

## MS Burden of disease

## 186 THE BRITISH OCCUPATIONAL CANCER BURDEN STUDY

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**Objectives** Prioritising control of occupationally-related cancers should be evidence based. We have estimated the current burden of cancer in Great Britain attributable to occupation for IARC group 1 and 2A carcinogens.

**Methods** We calculated attributable fractions and numbers for mortality/incidence using risk estimates from published literature and national data sources to estimate proportions exposed.

**Results** Cancer deaths attributable to occupation in 2005 are 5.3% (8023) (men: 8.2% (6366); women 2.3% (1657)). Attributable incidence estimates are 13694 (4.0%) cancer registrations (men: 10074 (5.7%); women 3620 (2.1%)). Occupational attributable fractions are over 2% for mesothelioma, sinonasal, lung, nasopharynx, breast, non-melanoma skin, bladder, oesophagus, soft tissue sarcoma and stomach cancers. Asbestos, shift work, mineral oils, solar radiation, silica, diesel engine exhaust, coal tars and pitches, occupation as a painter or welder, dioxins, environmental tobacco smoke, radon, tetrachloroethylene, arsenic and strong inorganic mists each contribute 100+ registrations. Industries/occupations with over 200 cancer registrations include construction, women's shift work, metal working, personal/household services, mining, land transport, printing/publishing, retail/hotels/restaurants, public administration/defence, farming and several manufacturing sectors.

**Conclusions** This study is the first detailed cancer burden study using all IARC 1 and 2A carcinogens and quantifying the contribution of individual industry sectors. Our methodology provides a basis for adaptation for use in other countries and global occupational burden estimation and for extension to include social and economic impact evaluation.. The results highlight specific carcinogenic agents and the occupational circumstances and industrial areas where exposures to these agents occurs, facilitating prioritisation of risk reduction strategies.