

Health and Safety Executive

Occupational Health Statistics Bulletin 2003/04



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Introduction

This *Occupational Health Statistics Bulletin* sets out the latest picture on work-related ill health in Great Britain. It uses updated statistics from several sources: reports from specialist doctors in The Health and Occupation Reporting network (THOR); claims for disablement benefit under the Industrial Injuries Scheme (IIS); and death certificates for mesothelioma and other fatal occupational diseases. More details are on the web at www.hse.gov.uk/statistics.

The *Bulletin* does not cover progress against the health targets set in *Revitalising Health and Safety (RHS)*. HSE statisticians' latest assessment is on the website at www.hse.gov.uk/statistics/targets.htm. A new judgement will be possible when other information becomes available, in particular from the Self-reported Work-related Illness (SWI) survey carried out in winter 2003/04. Updated progress reports on the RHS targets for ill health, injuries and days lost will be published in November 2004, in *Health and Safety Statistics Highlights 2003/04*.

The key messages from the statistics in this *Bulletin* are summarised in the following box.

Each year over 2 million people suffer from ill health which they think is work-related ...

Overall, in 2001/02 an estimated 2.3 million people were suffering from an illness which they believed was caused or made worse by their current or past work; around 700 thousand of these first became aware of the illness in the past 12 months.

... with over 20 thousand new cases each year severe enough to be seen by specialist doctors ...

In 2001-2003 an estimated 23 000 new cases per year were seen by specialist doctors in The Health and Occupation Reporting network, while nearly 8000 per year were assessed for compensation under the Department for Work and Pensions' Industrial Injuries Scheme.

... and several thousand people dying each year from past exposures at work.

Each year an estimated 6000 people (uncertainty range 3000 to 12 000) die from cancer due to past exposures at work. In 2002 over 1800 people died from mesothelioma, a cancer caused mainly by occupational exposure to asbestos, and at least as many again from asbestos-related lung cancer. Around 100 died from asbestosis and nearly 300 from other types of pneumoconiosis, mostly associated with coal dust and silica.

Over half of all cases of work-related illness are musculoskeletal disorders or stress ...

The most common types of work-related illness were musculoskeletal disorders – in particular those affecting the back and upper limbs – and stress and other types of mental illness. Both self-reporting surveys and surveillance by specialist doctors show each of these accounting for around a third of the total incidence.

... but the total also includes diseases ranging from asthma and dermatitis to infections and deafness.

Other types of ill health with significant numbers of cases reported by doctors or compensated by the Government were lung diseases such as asthma and pneumoconioses; contact dermatitis and other skin diseases; diarrhoeal and other infections; and disorders related to vibration or noise.

Jobs with high risks for musculoskeletal disorders included metal plate workers and typists ...

The jobs carrying the highest risks of musculoskeletal disorders, according to reports from rheumatologists in 2001-03, were metal plate workers, shipwrights and riveters, with an annual average incidence rate approximately 40 times the average for all occupations, followed by typists (18 times the average) and road construction operatives (16 times).

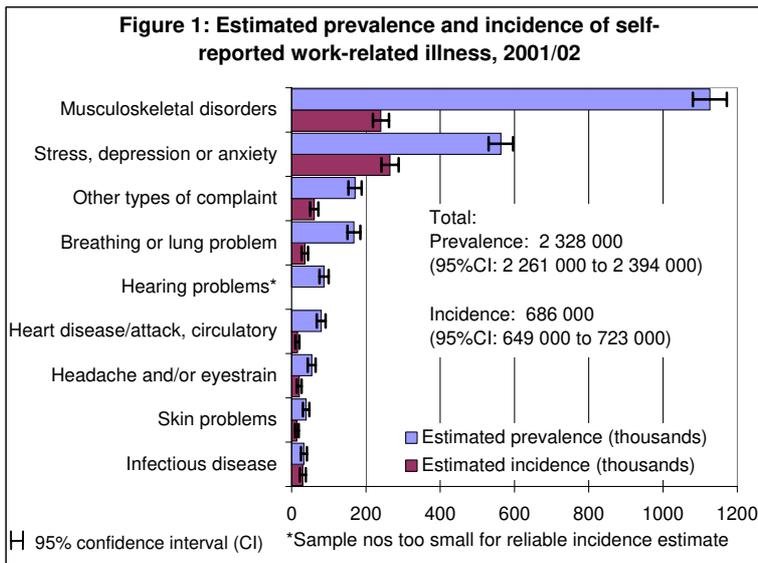
... while protective service, healthcare and education occupations are most at risk for mental ill health, and protective services also for violence at work.

Consultant psychiatrists reported NCOs and other ranks in UK armed forces as the occupation with the highest incidence rate of work-related mental ill health in 2001-03, at around 15 times the overall average, followed by medical practitioners (12 times). The British Crime Survey showed protective service occupations with the highest risk of being a victim of an assault at work.

Among the riskiest jobs for occupational asthma are vehicle spray painters, for contact dermatitis floral arrangers/florists and for infectious diseases care assistants/home carers.

Vehicle spray painters had the highest estimated incidence rate for occupational asthma in 2001-03, at roughly 80 times the average for all occupations, floral arrangers/florists had the highest rate for contact dermatitis (14 times the average) and care assistants/home carers for occupational infections (25 times the average), according to reports from respiratory physicians, dermatologists and communicable disease specialists.

The overall picture

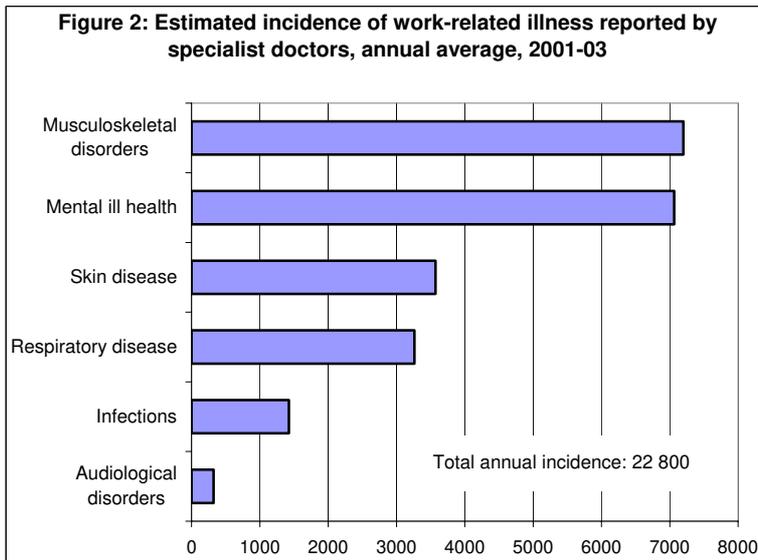


In 2001/02, 2.3 million people in Great Britain were suffering from an illness which they believed was caused or made worse by their current or past work, according to a self-reporting household survey (SWI01/02). This prevalence estimate includes long standing as well as new cases.

Musculoskeletal disorders (bone, joint and muscle problems) were the most commonly reported, with nearly half of the total, followed by stress, depression or anxiety, with a quarter.

There were around 700 000 new (incident) cases, ie people who first became aware of their illness in the last 12 months. Musculoskeletal disorders and stress, depression or anxiety each accounted for just over a third of these.

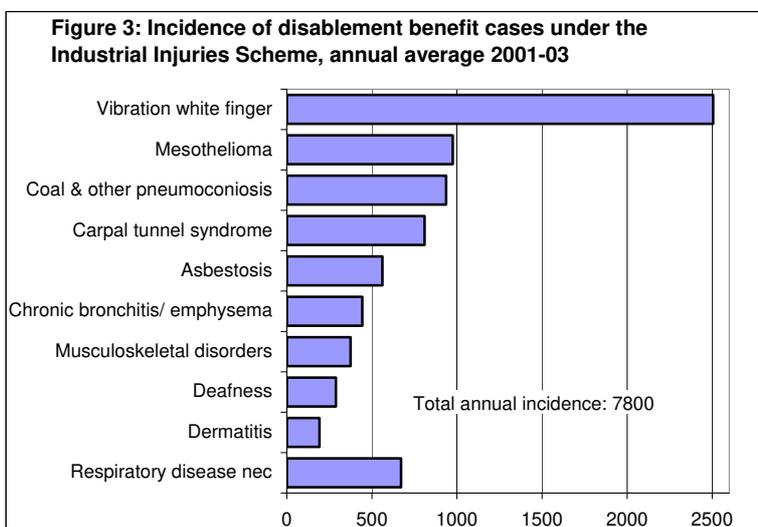
See www.hse.gov.uk/statistics/causdis/swi0102.pdf



Each year between 2001 and 2003, an estimated average of some 23 000 new cases of occupational or work-related illness were seen by disease specialist doctors and occupational physicians who reported to the THOR surveillance scheme.

As with self-reported cases, mental ill health and musculoskeletal disorders were the most common types of illness: each accounted for just under a third of the total.

Skin disease (especially dermatitis) and respiratory disease (including asthma) made up the bulk of the remaining cases reported by specialist doctors.

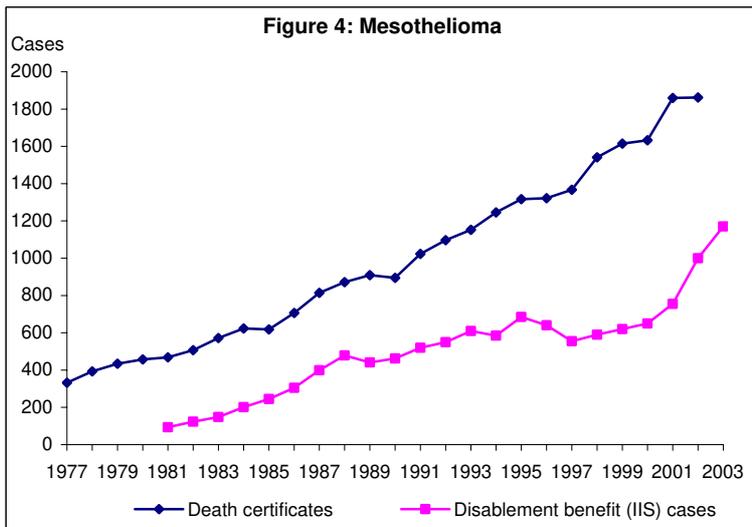


In each of the latest three years (up to 2003 or 2002/03), an average of nearly 8000 cases were assessed under the Industrial Injuries Scheme (IIS), which compensates employees who have been disabled by prescribed occupational diseases.

The largest category was Vibration White Finger, linked to regular use of power tools, making up nearly a third of the total number of cases.

Much of the remainder was accounted for by respiratory diseases, associated with past exposures to substances such as asbestos and coal dust.

Asbestos-related and other fatal diseases



The annual number of deaths in Great Britain from mesothelioma (an asbestos-related cancer) has increased from 153 in 1968 to 1862 in 2002.

The latest projections suggest that the annual total number of mesothelioma deaths is estimated to peak at a level around 1950 to 2450 deaths some time between 2011 and 2015. Deaths occurring now reflect past industrial conditions; deaths in males aged under 45 have been falling since the early 1990s.

Occupations and geographical areas with highest mesothelioma risks are mainly those with a clear link to past use of asbestos in industries such as shipbuilding, railway engineering and asbestos product manufacture.

See www.hse.gov.uk/statistics/causdis/meso.htm

It is likely that there are at least as many asbestos related lung cancer deaths annually as mesotheliomas. Thus, there may have been at least 1800 such deaths in 2002.

See www.hse.gov.uk/statistics/causdis/lungcan.htm

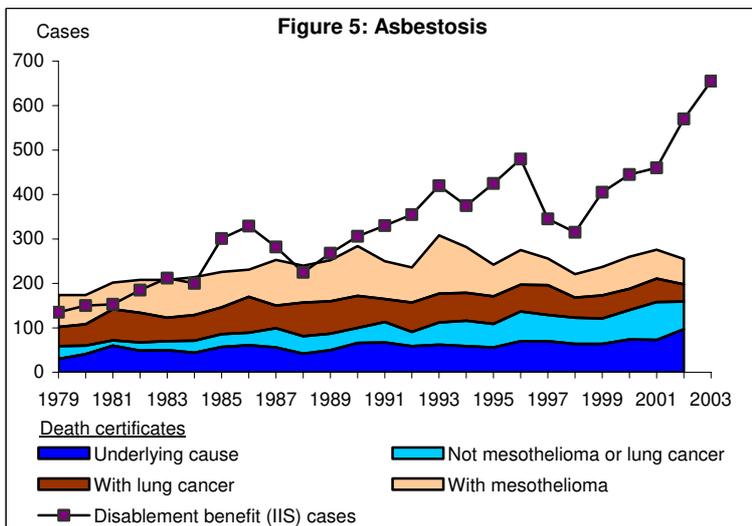
In total an estimated 6000 people (uncertainty range 3000 to 12 000) die from cancer in Britain each year due to past exposures at work.

See www.hse.gov.uk/statistics/causdis/cancer.htm

Disablement benefit cases for those living with asbestosis have risen since the early 1980s, reaching a peak of 655 in 2003.

Based on Death certificates where asbestosis is described as being the underlying cause, there were 97 deaths due to the disease in 2002.

See www.hse.gov.uk/statistics/causdis/asbestos.htm

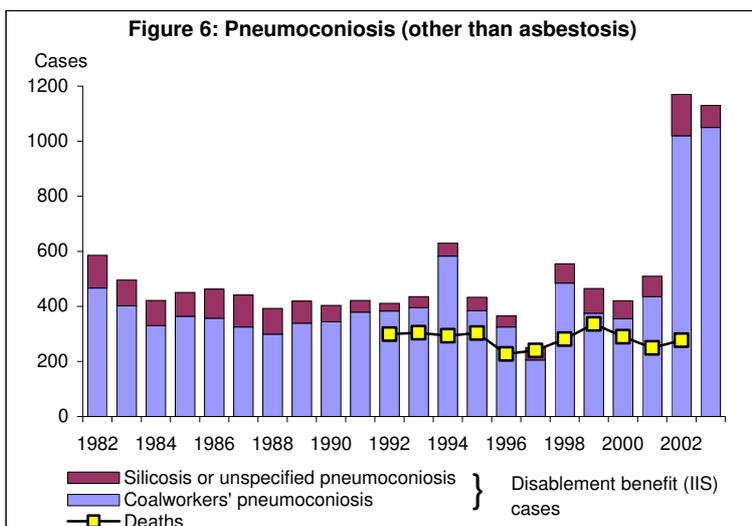


There were 1130 new assessed cases of pneumoconiosis (excluding asbestosis) in the Industrial Injuries Scheme (IIS) in 2003, similar to 2002 and a large increase on previous years. This is probably due to a publicity campaign and also a more accurate method of data collection introduced in 2002.

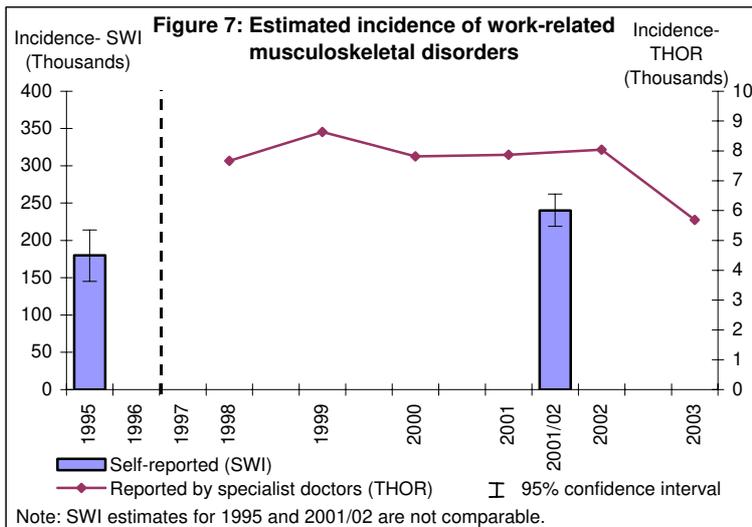
New compensated cases of pneumoconiosis (excluding asbestosis) mostly occur in retired workers, mainly from the coal mining industry; other industries affected are quarrying, foundries and potteries, where silica is the main cause.

The number of deaths with pneumoconiosis as the underlying cause fell in 2000 and 2001 to 279 and 240 cases respectively, but rose again to 271 cases in 2002. Deaths are on a long-term downward trend despite this small rise of late.

See www.hse.gov.uk/statistics/causdis/coal.htm



Musculoskeletal disorders

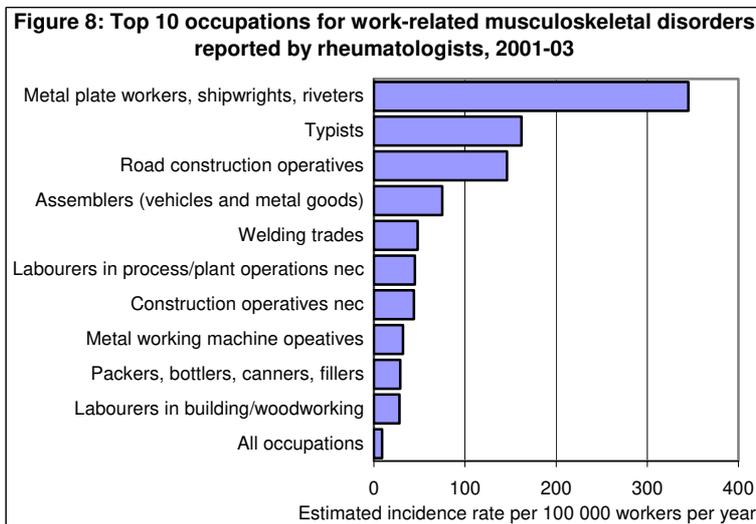


In 2001/02, the estimated prevalence of people in Great Britain with a musculoskeletal disorder which they believed was caused or made worse by their current or past work was 1 126 000, according to a self-reporting (SWI) survey.

SWI01/02 estimated that 21% of sufferers, 240 000 people ever employed, first became aware of their work-related musculoskeletal disorder in the previous 12 months.

THOR data show an estimated 5700 cases were seen for the first time in 2003. This was lower than during the preceding five year period, when around an estimated 8000 cases were seen each year. It is too soon to judge whether this change reflects any real decline in the incidence of musculoskeletal disorders.

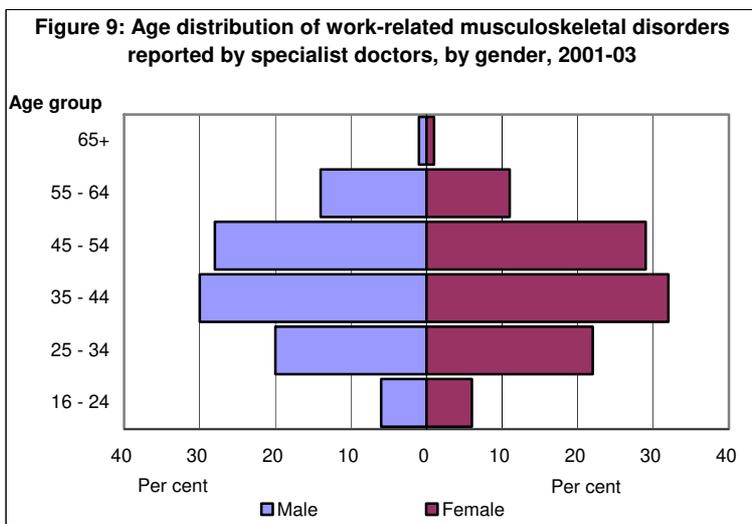
See www.hse.gov.uk/statistics/causdis/musc.htm



The occupation with the highest average annual incidence rate reported by rheumatologists to THOR between 2001 and 2003 was metal plate workers, shipwrights and riveters, with a rate approximately 40 times the average for all occupations. This was followed by typists and road construction operatives.

Occupations carrying above average prevalence rates in the SWI01/02 survey included skilled trades (eg painters and decorators, carpenters and joiners) and process plant and machine operatives (eg heavy goods vehicle drivers). Skilled trades also carried an above average incidence rate.

See www.hse.gov.uk/statistics/causdis/musc.htm



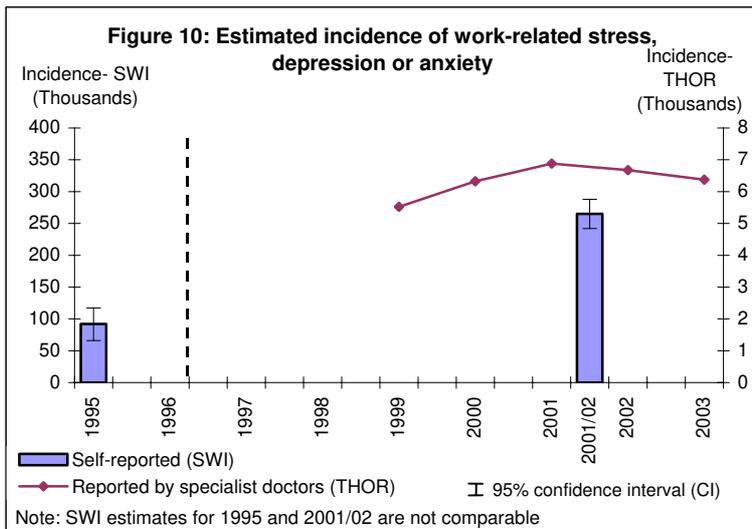
80% of new cases seen by rheumatologists and occupational physicians in the three-year period 2001 to 2003 were between the ages of 25 and 54. There was a similar picture for males and females.

The age group most commonly seen by rheumatologists was 45-54, whilst the 35-44 year age group was the most commonly seen by occupational physicians.

The SWI01/02 survey showed that for both males and females, the oldest working age group (55-64 years for males and 55-59 years for females) carried the highest prevalence rate.

See www.hse.gov.uk/statistics/causdis/musc.htm

Stress and violence at work

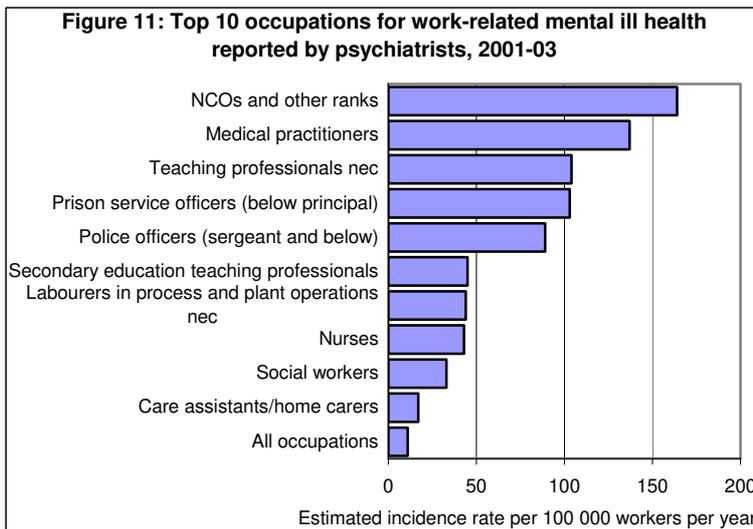


In 2001/02, over half a million people in Great Britain believed that they were experiencing work-related stress at a level that was making them ill, according to the SWI01/02 self-reporting household survey. An estimated 47% of these, 265 000 people ever employed, first became aware of the illness in the last 12 months.

Between 2001 and 2003, an annual average of just over 7000 new cases of occupational mental health problems were reported to THOR.

Despite evidence suggesting that that work-related stress and related disorders have been increasing in the recent past, the latest THOR data show a fall in cases. Further data are required to adequately assess these trends.

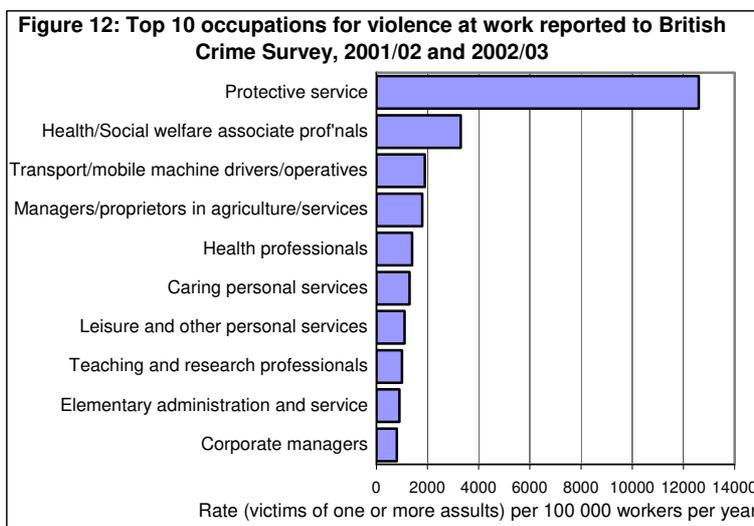
See www.hse.gov.uk/statistics/causdis/stress.htm



Occupation and industry groups containing teachers and nurses, along with protective service occupations and some managerial groups, have high prevalence rates of work-related stress in the SWI and Stress and Health At Work (SHAW) surveys.

The THOR data also show high incidence rates of work-related mental illness for these occupational groups, along with other public sector workers such as police officers, social workers, prison officers, UK armed forces personnel and medical practitioners.

See www.hse.gov.uk/statistics/causdis/stress.htm



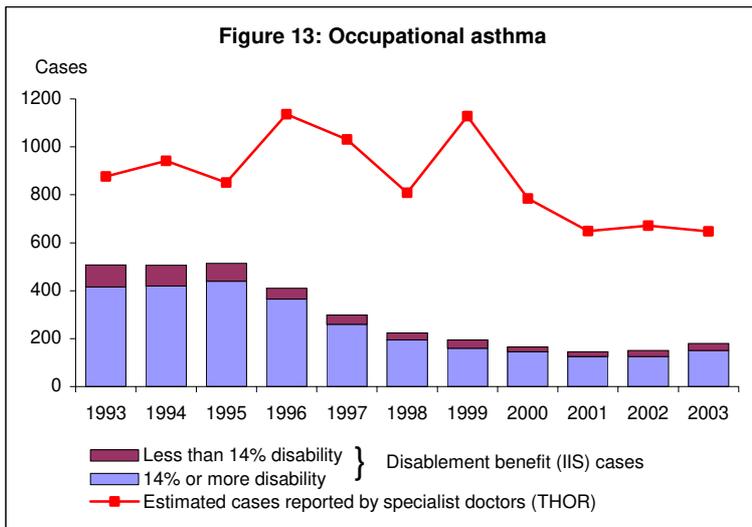
Estimates from the 2002/03 British Crime Survey (BCS) indicated that there were some 453 000 threats of violence and 467 000 physical assaults by members of the public on British workers during the 12 months prior to the interviews.

The risk to individual workers of being a victim at least once during the 12 months was estimated at 900 per 100 000 workers for threats, 900 per 100 000 for assaults and 1700 per 100 000 for any violent incident (threat or assault).

According to the BCS, the major occupational groupings with the highest risk of assault were protective service occupations, followed by health and social welfare associate professionals, with rates of 12 600 and 3300 per 100 000 workers respectively.

See www.hse.gov.uk/statistics/causdis/violence.htm

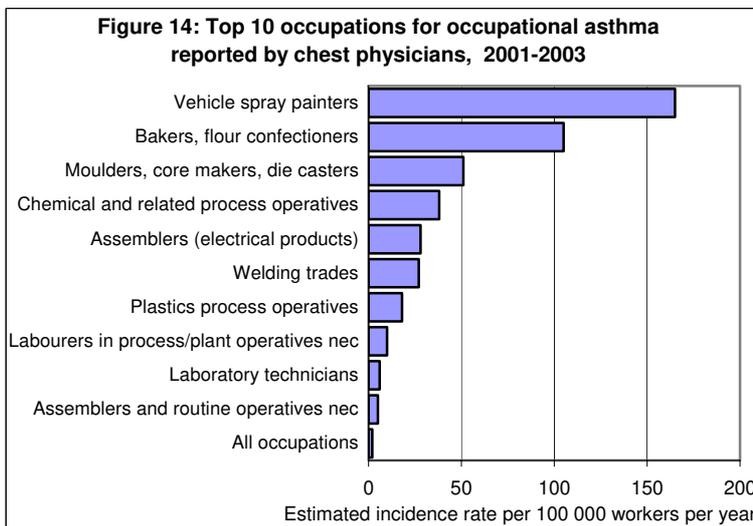
Asthma



In the years 2001 to 2003, the annual average number of cases of occupational asthma seen for the first time by occupational and chest physicians who reported to the THOR monitoring scheme was around 650.

Trends in occupational asthma are difficult to assess from the available data sources. Over the last ten years, the number of estimated THOR cases has fluctuated around an average annual incidence of around 1000 cases per year. However, the estimated numbers for the last four years have been well below this level, indicating a probable decrease in the incidence of occupational asthma.

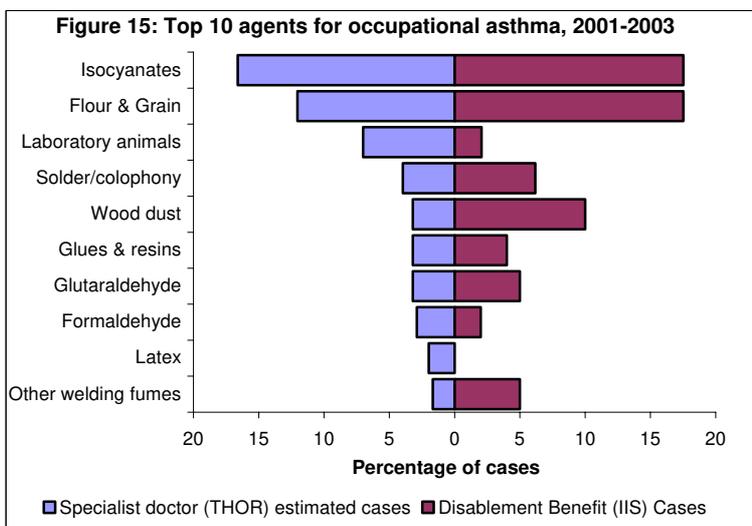
See www.hse.gov.uk/statistics/causdis/asthma.htm



The occupations with the highest incidence rates of occupational asthma as reported by chest physicians in 2001-2003 were vehicle spray painters (165 cases per 100 000), bakers, flour confectioners (105 cases per 100 000) and moulders, core makers, die casters (51 cases per 100 000).

THOR data show that the industries with the highest incidence rates of occupational asthma reported by chest physicians were manufacture of basic metals (36 cases per 100 000 workers) and manufacture of motor vehicles trailers and semi-trailers (13 cases per 100 000 workers).

See www.hse.gov.uk/statistics/causdis/asthma.htm

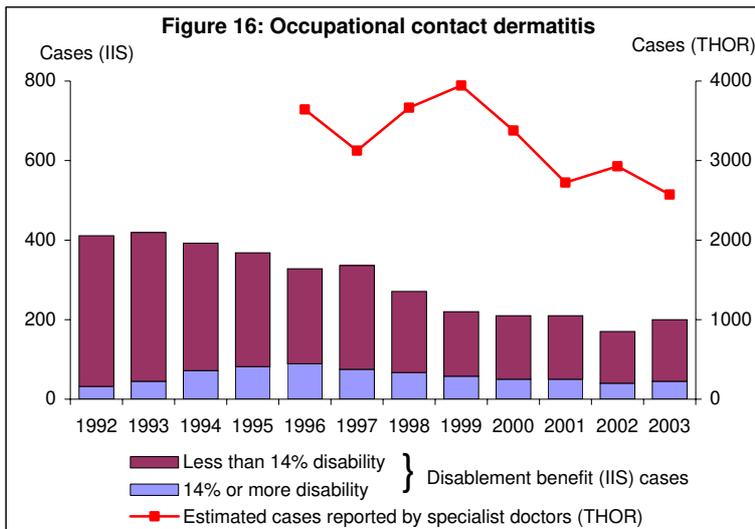


Isocyanates (used eg in the manufacture of some paints and foams) and flour/grain were the most commonly cited agents for both THOR data and Industrial Injuries Scheme cases in the three years 2001-2003.

THOR data show that the most common age groups for new cases of occupational asthma were 45-54 and 35-44 years for males (with around one-third and one-quarter of the total respectively), and 25-34, 35-44 and 45-54 years for females (each with around one-quarter of the total).

See www.hse.gov.uk/statistics/causdis/asthma.htm

Dermatitis

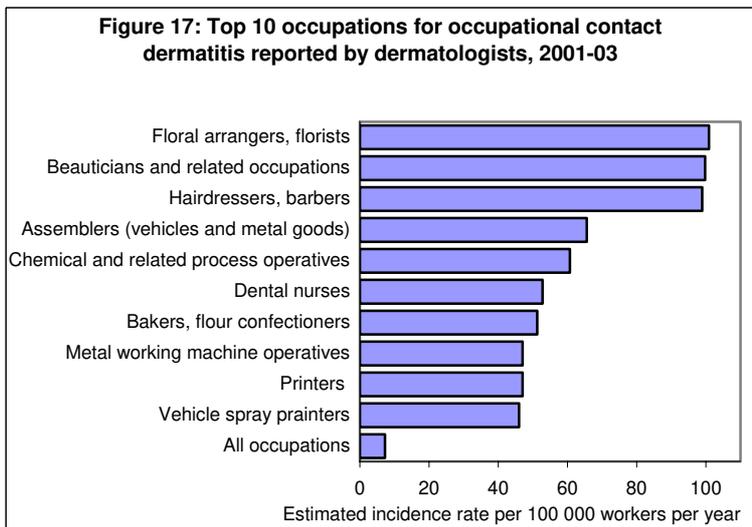


Specialist physicians diagnosed an estimated average of 3600 new cases of work-related skin disease each year between 2001 and 2003: approximately 80% of these were contact dermatitis.

The annual number of workers with occupational dermatitis assessed as having some degree of disablement under the Industrial Injuries Scheme fell from just over 400 in the early 1990s to 200 in 2002/2003.

Trends in dermatitis incidence are difficult to discern, but after fluctuating between 3000 and 4000 cases per year from 1996 to 2000, the estimated number of cases in the THOR surveillance schemes has now been below 3000 for the last three years, and seems to represent a genuine downward trend.

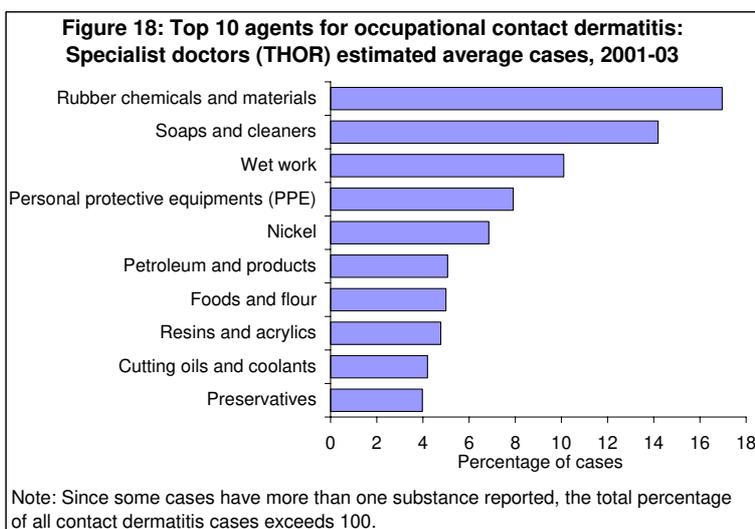
See www.hse.gov.uk/statistics/causdis/skin.htm



THOR data from dermatologists show that the occupations estimated to be at highest risk in 2001-2003 were floral arrangers/florists (101 per 100 000 workers per year), beauticians and related occupations (100 per 100 000); and hairdressers and barbers (99 per 100 000).

The industries where workers were estimated to be at highest risk in 2001-2003, according to THOR dermatologists, were other service activities (58 per 100 000 workers per year); research and development (23 per 100 000) and manufacture of motor vehicles, trailers and semi-trailers (21 per 100 000).

See www.hse.gov.uk/statistics/causdis/skin.htm

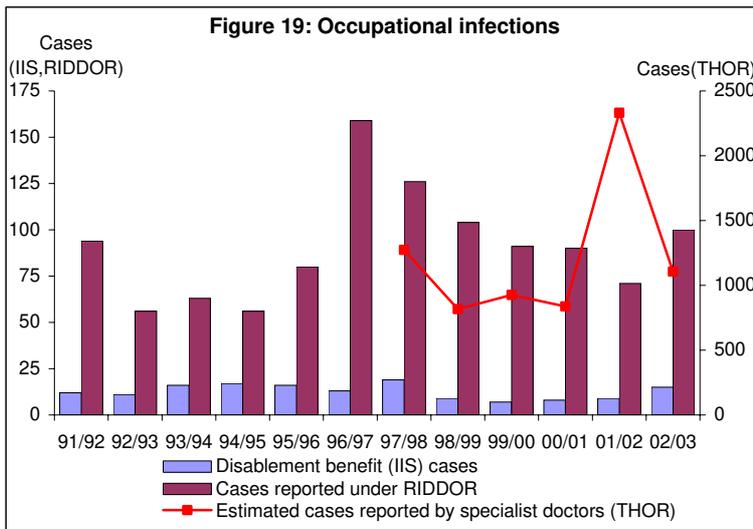


During 2001-2003, the most common agents cited by THOR dermatologists and occupational physicians as causes of contact dermatitis were rubber chemicals and materials, followed by soaps and cleaners and wet work.

THOR data show that the bulk of contact dermatitis cases were shared among the three age-groups 35-44, 45-54 and 25-34 years for males, and 25-34, 16-24 and 35-44 years for females.

See www.hse.gov.uk/statistics/causdis/skin.htm

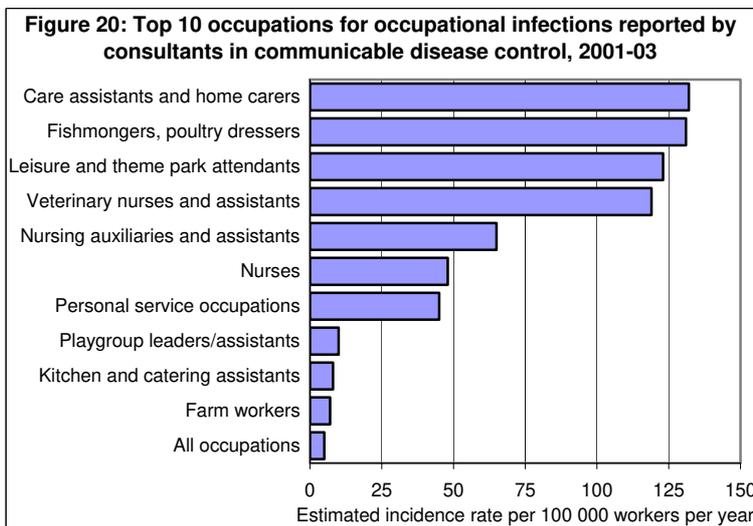
Infections



The annual incidence of work-related infections in Britain in 2003, as estimated from the THOR surveillance schemes, was approximately 1100 cases. Based on reports from disease specialists this is a fall of more than 50% on 2002, (although new cases in 2002 were marked by several large outbreaks of diarrhoeal disease). This estimate probably substantially underestimates the true incidence of occupational infections in Britain, as many will not be reported or referred for investigation.

The underlying trend in recent years from RIDDOR and IIS data, which focus on a limited group of usually more serious infections, suggests no clear change in the numbers of occupational infections over time.

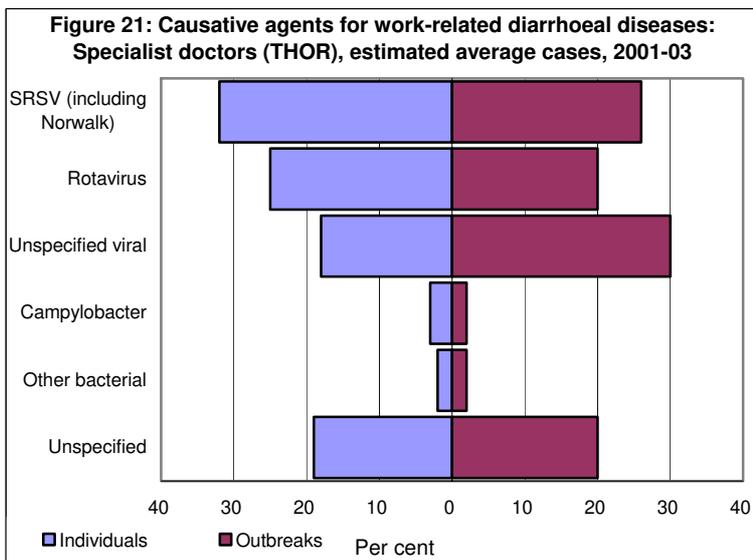
See www.hse.gov.uk/statistics/causdis/infect.htm



According to THOR disease specialist data for 2001-2003, high estimated rates of occupational infections are seen for Care assistants and home carers (132 per 100 000 workers per year), Fishmongers and poultry dressers (131 per 100 000) and Leisure and theme park attendants (123 per 100 000).

Industry analysis indicates that most cases of occupational infections reported to THOR in 2001-2003 occurred in the industry section Health and Social Work (37 per 100,000 workers per year). There was also an above-average rate for Financial Intermediation (12 per 100 000), and within this the division Post and Communication (22 per 100 000).

See www.hse.gov.uk/statistics/causdis/infect.htm

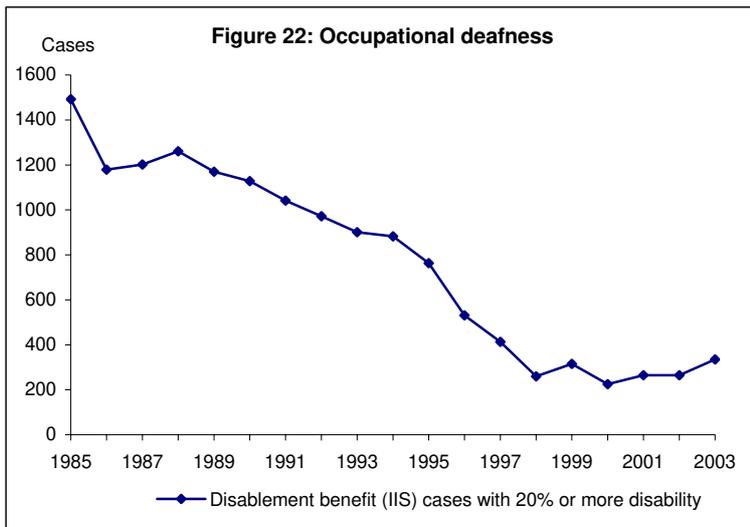


The most common types of occupational infections reported to THOR disease specialists were diarrhoeal diseases, comprising nearly 90% of cases in the period 2001-2003. Small Round Structure Virus (SRSV) infections were identified as the cause of the highest percentage of these infections between 2001 and 2003 (over 30%), followed by rotavirus (25%).

Around three-quarters of cases of occupational infection reported to THOR in 2001-2003 were in females, where sex was recorded. The age-groups 35-44 and 25-34 each accounted for around one-quarter of the total (However, age and sex were only recorded in a minority of cases)..

See www.hse.gov.uk/statistics/causdis/infect.htm

Other occupational diseases and exposures

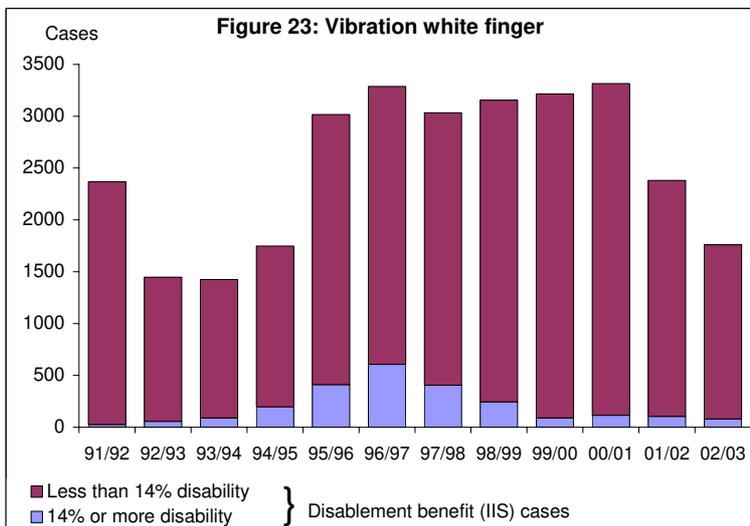


A Medical Research Council survey in 1997-98 gave a prevalence estimate of 509 000 people in Great Britain suffering from hearing difficulties as a result of exposure to noise at work. This is greater than the SWI01/02 estimate (87 000).

New cases of noise-induced deafness qualifying for Industrial Injuries Scheme disablement benefit fell steadily since the mid 1980s, reaching 226 in 2000. However since 1998 there has been little change and the number rose slightly to 264 in 2002 and 335 in 2003.

Occupations with high incidence rates based on audiologists' reports in 2001-2003 were foundry labourers, NCOs and other ranks in the armed forces, other labourers in making and processing and machine tool operatives.

See www.hse.gov.uk/statistics/causdis/noise.htm

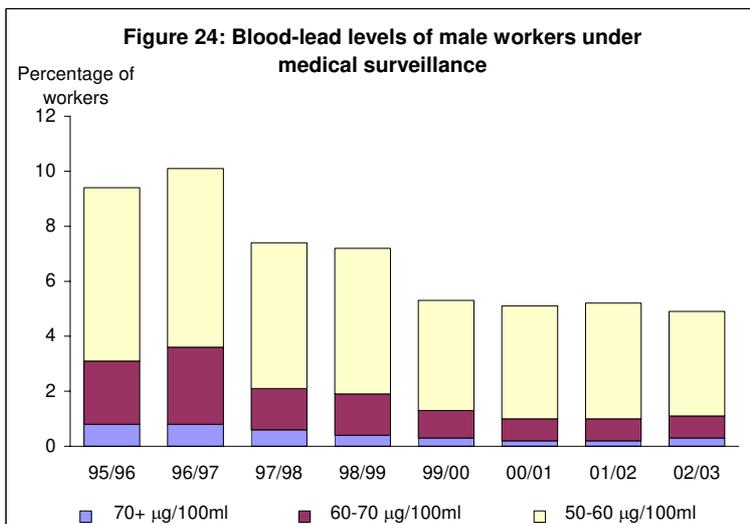


The number of new cases of Vibration White Finger (VWF) assessed for disablement benefit under the Industrial Injuries Scheme (IIS) was 1775 in 2002/03, of whom nearly all were males. These figures are lower than in the preceding seven years.

An estimated total of 303 cases of hand-arm vibration syndrome (HAVS) were seen by occupational physicians and rheumatologists in the THOR reporting schemes in 2003, compared with 1181 cases in 2002.

The Medical Research Council (MRC) survey in 1997-98 gave a prevalence estimate of 288 000 sufferers from VWF in Great Britain.

See www.hse.gov.uk/statistics/causdis/vibrate.htm



The total number of lead workers under medical surveillance in 2002/03 fell for the fifth consecutive year to 12 773.

The number of individuals suspended from work fell in 2002/03, with 68 males and 5 females suspended, a reduction of 32 and 5 respectively on the previous year.

The proportion of male workers with blood-lead measurements at or above 60µg/100ml remains at the same level for the last three years at 1.1%.

Smelting and refining, lead batteries and painting (of buildings and vehicles) were the industrial sectors where the proportion of male workers at or above 60µg/100ml was greatest.

See www.hse.gov.uk/statistics/causdis/lead.htm

Technical note

The terms 'occupational' or 'work-related' ill health cover the wide range of disorders which can be linked to a person's work. Some, such as lead poisoning and asbestosis, are clearly occupational since the exposures which cause them are unlikely to be found outside work. However, many conditions – eg back pain or stress – can arise from a variety of factors, both inside and outside work.

Another special feature of occupational ill health is that, unlike workplace injuries, it does not normally occur immediately after exposure to the hazard. There is a delay between exposure and ill health, which may range from a few hours (in the case of some infectious diseases) to several decades (for many cancers).

All of this means that individual cases of ill health cannot be defined as work-related in a single, straightforward way, and indeed that this will be done differently by different people – eg doctors, employers and individual workers. Therefore no single source of statistics is available in Great Britain on the nature and full extent of work-related ill health, and HSE's policy is to make the fullest use of a range of data sources, developing new ones where necessary. The statistics presented in this document are based on five main sources, mostly referred to by their acronyms:

SWI: Household surveys of self-reported work-related illness, giving estimates of the number of people who have conditions which they think have been caused or made worse by work. SWI surveys have been carried out, in conjunction with the Labour Force Survey (LFS), in 1990, 1995, 1998/99, 2001/02 and 2003/04. Headline results of the 2001/02 survey were published in December 2002; full results were published in June 2003 and are available at www.hse.gov.uk/statistics/causdis/swi0102.pdf. Headline results of the 2003/04 survey will be published in November 2004, in *Health and Safety Statistics Highlights 2003/04*.

THOR: Voluntary medical surveillance schemes in The Health and Occupation Reporting network (formerly known as ODIN), counting new cases which are caused by work in the opinion of the specialist doctor who sees them. THOR data are available from 1999 for work-related mental ill health, from 1998 for hearing loss, musculoskeletal disorders and infections, and from the early 1990s for respiratory and skin disorders, up to 2003.

IIS: Compensation under the Department for Work and Pensions' (DWP's) Industrial Injuries Scheme, recording new cases of specified 'prescribed diseases' (conditions whose occupational cause is well established) assessed for disablement benefit. IIS data are available annually from at least the 1980s up to 2003 (for lung diseases) and 2002/03 (for non-lung diseases).

RIDDOR: Statutory reports by employers under HSE's Reporting of Injuries, Diseases and Dangerous Occurrences Regulations of cases of a defined list of diseases occurring in their employees. RIDDOR data, which are subject to far greater under-reporting for ill health than for injuries, are available from the 1980s up to 2002/03.

Death Certificates for some types of occupational lung disease, including mesothelioma and asbestosis (for these two diseases special registers are maintained by HSE). Again these are available for a long time series, the most recent data being for 2002.

In addition, more specific sources provide data for certain conditions or hazards:

BCS: The British Crime Survey, a large household survey of criminal victimisation against people aged 16 or over in the previous 12 months, undertaken every two years from 1982-2000 and annually since 2000, which includes questions on violence at work.

SHAW: The Stress and Health at Work household survey in 1998, which reported on how stressful individuals believed their jobs were.

MRC: Two Medical Research Council studies in 1997/98, which gave estimates of the numbers of people suffering from work-related deafness and from vibration white finger based on the fractions of the national prevalence attributable to work.

Blood-lead: The measurement of levels of lead in workers' blood samples, as part of the medical surveillance required under the Control of Lead at Work Regulations, from which annual statistics are produced, most recently for 2002/03.

More details of the sources are at: www.hse.gov.uk/statistics/causdis/sources.htm.

Some of the sources are surveys and are therefore subject to sampling errors, because the estimates are based on a sample rather than the whole population. For estimates from the SWI surveys, "95% confidence intervals" are quoted to indicate the range of uncertainty due to this: each 95% CI shows the range which we are 95% confident contains the true value. Confidence intervals are not available for the THOR data, but to take account of sampling variation, figures for detailed occupations and industries are only given here if they are based on 10 or more actual cases.

Links and contacts

A wealth of information about occupational health statistics is on the HSE website at www.hse.gov.uk/statistics, including:

- more than a dozen detailed commentaries on different causes and kinds of disease
- over 40 tables containing data from the THOR surveillance scheme and 10 giving data from the IIS
- links to full reports of the SWI surveys and to in-depth factsheets, for example on mesothelioma and on work-related illness in the construction industry.

The website also contains HSE's statistics of workplace fatalities and injuries, dangerous occurrences, gas safety, and enforcement action by HSE and local authorities.

For further information please contact:

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