, educational level, body mass index, and smoking status. Dyspnea attacks and dyspnea grade 2 had the largest negative impact on both PCS and MCS.

This is the first longitudinal population study to show the negative impact of incidence and persistence of respiratory symptoms on HRQoL.

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The effect of educational level on the incidence of asthma and respiratory symptoms.

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Abstract: Few studies have examined the impact of socioeconomic status on the incidence of asthma and respiratory symptoms. Between 1985 and 1996/97, we conducted an 11-years community cohort study with 2819 subjects, aged 15-70 years at baseline, in Western Norway. We examined the cumulative incidence of asthma and respiratory symptoms by educational level (primary, secondary, and university), as well as estimating the odds ratios (ORs) of educational level on the incidences, after adjustment for sex, age, hay fever, smoking habits, pack years, and occupational exposure. For all respiratory symptoms, the incidences decreased with increasing educational level. The cumulative incidence of asthma was 5.3%, 4.1%, and 1.8%, respectively, for those with a primary educational level, secondary educational level, and university level. Subjects with a primary educational level had adjusted ORs (95% CI) from 1.4 (0.9, 2.3) for the incidence of chronic cough to 2.5 (1.6, 4.0) for the incidence of dyspnea grade 2, compared to those with a university level education. The adjusted OR (95% CI) for the incidence of asthma was 2.1 (1.01, 4.4) in subjects with a primary educational level, and 2.0 (1.04, 3.6) in subjects with a secondary educational level, compared to subjects with a university educational level. In conclusion, subjects with a lower educational level had a higher risk of developing asthma and respiratory symptoms, after adjustment for sex, age, hay fever, smoking, and occupational exposure.

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Exposure to environmental tobacco smoke in a general population.
Abstract:
To estimate how the level of exposure to environmental tobacco smoke (ETS) in pregnancy, childhood and adulthood vary with personal characteristics in a general population.

In 1996/1997, a community sample of 3181 adults, aged 26-82, received a mailed questionnaire, to which 2819 subjects responded. The prevalences of ETS exposure were estimated according to sex, age, educational level, smoking, occupational dust or gas exposure and exposure to moulds. Logistic regression was used to estimate the adjusted odds ratios for the different ETS exposures with respect to these covariates.

Altogether 9% reported exposure to maternal smoking in foetal life and 23% in childhood. Fourteen percent reported current domestic ETS exposure, while 13% reported current occupational ETS. Occupational ETS exposure was more frequent among men (16%) than women (10%). The oldest subjects (61-82 years) reported less ETS exposures than the younger subjects. Current smokers and subjects with occupational dust or fumes exposure had a higher prevalence for all the ETS exposures compared to ex- and never smokers and subjects without occupational exposure, respectively.

From a general population sample male sex, younger age, current smoking, and occupational dust or fumes exposure were associated with higher level of ETS exposure.

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Abstract: The reduced pressure in aircraft cabins may cause severe hypoxemia and respiratory distress in patients with chronic obstructive pulmonary disease (COPD). The primary objective of this study was to determine the prevalence of in-flight symptoms in COPD patients and non-COPD subjects, and evaluate associations between these symptoms and pre-flight variables.

In a cross-sectional study of 391 COPD patients and 184 non-COPD subjects, we recorded lung function, blood gas values, exercise capacity, air travel habits and in-flight symptoms.

Fifty-four percent of the COPD patients had travelled by air the last two years. Hypoxia-related symptoms during air travel were experienced in 25% of the COPD patients and 9% of the non-COPD subjects (p
Lung hyperinflation contributes to dyspnea, morbidity and mortality in chronic obstructive pulmonary disease (COPD). The inspiratory-to-total lung capacity (IC/TLC) ratio is a measure of lung hyperinflation and is associated with exercise intolerance. However, knowledge of its effect on longitudinal change in the 6-min walk distance (6MWD) in patients with COPD is scarce. We aimed to study whether the IC/TLC ratio predicts longitudinal change in 6MWD in patients with COPD.

This prospective cohort study included 389 patients aged 40-75 years with clinically stable COPD in Global Initiative for Chronic Obstructive Lung Disease stages II-IV. The 6MWD was measured at baseline, and after one and 3 years. We performed generalized estimating equation regression analyses to examine predictors for longitudinal change in 6MWD. Predictors at baseline were: IC/TLC ratio, age, gender, pack years, fat mass index (FMI), fat-free mass index (FFMI), number of exacerbations within 12 months prior to inclusion, Charlson index for comorbidities, forced vital capacity (FVC), forced expiratory volume in 1 s (FEV1), and light and hard self-reported physical activity.

Reduced IC/TLC ratio (p?)
Nonresponse in a community cohort study: predictors and consequences for exposure-disease associations.

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Patient Participation
Questionnaires
Risk factors
Selection Bias
Sex Distribution
Sex Factors
Smoking - adverse effects - epidemiology
Socioeconomic Factors
Time Factors
Abstract: We have assessed predictors for response in a Norwegian community cohort study, with an 11-year follow-up. We also examined to what extent the association of gender, age, and smoking to the incidence of respiratory symptoms and asthma differed if the analyses were based on the 65% (n = 2,079) initial responders, or were based on the 89% (n = 2,819) who responded after three reminders. The associations between the six symptoms/asthma and the gender, age, and smoking groups amounted to 42 odds ratios. The adjusted odds ratio for responding at follow-up was 1.39 (95% CI: 1.01, 1.90) for those being middle aged at baseline compared to younger subjects. The adjusted odds ratios for responding at follow-up for those being students, unemployed, or retired at baseline were 0.50 (95% CI: 0.35, 0.73), 0.29 (95% CI: 0.16, 0.55), 0.21 (95% CI: 0.13, 0.36), respectively, compared to being employed. Of the 42 odds ratios mentioned above, 25 differed less than 10% when comparing the initial and all respondents. Twelve differed 10-20% and five differed 20-45%. The study indicates that to ensure a high participation rate in a follow-up study one should pay special attention to those being late responders, unemployed, retired, or students at baseline. No overt differences were observed in the gender, age, and, smoking associations to the respiratory disorders when the analyses were based on the initial compared to all respondents.

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Non-response in telephone surveys of COPD patients does not introduce bias.

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          Remote Consultation - methods
          Telephone

Abstract: We examined the telephone response rates in a 2-year study of patients with COPD to identify factors associated with non-response. A total of 381 patients received monthly telephone calls to assess symptoms and treatment in 2007 and 2008. A total of 9019 calls were made over 24 months, of which 73% were answered. The highest response rate was obtained in February 2007 (81%), and the lowest in July 2008 (48%). The monthly response rate was lower in the second year of follow up. There were 39 patients (10%) who were less frequent responders, with 10 or fewer responses. Less frequent responders were more likely to be current smokers and have hypoxaemia.

The median number of answered calls was 18 (interquartile range 16-20). In bivariate models the median number of responses was significantly lower in subjects with chronic cough. In multivariate models neither demographic nor disease characteristics were significantly associated with non-response. We found less frequent responders to monthly telephone calls to be similar in characteristics to frequent responders. This suggests that non-response does not necessarily introduce bias in telephone surveys of patients with COPD.

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Occupational airborne exposure and the incidence of respiratory symptoms and asthma.

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Abstract:
Several prevalence studies have suggested an association between occupational exposure and respiratory symptoms and asthma, but there has been a lack of incidence studies to verify this. This study examined the incidence of respiratory symptoms and asthma in an 11-year Norwegian community cohort study with 2,819 subjects. Predictors examined were sex, age, educational level, lifetime exposure to quartz, asbestos, and dust or fumes, as well as smoking habits and pack-years. The prevalence of exposure to quartz, asbestos, and dust or fumes was, respectively, 3.7%, 5.0%, and 28.3% at baseline. In those exposed to dust or fumes, the odds ratios (95% confidence intervals) varied between 1.4 (1.1, 1.7) and 2.1 (1.3, 3.2) for developing respiratory symptoms or asthma after adjusting for sex, age, educational level, and smoking. Between 5.7% and 19.3% of the incidence of respiratory symptoms and 14.4% of the incidence of asthma were attributable to dust or fumes exposure after adjustment for sex, age, educational level, and smoking. In conclusion, airborne occupational exposure increases the incidence of respiratory symptoms and asthma, independent of sex, age, educational level, smoking habits, and pack-years.

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Paraneoplastic Hu and CRMP5 antibodies are present in smokers without cancer or neurological disease.
We investigated if the paraneoplastic Hu and collapsin response mediator protein 5 (CRMP5) antibodies could be used as early markers for lung cancer in smokers with or without chronic obstructive pulmonary disease (COPD). Hu and CRMP5 antibodies were measured by radioimmunoprecipitation assay (RIPA) in sera from 552 smokers; 379 with and 173 without COPD. Three hundred blood donors served as controls. The positive sera were also tested by indirect immunofluorescence and line blot with recombinant proteins. The 552 smokers were matched with data from the Cancer Registry of Norway, and the hospital medical records from the subjects positive for Hu and CRMP5 antibodies were reviewed. The mean follow-up time was 4.4 years (range 2.5-5.7 years).

The RIPA showed that 5/379 (1.3%) smokers with COPD had Hu antibodies and 1/379 (0.3%) smokers with COPD had CRMP5 antibodies. Only the smoker with the highest RIPA index had Hu antibodies also detected by immunofluorescence and line blot. One of 173 (0.6%) smokers without COPD had Hu antibodies, but none had CRMP5 antibodies. None of the 300 controls had Hu antibodies, but 2/300 (0.7%) had CRMP5 antibodies. Hu antibodies remained positive for more than 5 years. No cancer or neurological disease was recorded in the Hu or CRMP5 positive patients. The total cancer frequency in the smokers with and without COPD was 70/552 (13%).

Hu and CRMP5 antibodies were not associated with cancer or neurological disease in a large cohort of smokers and are therefore not always paraneoplastic.