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Prevalence of Airways Obstruction in Smokers and Never Smokers in Switzerland

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Airways obstruction (AO) prevalence is unknown in Switzerland. We aimed to measure prevalence of AO in smokers and never smokers using pulmonary function tests (PFTs) and respiratory symptoms.

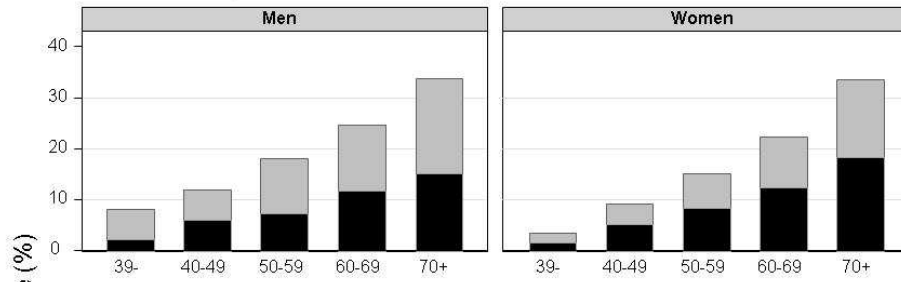
The SAPALDIA study (Swiss Cohort Study on Air Pollution and Lung Diseases in Adults) provided PFTs on 6127 adults in 2002 (mean age 52 [range 28-73]; men 48%, smoking status: never 43%; former 32%; current 25%). Obstruction was defined and graded according to the GOLD Initiative. Separate analyses were performed on smokers and never-smokers.

Overall, prevalence of AO stage 2-4 was 5.9 % and increased with age.

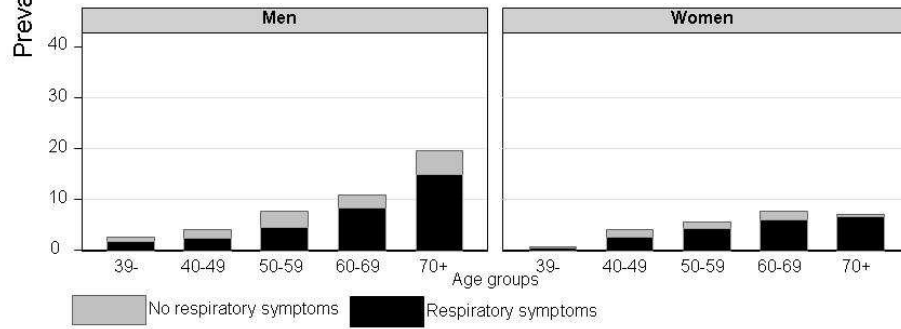
In multivariate analysis, age (OR aged70+ vs aged 30-39 7.3), ever smoking (OR 1.7), atopy (OR 1.4), asthma, (OR 5.8), obesity (OR body mass index 30+ vs <21 1.9) and being a foreigner (OR 1.4) were associated with obstruction stage 2-4. Environmental tobacco smoke represented an additional risk only in smokers. Never smokers constituted 30.5% of subjects with stage 2-4 obstruction. Never smokers with AO were younger, had more frequently asthma, atopy and positive methacholine challenge than obstructive smokers. Symptoms were similar and quality of life scores equally impaired in smokers and never smokers with AO.

Prevalence of AO in Switzerland is comparable to other western countries. Never smokers account for a third of the prevalence which is higher than elsewhere. Detection of AO in never smokers should be considered.

FEV₁/FVC <0.7 and FEV₁ ≥0.8 predicted (Stage 1)



FEV₁/FVC <0.7 and FEV₁ <0.8 predicted (stage 2-4)



Legend:
 No respiratory symptoms
 Respiratory symptoms