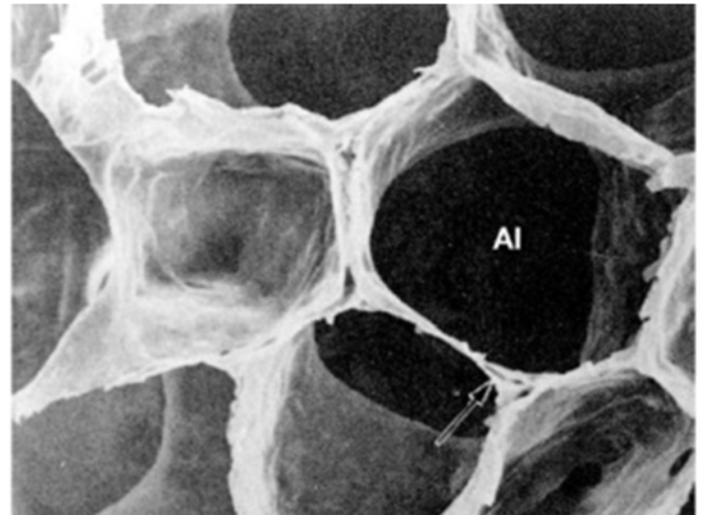
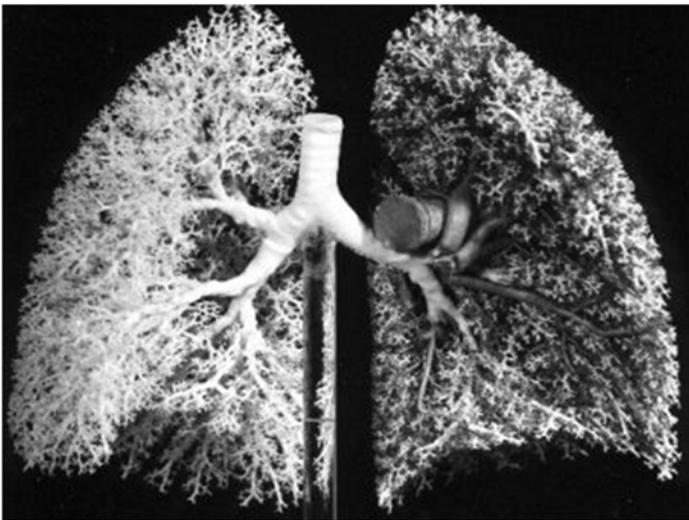


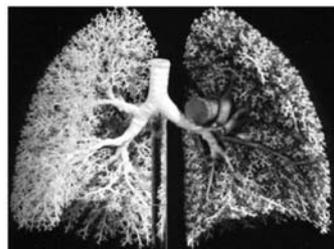
Prof David Fishwick

Consultant Respiratory Physician at the Centre for Workplace Health, Honorary Professor of Respiratory Medicine at University of Sheffield, Chief Medical Adviser to; HSE GB and HSE NI



How many alveoli in a human?

- 120,000,000
- 250,000,000
- 380,000,000
- 600,000,000



## Estimated NI deaths from OLDs



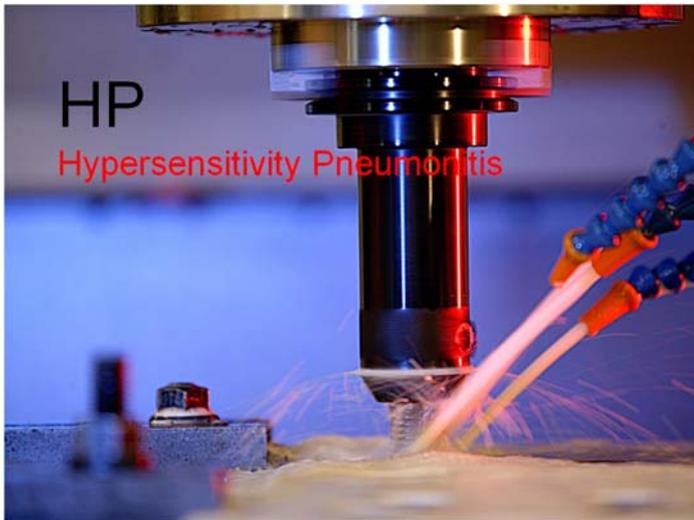
- 165 COPD
- 45 Mesothelioma
- 45 Lung Cancer



## Estimated NI cases of work related ill health



Work related illness	20,000	
Musculoskeletal disorders	13,000	
Work related stress	15,000	



## A Case



## A Case



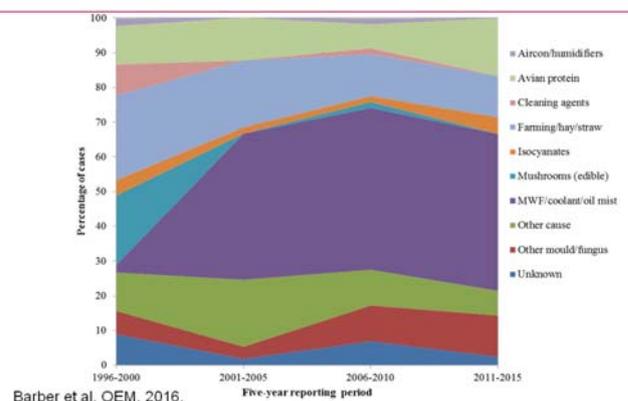
**57 year old factory worker**  
 Chronic persistent cough 8 years  
 Weight loss  
 Three children, 2 dogs

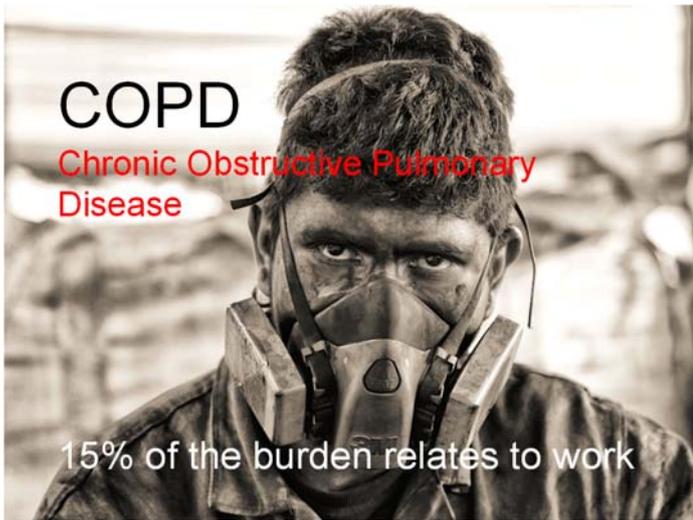
**8 pack years of smoking**

**Lung Function;** FEV<sub>1</sub> 50% of predicted, with airways obstruction



## Changes in reported causes





A patient with COPD



Mortality from COPD by occupation



Industry	PMR	95% CI
Coal Mining	1.98	1.84 - 2.12
Trucking services	1.29	1.22 - 1.37
Mining non metallic and quarrying	1.28	1.01 - 1.61
Automotive repair	1.26	1.17 - 1.37
Metal mining	1.26	1.04 - 1.52
Logging	1.25	1.07 - 1.46
Oil and gas extraction	1.24	1.04 - 1.48
Food retailers	1.23	1.17 - 1.30
Repair services	1.23	1.06 - 1.42
Construction	1.19	1.16 - 1.23
Furniture and fixtures	1.19	1.06 - 1.32

Adapted from NIOSH US based data



A Worker with early COPD





## Silicosis

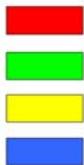


## Was he just unlucky?

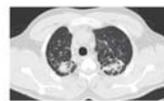


What was his lifetime risk of developing silicosis?

- 1 in 1000
- 1 in 100
- 1 in 40
- 1 in 20



## Silicosis affects young people too



24 year old;  
7 years RCS



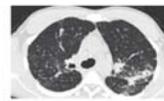
29 year old;  
12.5 years RCS



38 year old;  
14 years RCS



36 year old;  
17 years RCS



37 year old;  
20 years RCS

Nicol LM et al. OM 2015.

## A Worker with Asthma



## A Worker with Asthma



# Prevention and identification



## Risk based approaches

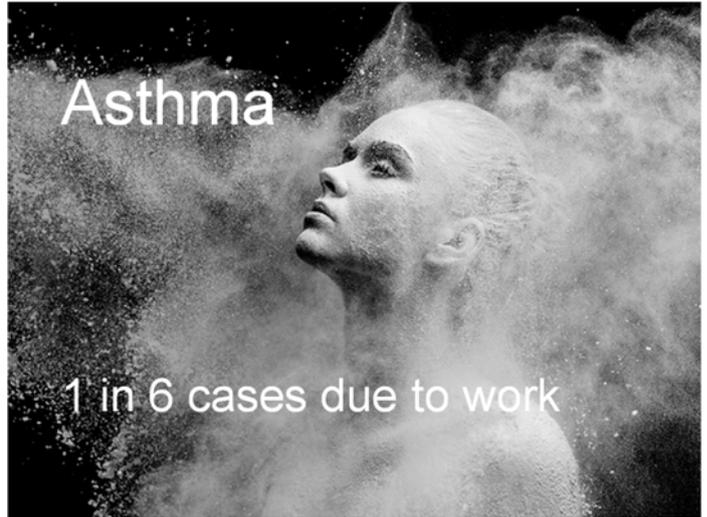
**Questionnaires**  
HP, COPD, Asthma



**Lung Function measures**  
HP, COPD, Asthma

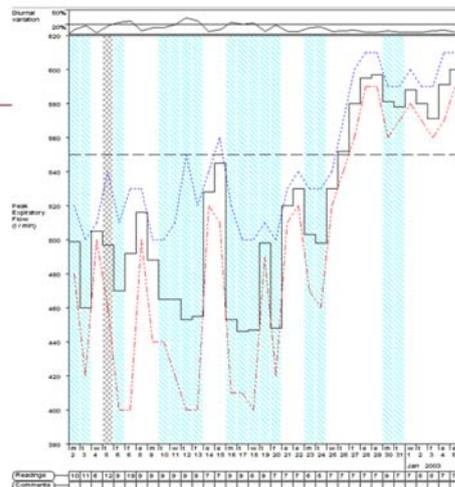


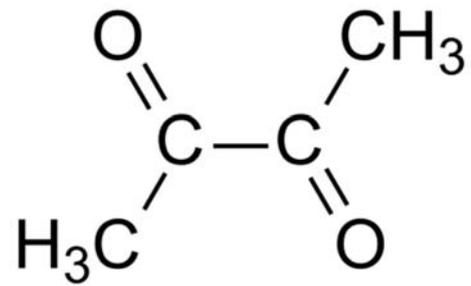
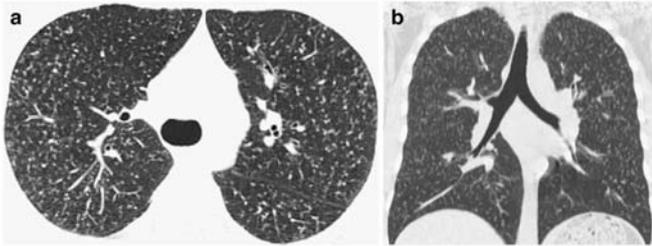
**Chest X rays**  
Silicosis



COMPLETE BY HAND - ONLY PER WEEK  
 BY WORK  
 REF BEING USED AT WORK

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time you wake	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get up	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get dressed	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you start work	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you finish work	4:30	4:30	4:30	4:30	4:30	4:30	4:30
Time you go to bed	10:30	10:30	10:30	10:30	10:30	10:30	10:30
Time you wake today	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get up today	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get dressed today	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you start work today	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you finish work today	4:30	4:30	4:30	4:30	4:30	4:30	4:30
Time you go to bed today	10:30	10:30	10:30	10:30	10:30	10:30	10:30
Time you wake tomorrow	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get up tomorrow	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you get dressed tomorrow	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you start work tomorrow	8:30	8:30	8:30	8:30	8:30	8:30	8:30
Time you finish work tomorrow	4:30	4:30	4:30	4:30	4:30	4:30	4:30
Time you go to bed tomorrow	10:30	10:30	10:30	10:30	10:30	10:30	10:30

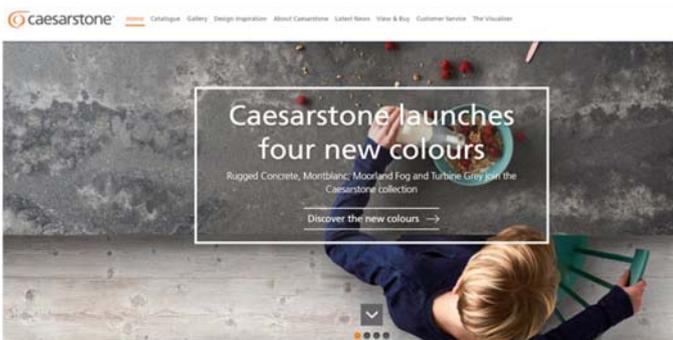




Alper F Eur Radiol 2008

## Artificial Stone Products

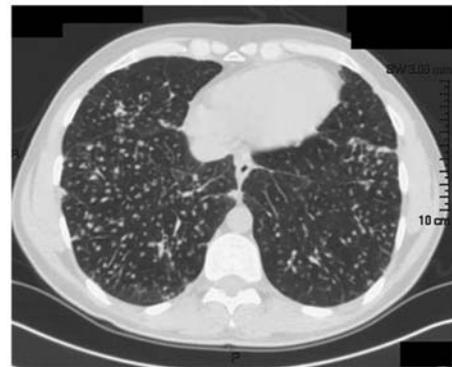
## Artificial Stone Products

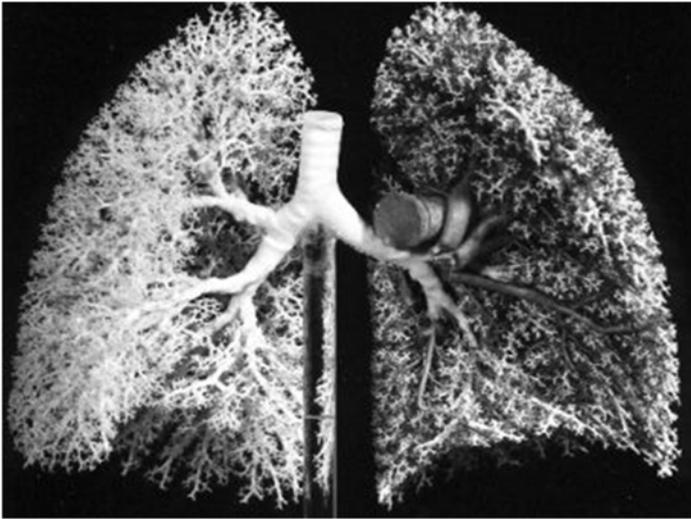


## Artificial Stone Silicosis

## Israeli Countertop Workers

7 male workers, 44 years old median  
 1 simple, 6 complicated  
 Small kitchen / bathroom businesses  
 Dry cutting, poor dust control  
 7 years median dust exposure (range 4 – 10)  
 Short term follow up;  
 FEV<sub>1</sub>           **386mls/year decline**  
 FVC               **448mls/year decline**





## Health and Work priorities



- Three priority areas
  - Work related stress
  - Work related occupational musculoskeletal problems
  - Occupational lung diseases

## Health and Work priorities

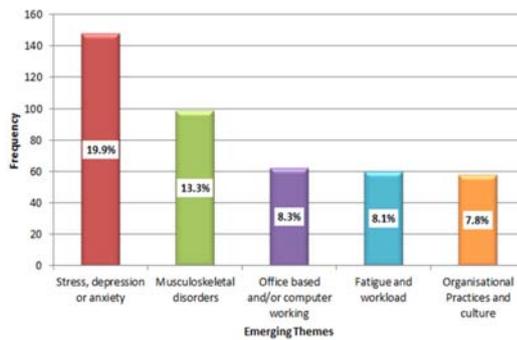


- Expert views internally
  - Medical, nursing, scientist, policy, statistical
- Health and safety representatives
- Health and safety professionals
- Faculties and societies
- Apprentices
  
- Questionnaires and focus groups

## Apprentices and young workers



What do you think will be the most important health issues in your workplace in the future? Responses (N = 745)



## New Communications Strategy

