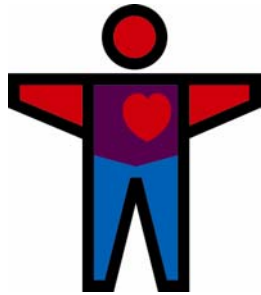


Celebrating 30 years of the MIDSPAN Studies



Respiratory disease

Mark Upton

Respiratory illness in 2 generations

Parents

Respiratory symptoms

Asthma, hay fever

Lung function

Smoking, social class

Offspring

Respiratory symptoms

Asthma, hay fever

Lung function

Smoking, social class

Diagnosed disease

Current ETS exposure

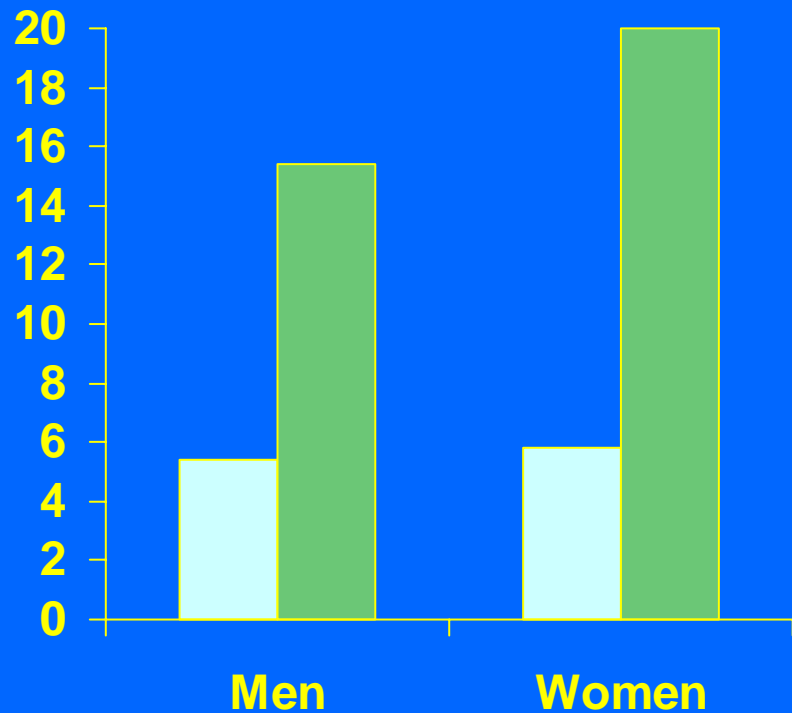
Serum cotinine

Accuracy of reported non-smoking status using serum cotinine in 1996

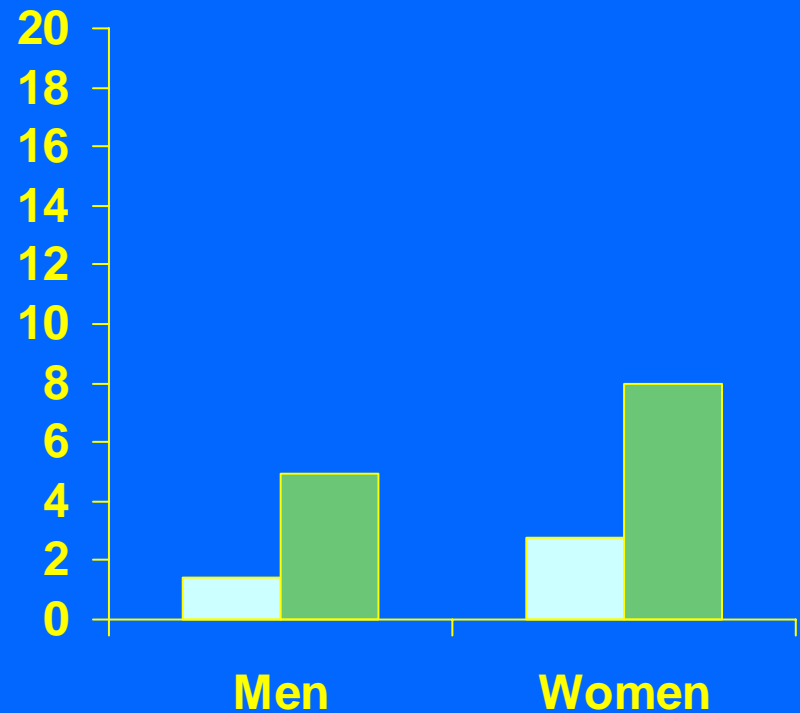
	Cotinine < 15 ng/ml
Never smoker	99%
Former smoker	92%
[Current smoker	6%]

Prevalence (%) of hay fever and asthma in 1972-6 and 1996

Hay fever



Asthma



Asthma classification

Allergy status

Atopic

asthma with hay fever

Non-atopic

asthma without hay fever

Case definition

Narrow

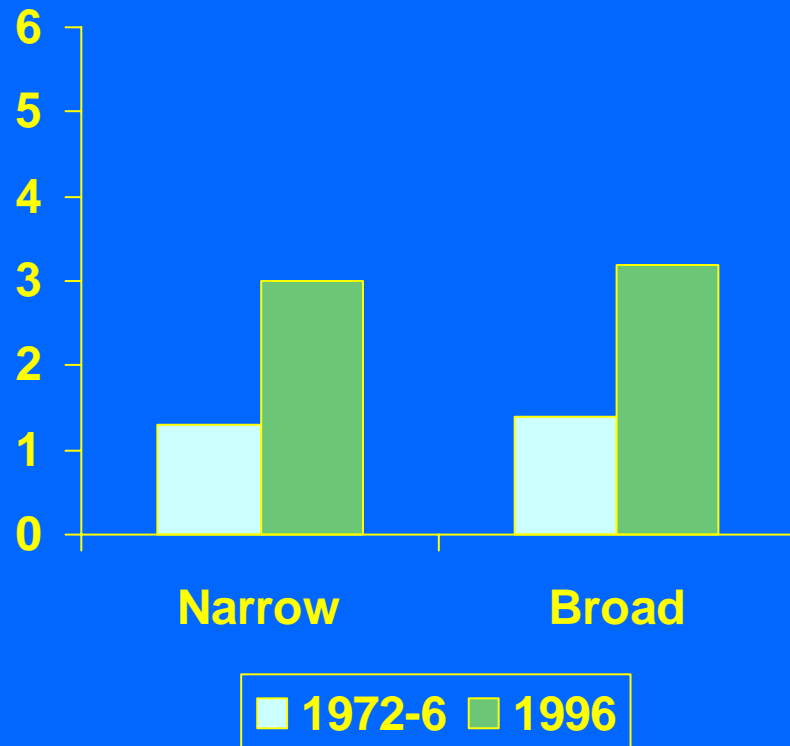
ever asthma

Broad

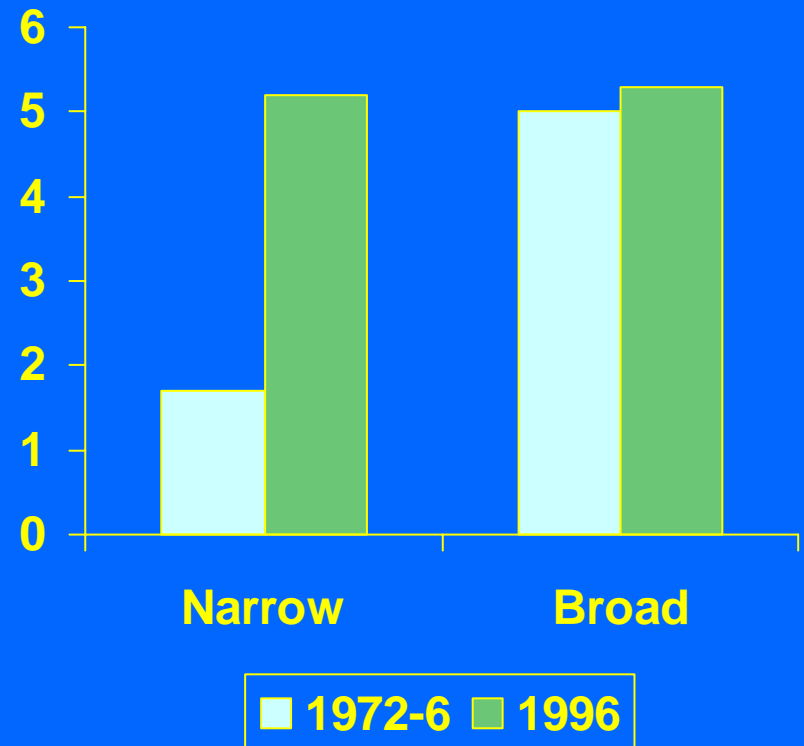
ever asthma and/or wheeze

Prevalence (%) trends of atopic and non-atopic asthma in never smokers

Atopic asthma



Non-atopic asthma



Burden of asthma & allergies

- Relatively high prevalence of non-atopic asthma in 1972-6 and in 1996
- Prevalence trends over 20 years
 - trebling prevalence of hay fever
 - doubling prevalence of asthma
 - atopy trends driving asthma trends
 - changed diagnostic labelling of wheeze in non-atopic subjects



EUROPEAN LUNG WHITE BOOK

THE FIRST COMPREHENSIVE SURVEY ON
RESPIRATORY HEALTH IN EUROPE

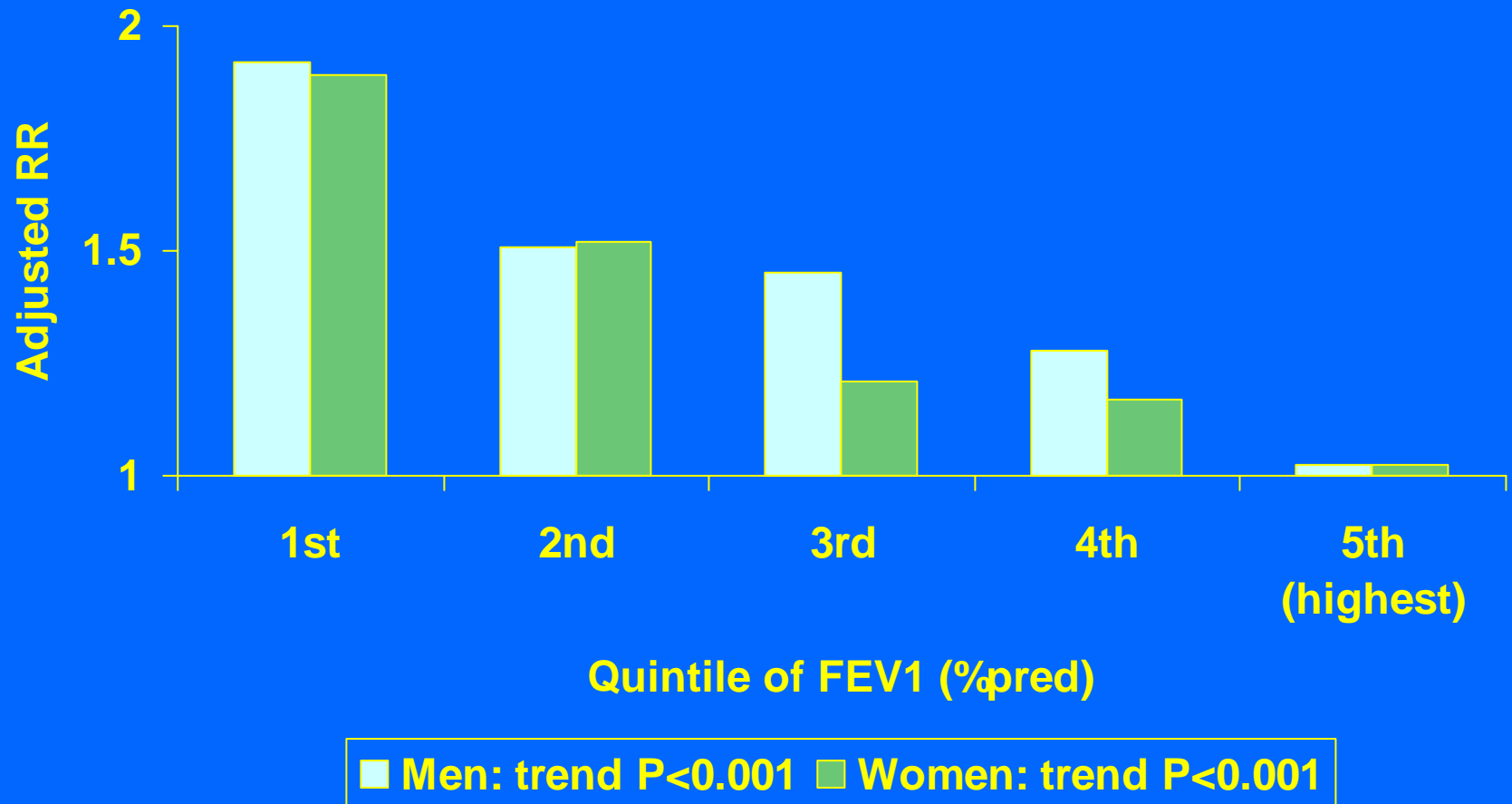


European Respiratory
Society



EUROPEAN
LUNG FOUNDATION

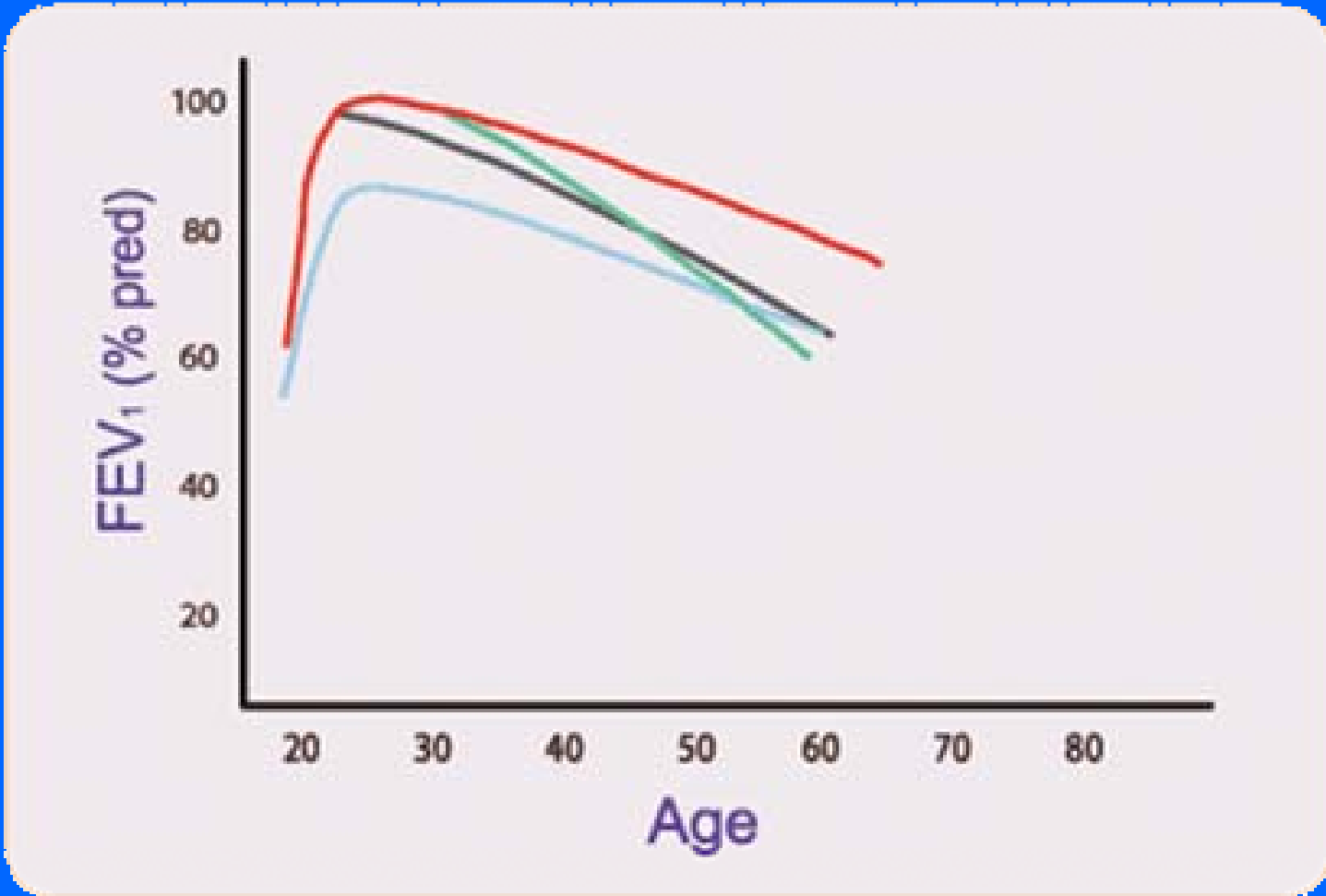
FEV₁ predicts all-cause mortality



FEV₁ predicts all-cause mortality

- FEV₁ predicts mortality from all-causes, CHD, stroke, respiratory disease, lung cancer, and other causes
- These risks, with the exception of lung cancer, are apparent in never smokers
- FEV₁ is second in importance to smoking as a predictor of all-cause mortality, and as important as cholesterol in predicting mortality from CHD

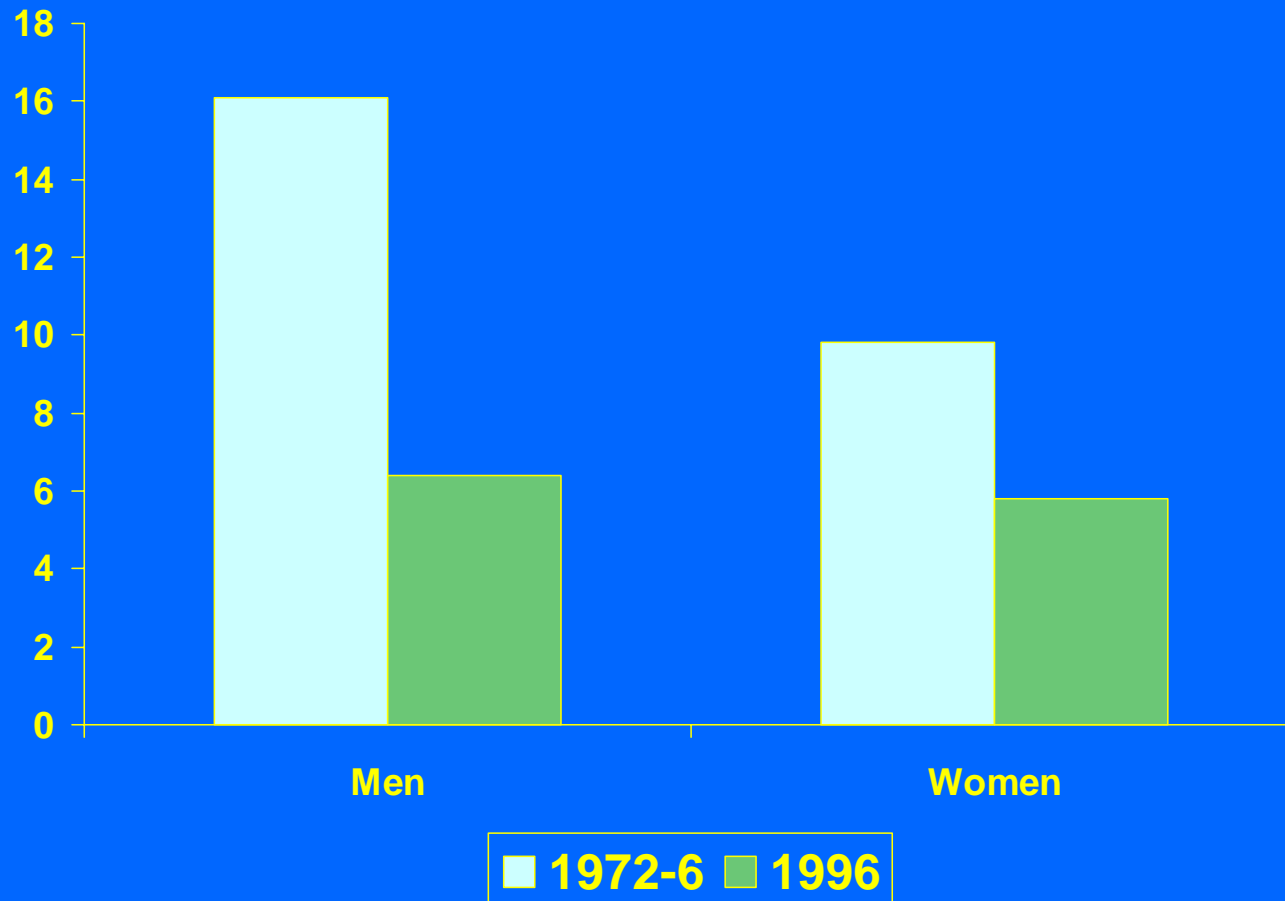
The natural history of FEV₁



Effects of maternal smoking on lung function in adult offspring

- Permanent effect of maternal smoking on lung volumes (FVC, FEV₁), irrespective of personal smoking
- Greater smoking intensity & less quitting in offspring who take up smoking
- Synergistic effect of maternal & personal smoking on airflow limitation (FEV₁/FVC) & the risk of COPD

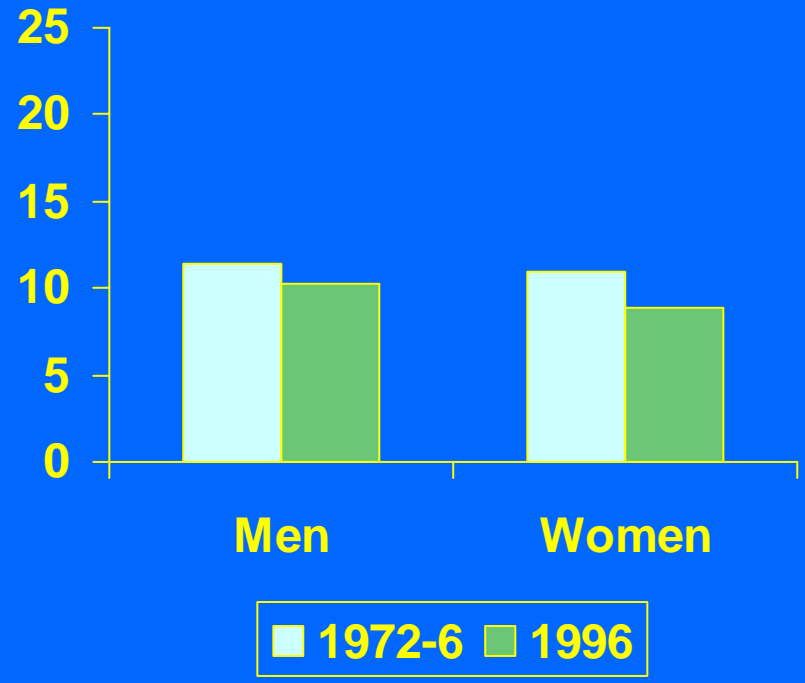
Prevalence (%) trends of COPD (\geq GOLD stage II)



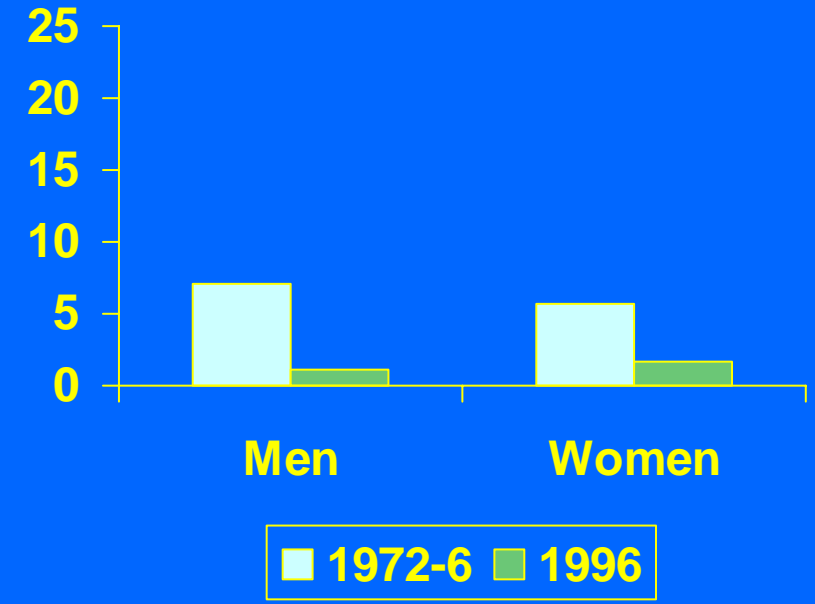
Unpublished data

Prevalence (%) trends of COPD (\geq GOLD stage II)

Never smokers



Non-asthmatic never smokers (broad definition)



Adjusted lung function deficit in highest versus lowest quartile of serum cotinine in never smokers

No asthma (n=805)

Current asthma (n=44)

FEV₁

-0.04L (-0.12, +0.04)

-0.74L (-1.30, -0.18)

Heterogeneity P=0.019

FEV₁/FVC

-0.3% (-1.3, +0.7)

-7.4% (-14.1, -0.7)

Heterogeneity P=0.005