



# Health and Safety Statistics 1999/2000



HSC'S MISSION STATEMENT

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To ensure that risks to  
people's health and safety  
from work activities  
are properly controlled



# Health and Safety Statistics 1999/2000



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## **HEALTH AND SAFETY STATISTICS HISTORY**

Since 1992/93, statistics relating to health and safety at work have been published in both the Health and Safety Commission's *Annual report* and in *Health and safety statistics*.

The latest available statistics are set out in summary in the *Annual report* and in more detail in this report. Before *Health and safety statistics*, figures were published in a supplement to the *Employment Gazette*.<sup>1,2,3</sup>

# **PART 1: INJURY, DANGEROUS OCCURRENCES, GAS SAFETY AND ENFORCEMENT ACTION STATISTICS**

## **INTRODUCTION**

1.1 Part 1 of this report covers the latest statistics available on occupational safety and enforcement action in Great Britain by HSE inspectorates and local authorities. Statistics for occupational injuries, dangerous occurrences and gas safety are compiled from reports made to HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). Enforcement action statistics are compiled from information held by the individual HSE inspectorates and local authorities.

1.2 Two sets of statistics are reported in Part 1: provisional statistics for 1999/2000 and finalised statistics for 1998/99. The report sets the 1999/2000 and 1998/99 figures in the context of previous years' figures and also comments on emerging trends. However, in many cases, figures from 1996/97 onwards cannot be compared with those for earlier years due to the introduction of revised RIDDOR regulations in 1996. More detailed information on the reporting regulations, including injury definitions, can be found in the report and in the technical note at the end of Part 1.

1.3 All the statistics by industrial sector are based on the 1992 Standard Industrial Classification (SIC92). When SIC92 was introduced in 1995/96, the statistics by industrial sector were revised back to 1991/92. SIC92 definitions are given in the publication *Standard industrial classification of economic activities 1992*.<sup>4</sup>

1.4 The figures for fatal injuries are based on RIDDOR statistics and other sources of information to ensure that the statistics on fatalities are virtually complete. However, it is possible that a small number of fatalities, mainly to members of the public, may be missed due to either the particular circumstances of the accident or to a lengthy gap between the accident and the ensuing fatality. This should not affect the consistency of the data series over time.

1.5 The Health and Safety Executive has developed the Labour Force Survey (LFS) as a source of information on workplace injury to complement the flow of injury reports made by employers and others under RIDDOR. HSE placed a supplement of detailed questions on workplace injury (and ill health) in the 1990 LFS. Results from this confirmed HSE's previous concerns that non-fatal injuries are substantially under-reported. HSE has placed a limited set of injury questions in the LFS annually since 1993.

## **SUMMARY OF REPORTED INJURIES IN 1998/99 AND 1999/2000**

1.6 Injury statistics for 1998/99 have now been finalised. Statistics for 1999/2000 are based on provisional figures. Final figures for non-fatal injuries are normally about 2.5% higher than provisional because of late reports. Therefore, provisional figures for 1999/2000 have been adjusted to produce *estimated final* figures by examining trends in the difference between provisional and final figures from previous years.

1.7 Fatalities include deaths up to a year after the date of the accident. Estimated final figures for fatal injuries are based on the best information available at the time when the statistics were compiled. Throughout this report estimated final figures for 1999/2000 are

denoted 'ef' and provisional figures 'p'. Estimated final figures have not been compiled for detailed breakdowns of injury statistics such as kind of accident, or type and site of injury. Instead, unadjusted provisional figures are given for such breakdowns.

1.8 Injury statistics for 1998/99 and 1999/2000 have been compiled from reports made to HSE's operating divisions and local authorities under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR 95). Table 1.1 shows the final and provisional numbers of injury reports received in 1998/99 and 1999/2000.

**Table 1.1** Injury reports received by HSE and local authorities, 1998/99 - 1999/2000p

	1998/99	1999/2000p
Field Operations Directorate	141 549	137 928
Chemical and Hazardous Installations Division excluding Explosives Directorate	2 815	2 856
Explosives Inspectorate	25	39
Nuclear Safety Directorate	84	98
Railway Inspectorate	5 654	5 691
Offshore Safety Division	320	246
Mines Inspectorate	1 065	895
Local authorities	35 107	34 798
Directorate of Science and Technology	-	4
<b>All enforcing authorities</b>	<b>186 619</b>	<b>182 555</b>

1.9 The provisional figure of 182 555 reported injuries in 1999/2000 led to an estimated final figure of 187 255. This represents a less than 1% increase compared with the 186 619 injuries reported in 1998/99.

1.10 Of the estimated 187 255 injuries reported to HSE and local authorities in 1999/2000:

- 655 were fatal injuries, compared with 622 in 1998/99.
- 28 939 were major injuries to workers, compared with 29 053 in 1998/99.
- 133 027 were over-3-day injuries to workers, a slight drop compared with 133 144 in 1998/99.
- 24 634 were non-fatal injuries to members of the public, compared with 23 800 in 1998/99.

1.11 The 186 619 injuries reported in 1998/99 represent a 4% decrease compared with the previous year. In 1998/99, there was a 6% decrease in the number of fatal injuries to members of the public, and a substantial decrease in non-fatal injuries to members of the public for the second consecutive year. There were also decreases in the total number of fatal injuries and major injuries to workers, and a small (2%) decrease in the number of over-3-day injuries to workers.

**Table 1.2** Injuries by severity of injury 1990/91 - 1999/2000ef (includes injuries to employees, self-employed and members of the public)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (a)	97/98	98/99	99/00ef	
Fatal	572	473	452	403	376	344	654	667	622	655	
Major/ non-fatal	<i>workers</i>	21 222	18 698	18 053	17 979	18 354	17 734	29 320	30 002	29 053	28 939
	<i>members of the public</i>	9 981	11 009	10 669	11 552	12 642	13 234	35 694	28 613	23 800	24 634
Over-3-day	<i>workers</i>	162 888	154 338	143 283	137 459	142 218	132 976	129 568	135 773	133 144	133 027
<b>Total</b>	<b>194 663</b>	<b>184 518</b>	<b>172 457</b>	<b>167 393</b>	<b>173 590</b>	<b>164 288</b>	<b>195 236</b>	<b>195 055</b>	<b>186 619</b>	<b>187 255</b>	

(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

1.12 Tables 1.3 to 1.5 summarise the latest injury statistics in more detail.

**Table 1.3** Summary of provisional injury numbers and rates by severity and type of injured person 1999/2000

Severity of injury	Employees		Self-employed		Members of the public
	Number of injuries	Injury rate (a)	Number of injuries	Injury rate (a)	Number of injuries (b)
Fatal	161	0.7	55	1.6	440
Major/non-fatal	27 563	117.0	633	18.8	24 104
Over-3-day	128 889	547.0	710	21.1	-
<b>All injuries</b>	<b>156 613</b>	<b>664.6</b>	<b>1 398</b>	<b>41.6</b>	<b>24 544</b>

(a) Per 100 000 employed.

(b) The definition of a non-fatal injury to a member of the public is different to that for a worker (see paragraph 1.251).

**Table 1.4** Summary of estimated final injury numbers and rates by severity and type of injured person 1999/2000

Severity of injury	Employees		Self-employed		Members of the public
	Number of injuries	Injury rate (a)	Number of injuries	Injury rate (a)	Number of injuries (b)
Fatal	161	0.7	57	1.7	437
Major/non-fatal	28 299	120.1	640	19.1	24 634
Over-3-day	132 307	561.5	720	21.4	-
<b>All injuries</b>	<b>160 767</b>	<b>682.3</b>	<b>1 417</b>	<b>42.2</b>	<b>25 071</b>

(a) Per 100 000 employed.

(b) The definition of a non-fatal injury to a member of the public is different to that for a worker (see paragraph 1.251).

**Table 1.5** Summary of final injury numbers and rates by severity and type of injured person 1998/99

Severity of injury	Employees		Self-employed		Members of the public
	Number of injuries	Injury rate (a)	Number of injuries	Injury rate (a)	Number of injuries (b)
Fatal	188	0.8	65	1.9	369
Major/non-fatal	28 368	121.7	685	20.3	23 800
Over-3-day	132 295	567.3	849	25.2	-
<b>All injuries</b>	<b>160 851</b>	<b>689.8</b>	<b>1 599</b>	<b>47.4</b>	<b>24 169</b>

(a) Per 100 000 employed.

(b) The definition of a non-fatal injury to a member of the public is different to that for a worker (see paragraph 1.251).

### REPORTED FATAL INJURIES TO WORKERS (EMPLOYEES AND SELF-EMPLOYED) 1990/91 - 1999/2000

1.13 Estimated final figures indicate 218 fatal injuries to workers were reported during 1999/2000, 35 fewer than 1998/99. This is the lowest number reported since the introduction of RIDDOR in 1986, and represents a decrease of 14% compared to the 253 reported fatalities to workers in the previous year. In 1997/98, 274 fatalities to workers were reported, and 287 in 1996/97.

**Table 1.6** Fatal injuries to workers as reported to all enforcing authorities 1990/91-1999/2000ef

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00ef
Employees	346	297	276	245	191	209	207	212	188	161
Self-employed	87	71	63	51	81	49	80	62	65	57
<b>Total workers</b>	<b>433</b>	<b>368</b>	<b>339</b>	<b>296</b>	<b>272</b>	<b>258</b>	<b>287</b>	<b>274</b>	<b>253</b>	<b>218</b>

1.14 The pattern of the fatal injury rate for workers mirrors the number of fatalities. In 1999/2000, the rate is expected to be 0.8 per 100 000 workers, again the lowest since the introduction of RIDDOR, and compares with a rate of 0.9 in 1998/99. The rate for 1997/98 is 1.0, and 1.1 in 1996/97.

1.15 When the numbers and rates of fatal injuries to workers are viewed over the last ten

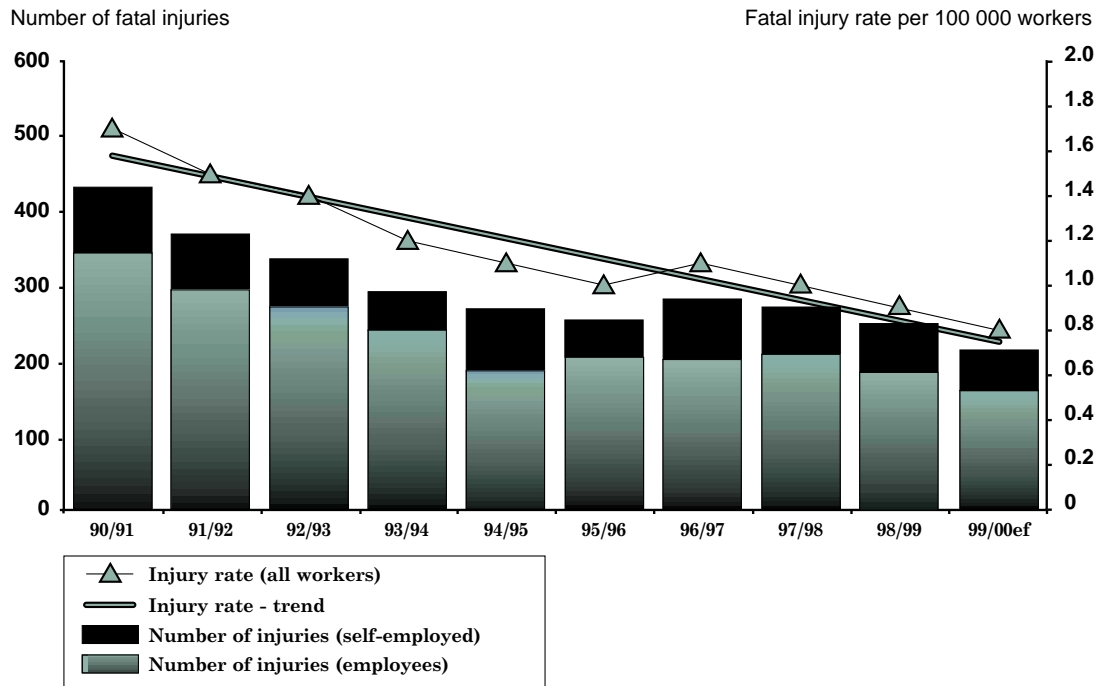
**Table 1.7** Rates of fatal injuries for workers 1990/91-1999/2000ef (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00ef
Employees	1.6	1.4	1.3	1.2	0.9	1.0	0.9	0.9	0.8	0.7
Self-employed	2.7	2.1	2.0	1.6	2.5	1.5	2.3	1.8	1.9	1.7
<b>Total workers</b>	<b>1.7</b>	<b>1.5</b>	<b>1.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>	<b>1.1</b>	<b>1.0</b>	<b>0.9</b>	<b>0.8</b>

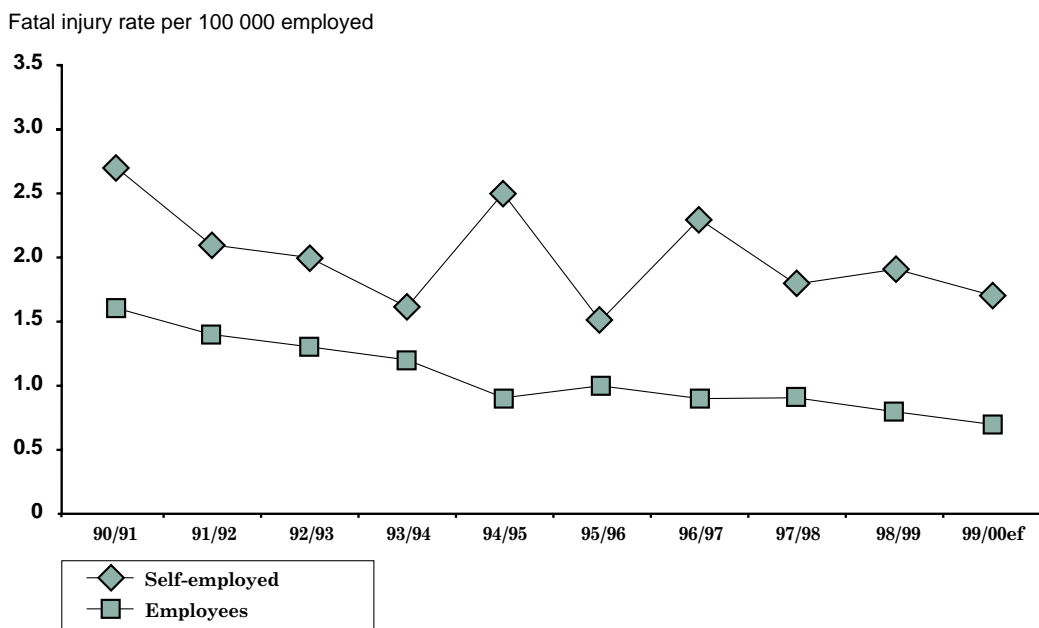
(a) Per 100 000 employed.

years, downward trends are evident in both respects. This can be seen in Figure 1.1, which shows the numbers of fatal injuries to workers, the fatal injury rate for workers, and the injury rate trend line. The trend line is based upon the finalised injury rates 1990/91 - 1998/99. The estimated final rate of fatal injury of 0.8 per 100 000 workers in 1999/2000 is within the range expected if this trend were to continue. Figure 1.2 provides an all-industry comparison of the fatal injury rates for employees and the self-employed.

**FIGURE 1.1**  
**Fatal injuries to workers 1990/91 - 1999/2000ef**



**FIGURE 1.2**  
**Fatal injury rates for employees and the self-employed 1990/91 - 1999/2000ef**



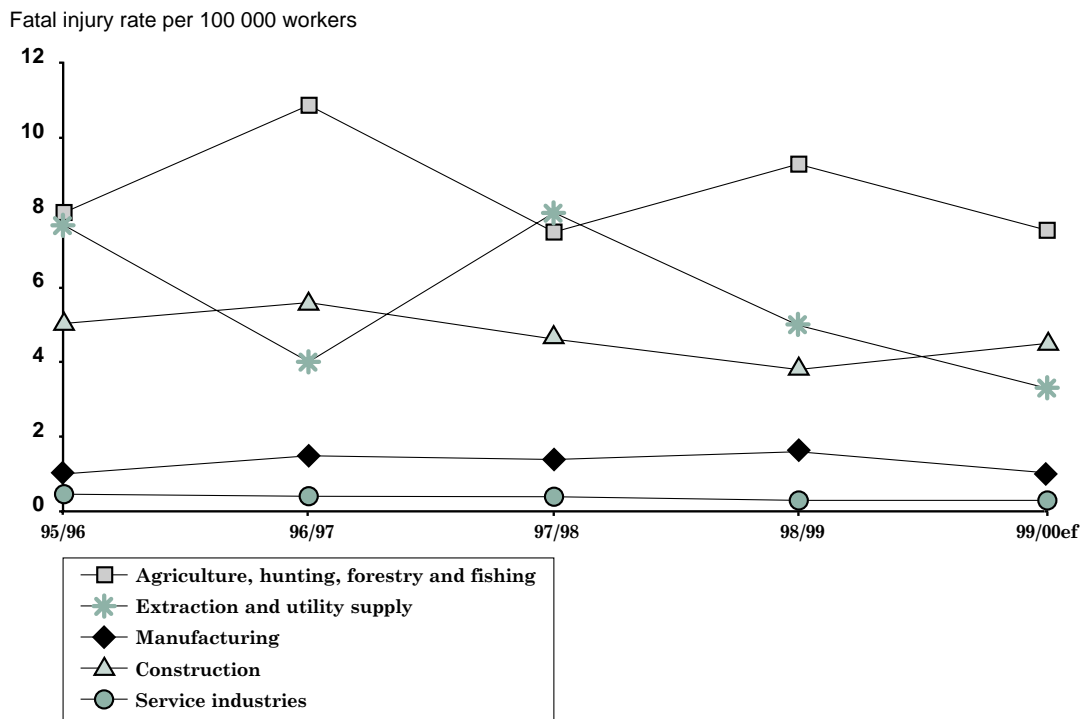
## Fatal injuries to workers by industrial sector

1.16 Fatal injury rates for workers in 1999/2000, compared with 1998/99, are expected to fall in agriculture, extraction and utility supply, and manufacturing. These are represented by 7.5, 3.3 and 1.0 fatalities per 100 000 workers respectively for 1999/2000, and 9.3, 5.0 and 1.6 for the previous year.

1.17 For 1999/2000, the fatal injury rate in the construction industry is expected to rise to 4.5 fatalities per 100 000 workers, compared with 3.8 in 1998/99.

1.18 The service sector has shown a downward trend in both the number and rate of fatal injuries to workers. The number of fatal injuries per year during the past decade has approximately halved, to an estimated 56 fatalities for 1999/2000. The expected rate of fatal injuries in this sector is 0.3 per 100 000 workers, the same as the previous year.

**FIGURE 1.3**  
Fatal injury rates for workers by industrial sector 1995/96 - 1999/2000ef



## REPORTED INJURIES TO EMPLOYEES 1990/91 - 1999/2000

1.19 Estimated final figures indicate that 160 767 injuries to employees were reported to HSE and local authorities in 1999/2000, a very slight reduction on the number of injuries compared with 1998/99. Of these:

- 161 were fatal injuries, a decrease of 14%;
- 28 299 were major injuries, a slight decrease compared with 1998/99; and
- 132 307 were over-3-day injuries, a very slight increase compared with 1998/99.

**Table 1.8** Injuries to employees by severity 1990/91 - 1999/2000ef as reported to all enforcing authorities

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (a)	97/98	98/99	99/00ef
Fatal	346	297	276	245	191	209	207	212	188	161
Non-fatal major	19 896	17 597	16 938	16 705	17 041	16 568	27 964	29 187	28 368	28 299
Over-3-day	160 811	152 506	141 147	134 928	139 349	130 582	127 286	134 789	132 295	132 307
<b>Total</b>	<b>181 053</b>	<b>170 400</b>	<b>158 361</b>	<b>151 878</b>	<b>156 581</b>	<b>147 359</b>	<b>155 457</b>	<b>164 188</b>	<b>160 851</b>	<b>160 767</b>

(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Fatal injuries

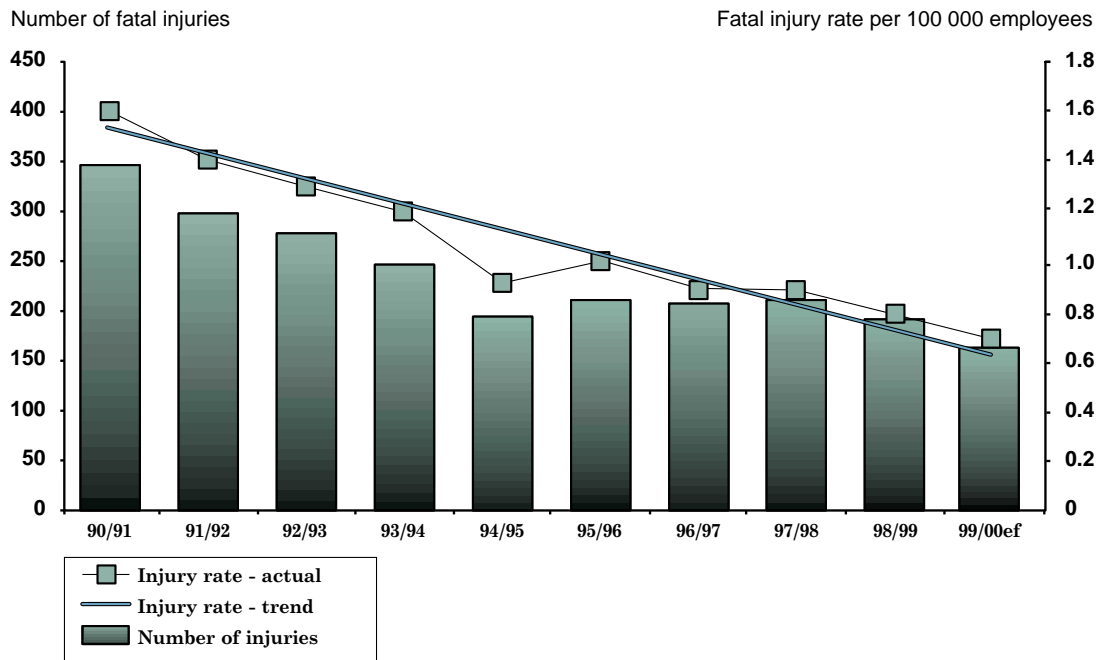
1.20 Estimated final figures for 1999/2000 indicate that 161 fatal injuries to employees were reported to HSE and local authorities: 27 less than in 1998/99, and the lowest number reported since the introduction of RIDDOR.

1.21 In 1999/2000, the fatal injury rate is expected to fall to 0.7 per 100 000 employees, the lowest rate on record.

1.22 In 1998/99, 188 fatal injuries to employees were reported to HSE and local authorities, a decrease of 24 compared with the previous year, and an injury rate of 0.8 per 100 000.

1.23 Figure 1.1 shows the number of fatal injuries to employees and the fatal injury rate per 100 000 employees from 1990/91 - 1999/2000ef. The trend line is based on the finalised injury rates, ie the nine-year period 1990/91 - 1998/99. The trend is downward and statistically significant. The estimated final rate of fatal injury of 0.7 per 100 000 employees in 1999/2000 is within the range expected if this trend was to continue.

**FIGURE 1.4**  
**Fatal injuries to employees 1990/91 - 1999/2000ef**



***Fatal injuries by industrial sector***

*Agriculture*

1.24 Estimated final figures indicate that in 1999/2000 there were 13 fatal injuries to employees in agriculture, the lowest number reported since 1991/92. In 1998/99, there were 16 fatalities, while in 1997/98 there were 20 fatalities, the same number as in the previous two years.

1.25 The fatal injury rate is expected to be 4.3 per 100 000 in 1999/2000, again the lowest level since 1991/92, and the fourth consecutive decrease. In 1997/98, although the number of fatalities was the same as in the previous year, the rate was lower, at 6.7 per 100 000 (compared with 7.6 in 1996/97). There was an increase in the number employed in the sector in 1997/98.

*Extraction and utility supply*

1.26 Estimated final figures indicate that there were 6 fatalities in 1999/2000, compared with 10 in 1998/99, and represents the lowest figure since the 4 reported fatalities in 1994/95.

1.27 The fatal injury rates mirror these changes. The rate has decreased from 7.9 per 100 000 in 1997/98, to 4.7 in 1998/99, and an expected rate of 2.9 per 100 000 in 1999/2000.

### *Manufacturing*

1.28 In 1999/2000, the final number of fatal injuries to employees in manufacturing is expected to be 36, a decrease of 43% compared with the previous year. This figure represents the lowest number of fatal injuries during the 1990s. There were 63 fatalities in 1998/99, 9 more than the number in the previous year.

1.29 The fatal injury rates mirror the pattern in the number of injuries. In 1999/2000 the rate is expected to be 0.9 fatalities per 100 000 employees, also the lowest level in recent years, and contrasts with the 1998/99 rate of 1.6 per hundred thousand, which was the highest since a similar rate for 1993/94.

1.30 Provisional figures indicate that within the sector in 1999/2000, the number of fatal injuries in the manufacture of basic metals and fabricated metal products industry is expected to fall to 16 from 19 in the previous year. In food and beverage manufacture the number is expected to fall to 1 from 7, and the number in the recycling industry is expected to fall to 2 from 7. There are no fatalities expected in the manufacture of other non-metallic mineral products, compared with 6 in 1998/99.

### *Construction*

1.31 In 1999/2000 an increase in the number of reported injuries is expected in construction. The estimated final number of fatal injuries is 59, the highest number since 1996/97 when 66 fatalities were recorded, and compares with 47 in 1998/99 and 58 in 1997/98.

1.32 The estimated rate of fatalities in the construction sector for 1999/2000 is 5.3 per 100 000, compared with 4.4 in 1998/99 and 5.7 in 1997/98. Despite the higher number of estimated fatalities for 1999/2000 compared with 1997/98, the rate has reduced due partly to the increase in numbers employed within the construction industry.

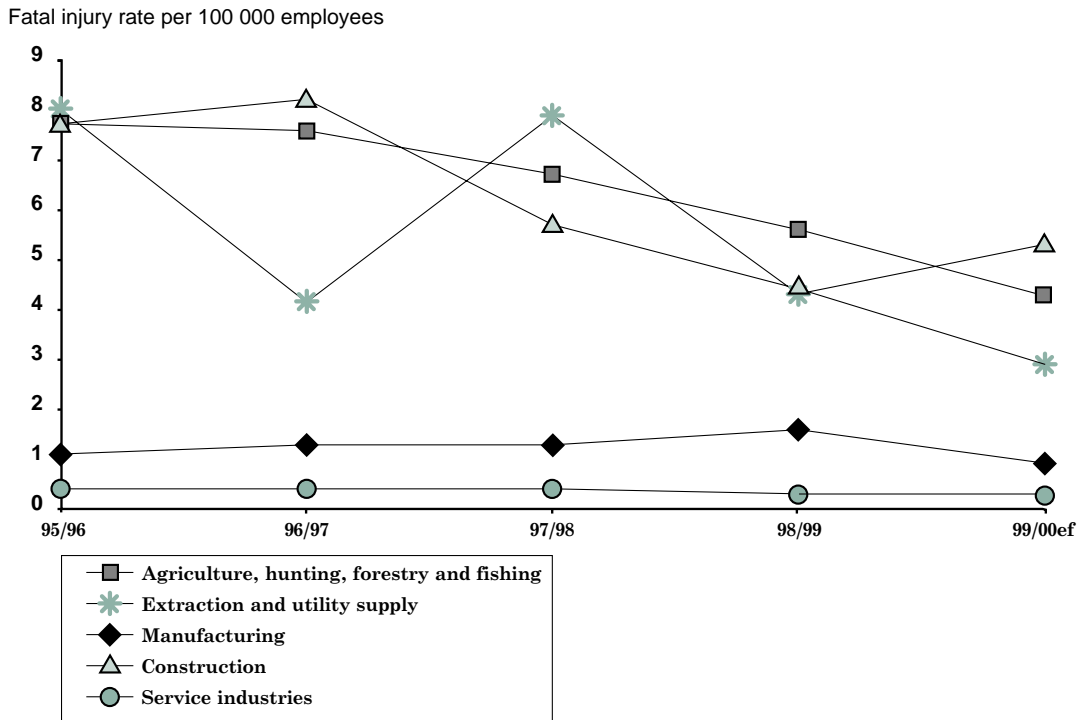
### *Service industries*

1.33 Estimated final figures indicate that there were 47 fatal injuries to employees in the service sector in 1999/2000, a decrease of 5 compared with the previous year and the lowest number reported during the 1990's. In 1998/99 there were 52 fatal injuries, 11 fewer than in the previous year.

1.34 In 1999/2000, the rate is expected to be 0.3 per 100 000, the same as 1998/99, and the lowest level in recent years. This compares with 0.4 per 100 000 for 1994/95 - 1997/98.

1.35 The number of fatalities for 1999/2000 (provisional figures) for other community, social and personal service activities is expected to increase to 8 from 4 in 1998/99. All other divisions in the service sector are expected to remain the same or show a decrease.

**FIGURE 1.5**  
**Fatal injury rates for employees by industrial sector 1995/96 - 1999/2000ef**



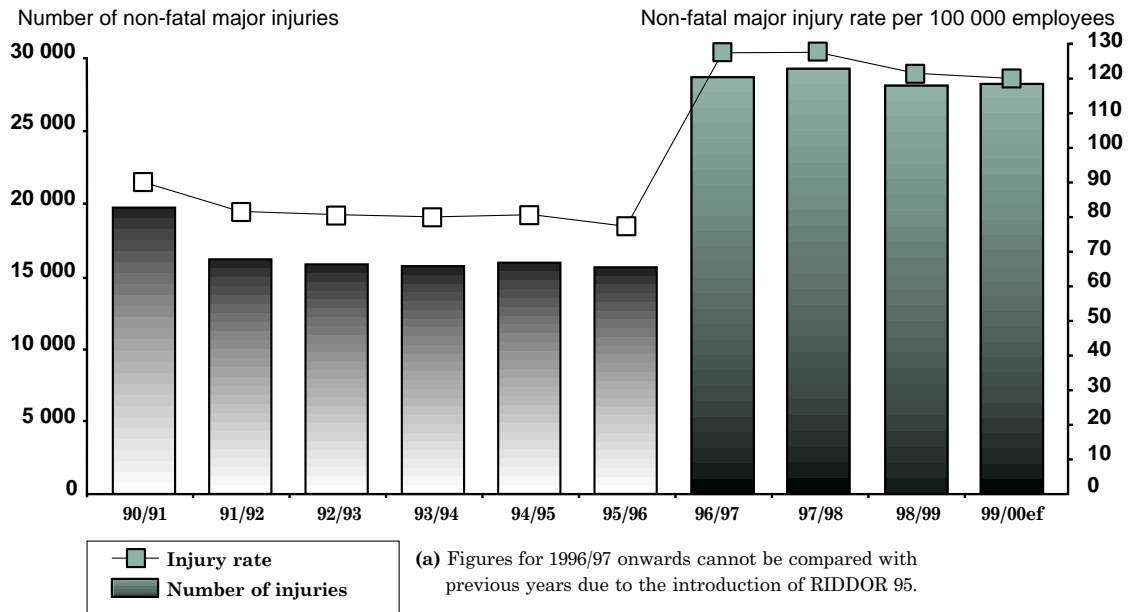
**Non-fatal major injuries**

1.36 The number of non-fatal injuries and non-fatal injury rates from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95. Under the revised regulations a wider range of major injuries became reportable including those resulting from acts of physical violence at work. The changes resulted in a substantial increase in the number of major injuries reported from 1996/97 onwards. Definitions of major injuries under the revised and previous reporting requirements are given in the technical notes at the end of Part 1.

1.37 In 1999/2000, the estimated final number of non-fatal major injuries to employees is expected to be 28 299, a slight decrease of 69 compared with 1998/99 in which there were 28 368 injuries. This level represents a similar figure to the number reported in 1996/97, the first year of reporting under RIDDOR 95. During this four-year period, the maximum difference between the highest and lowest number of reported injuries is 4%.

1.38 Although there were similar estimated final numbers of non-fatal major injuries to employees reported in 1999/2000, when compared to 1998/99, the rate of 120.1 per 100 000 has decreased from 121.7 due partly to an increase in the number of employees. This represents the lowest rate since the introduction of RIDDOR 95.

**FIGURE 1.6**  
**Non-fatal major injuries to employees 1990/91 - 1999/2000ef (a)**



***Non-fatal major injuries by industrial sector***

*Agriculture*

1.39 Estimated final figures indicate that there were 663 non-fatal major injuries to employees reported to HSE and local authorities in agriculture in 1999/2000, a substantial (10%) increase compared with 1998/99, when 605 injuries were reported. This 1999/2000 figure nearly represents a return to a similar level of 1996/97 and 1997/98.

1.40 In 1999/2000, the non-fatal major injury rate for employees in agriculture is expected to be 220.8 per 100 000, a return to a similar rate for 1997/98, and an increase from the recent low of 205.6 in 1998/99.

*Extraction and utility supply*

1.41 In 1999/2000, a substantial reduction (12%) in the number of non-fatal major injuries to employees, from 521 to 460, is expected in extraction and utility supply. This maintains the consecutive reduction in non-fatal injuries since the introduction of RIDDOR 95.

1.42 The non-fatal major injury rate for employees in this sector reflects the pattern of injuries. The estimated final rate of 224.5 per 100 000 employees for 1999/2000 represents a further substantial drop on 1998/99, again a consecutive decrease since the introduction of RIDDOR 95.

### *Manufacturing*

1.43 Estimated final figures for 1999/2000 indicate the number of reported non-fatal major injuries to employees in manufacturing is expected to fall slightly by 160 (2%) to 7977, the lowest since the introduction of RIDDOR 95. In 1998/99, 8137 injuries were reported, compared with 8770 in the previous year.

1.44 The injury rate does not follow a similar pattern to the changes in the number of injuries, with an estimated final rate of 204.0 per 100 000 in 1999/2000, compared with 201.5 in 1998/99.

### *Construction*

1.45 The number of non-fatal major injuries to employees in the construction industry reported to HSE and local authorities in 1999/2000 is expected increase slightly to 4337, from 4289 in 1998/99. This continues the consecutive yearly increases since the introduction of RIDDOR 95.

1.46 Although the number of injuries in construction has risen in recent years, due partly to an increase in the number employed in the sector over the same period, the injury rate has remained fairly constant, with a modest reduction for 1999/2000, compared with 1998/99. The estimated final 1999/2000 rate of 391.1 injuries per 100 000 compares with 402.7 in 1998/99, 382.3 in 1997/98, and 403.0 in 1996/97.

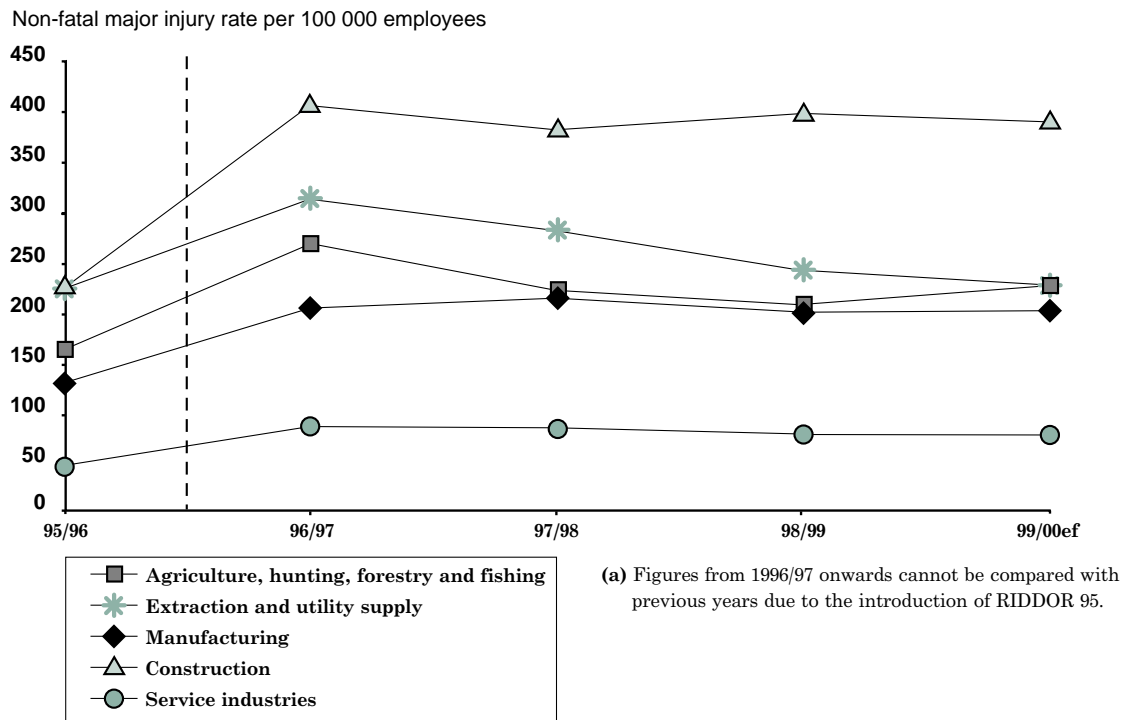
### *Service industries*

1.47 Numbers of non-fatal major injuries to employees have not fluctuated much since the introduction of RIDDOR 95. A similar number of non-fatal major injuries is expected in 1999/2000 compared with the previous year: the estimated final number of injuries is 14 862, and 14 816 in 1998/99.

1.48 The number employed in the service sector continues to rise by approximately 2% per year. Despite an increase in the number of injuries in 1997/98, the injury rate fell from 90.8 per 100 000 in 1996/97 to 88.4 the following year. Although the number of injuries for 1999/2000 is estimated to be similar to 1998/99, the non-fatal injury rate is expected to fall slightly, from 83.7 to 82.4.

**FIGURE 1.7**

**Non-fatal major injury rates for employees by industrial sector 1995/96 - 1999/2000ef (a)**



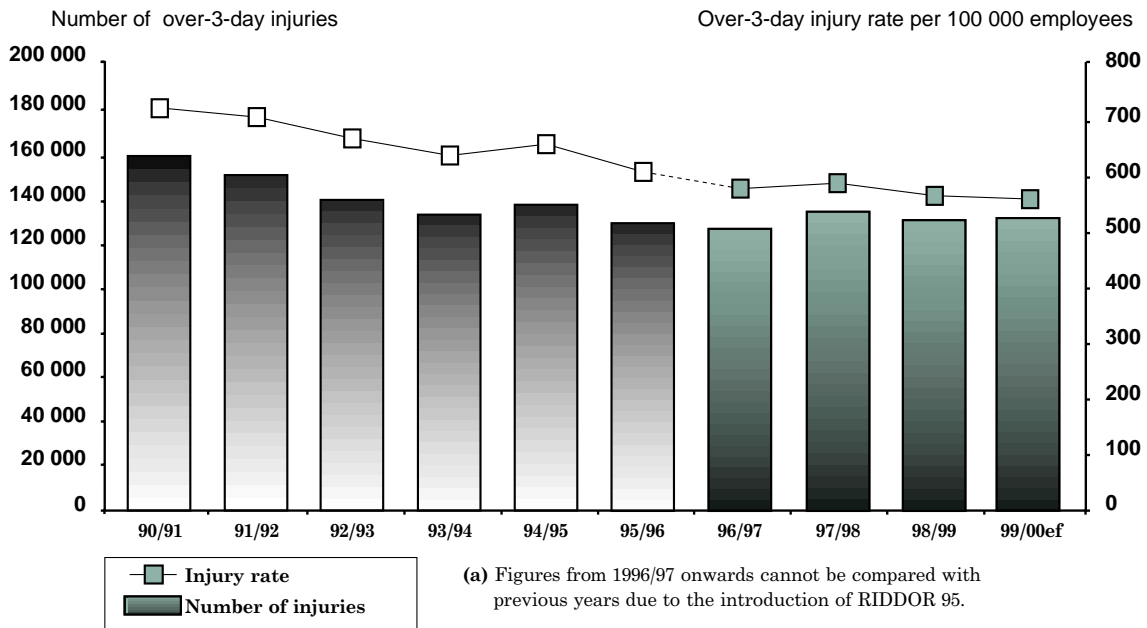
### Over-3-day injuries

1.49 Over-3-day injuries resulting from acts of violence became reportable under RIDDOR 95. This led to an increase in the number of over-3-day injuries reported from 1996/97 onwards. Conversely, the expansion of the major injury definition led to a reduction in the number of over-3-day injuries reported. This was because some injuries which would previously have been reportable as over-3-day became major injuries after 1996/97. The effect of RIDDOR 95 on the numbers of non-fatal major injuries can be clearly seen from 1996/97 onwards. However, with over-3-day injuries the effect is disguised by the contrasting changes to categorisations involving major injuries and injuries resulting from violence. As a result, figures from 1996/97 onwards cannot be compared directly with previous years'.

1.50 In 1999/2000 (estimated final figures), the number of over-3-day injuries to employees reported to HSE and local authorities is expected to be 132 307, almost identical to the figure of 132 295 in 1998/99. This represents a reduction of 2% compared with the 134 789 injuries reported in 1997/98, but is still substantially more than the 127 286 reported in 1996/97, the first year of reporting under RIDDOR 95.

1.51 In 1999/2000, the over-3-day injury rate is expected to be 561.5 per 100 000, which represents a reduction for the second consecutive year. In 1998/99 the rate was 567.3, and 589.2 in 1997/98.

**FIGURE 1.8**  
**Over-3-day injuries to employees 1990/91 - 1999/2000ef (a)**



***Over-3-day injuries by industrial sector***

*Agriculture*

1.52 Estimated final figures for 1999/2000 indicate that there was a 17% increase in the number of reported over-3-day injuries to employees in agriculture: the number of injuries is expected to be 1469 (the highest since the introduction of RIDDOR 95), and compares with 1258 in 1998/99.

1.53 Reflecting the increase in the number of injuries, the rate per 100 000 has also shown a substantial increase. The estimated final rate for 1999/2000 is 489.2, compared with the previous three-year low of 427.5 in 1998/99.

*Extraction and utility supply*

1.54 In 1999/2000, the number of reported over-3-day injuries to employees in the extraction and utility supply industry is expected to fall by 16% to 2390, the lowest since the introduction of RIDDOR 95. In 1998/99, 2845 over-3-day injuries were reported. This was 11% less than the 3188 injuries reported in 1997/98.

1.55 The over-3-day injury rates for the extractive industries mirror the changes in the number of injuries. The estimated final injury rate for 1999/2000 is 1166.3 per 100 000 compared with 1347.9 in 1998/99 and 1482.6 in 1997/98.

*Manufacturing*

1.56 The estimated final number of over-3-day injuries to employees in manufacturing for

1999/2000 (39 161) is expected to be almost identical to the numbers for 1998/99 (39 168). In 1997/98 there were 41 648 injuries, an increase of 4% compared with 40 005 in 1996/97.

1.57 The estimated final injury rate for 1999/2000 is 1001.6 per 100 000, a 3% rise on the 1998/99 rate of 969.8, and similar to the 1996/97 rate of 1002.8.

*Construction*

1.58 In construction, a substantial rise (9%) in the number of reported over-3-day injuries to employees in 1999/2000 is expected, with an estimated final figure of 10 013, compared with 9195 in 1998/99. This is the highest figure since the introduction of RIDDOR 95.

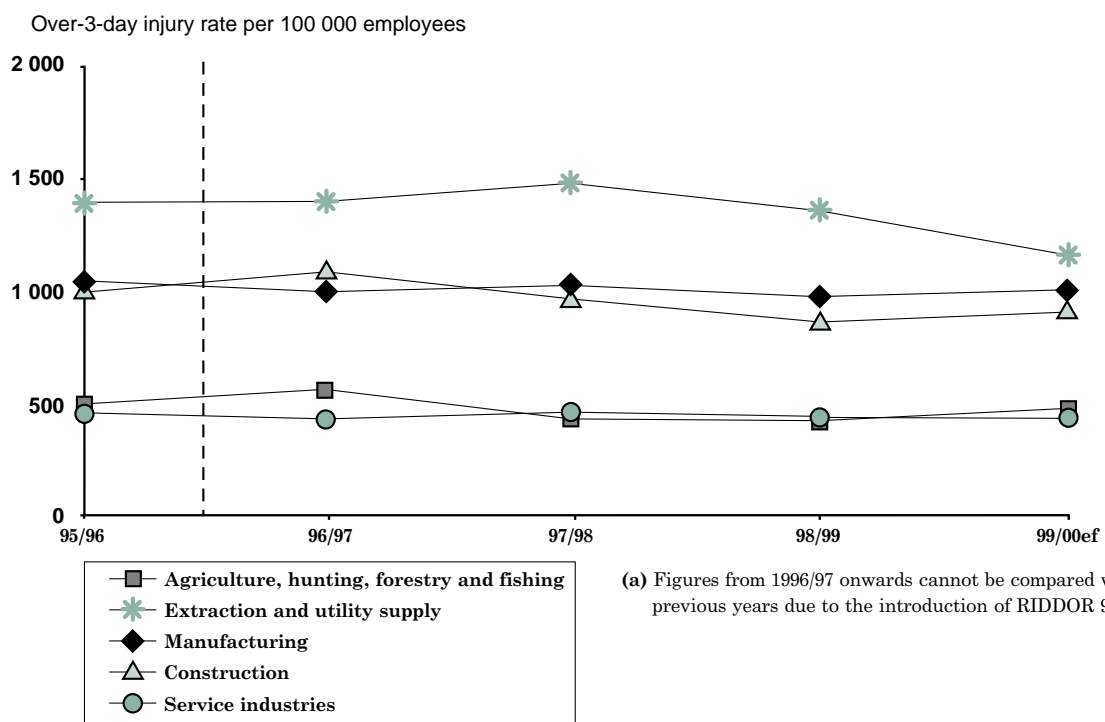
1.59 In 1999/2000 the injury rate is expected to be 902.9 per 100 000, compared with 863.4 in 1998/99. Although there was a 9% rise in the number of injuries in 1999/2000, the rate was only 5% higher than 1998/99 (902.9, compared with 863.4).

*Service industries*

1.60 In 1999/2000 the estimated final number of over-3-day injuries to employees is expected to fall slightly compared with the previous year to 79 274. In 1998/99, 79 829 injuries were reported, an increase of 966 compared with the 78 863 injuries reported in 1997/98.

1.61 In 1999/2000, the over-3-day injury rate is expected to fall to 439.4 per 100 000, compared with the rate of 450.8 for 1998/99, and represents the lowest rate since the introduction of RIDDOR 95.

**FIGURE 1.9**  
Over-3-day injury rates for employees by industrial sector 1995/96 - 1999/2000ef (a)



(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

## Injuries to employees by kind of accident

1.62 Statistics for injuries reported in 1999/2000 by kind of accident are based on provisional rather than estimated final figures.

### *Fatal injuries*

1.63 Of the 161 fatal injuries to employees in 1999/2000 (provisional figures):

- 24% were caused by falls from a height;
- 18% resulted from employees being struck by a moving vehicle; and
- 18% resulted from employees being struck by a moving or falling object.

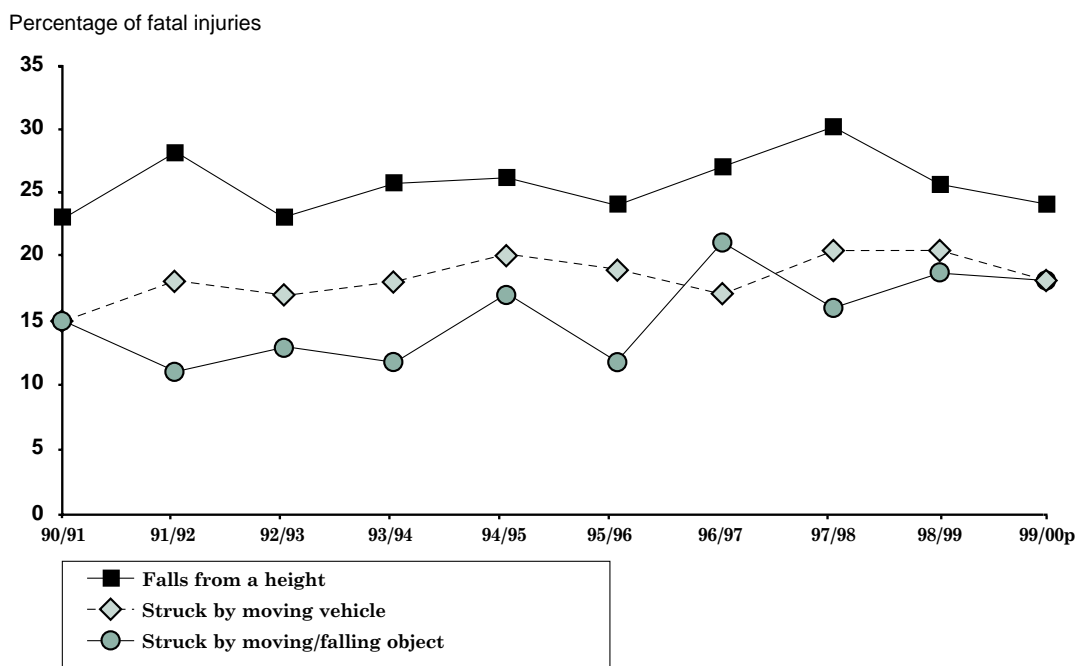
1.64 These three kinds of accident were also the most common causes of death to employees in 1998/99, accounting for 26%, 20% and 19% of the total number of fatalities.

1.65 Falls from a height continue to be the most common cause of fatal injuries to employees. Of these, falls from a height greater than two metres is by far the largest category. This has been the case since the introduction of RIDDOR 85.

1.66 Being struck by a moving vehicle was the second most common kind of accident resulting in employee fatalities in 1997/98, 1998/99 and 1999/2000. The proportions of fatalities due to this kind of accident were slightly less in 1999/2000 than in the previous two years.

1.67 There were no reported fatal injuries to employees caused by acts of physical violence at work in 1999/2000 (the same as 1997/98), but there was one such injury in 1998/99.

**FIGURE 1.10**  
**Fatal injuries to employees by kind of accident 1990/91 - 1999/2000p**



*Kind of accident by industrial sector*

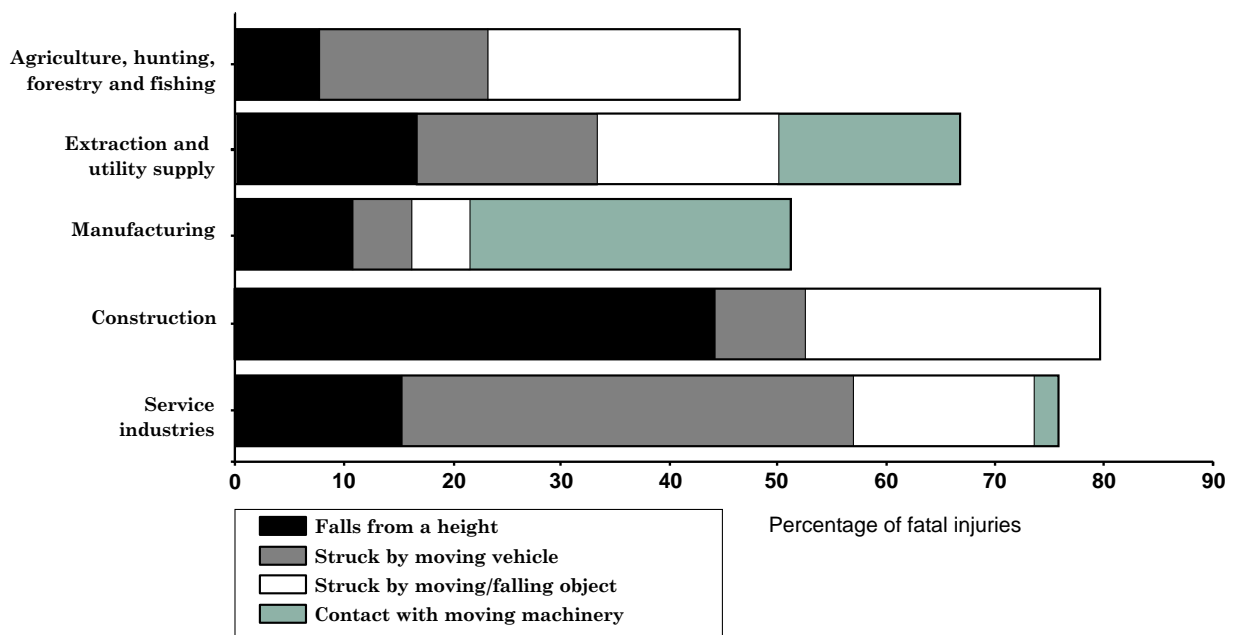
1.68 The proportion of injuries resulting from falls from a height continues to be substantially higher in construction than in any other industry sector. Based on provisional figures, such injuries accounted for 44% of fatal injuries to employees in construction in 1999/2000, compared with 47% in 1998/99 and 50% in the previous two years. Falls were also common in the service sector, accounting for 15% of deaths, the same as the previous year. Such deaths in manufacturing decreased to 4 in 1999/2000, compared with 13 in 1998/99.

1.69 Being struck by a moving vehicle continued to be the most common cause of fatal injury to employees in the service sector. Based on provisional figures for 1999/2000, such accidents accounted for 41% of deaths in the sector, a slight reduction from 44% the previous year. In construction, this kind of accident has decreased to 8% in 1999/2000, compared with 17% the previous year. Similarly, in manufacturing, the proportion decreased to 5% from 8%.

1.70 Injuries caused by a moving or falling object was the second most common cause of fatality in the construction sector, with provisional figures showing 27% in 1999/2000, compared with 15% in 1998/99. The proportion of this type of fatality also rose in the service sector, to 15% from 13%.

1.71 Provisional figures in 1999/2000 show that in manufacturing, 30% of fatal injuries were caused by contact with moving machinery, compared to 21% in 1998/99.

**FIGURE 1.11**  
**Fatal injuries to employees by industrial sector and kind of accident 1999/2000p**



### Non-fatal major injuries

1.72 Based on provisional figures, there were four kinds of accident that accounted for 10% or more of all non-fatal major injuries to employees in 1999/2000. Of the 27 563 non-fatal major injuries to employees reported to HSE and local authorities:

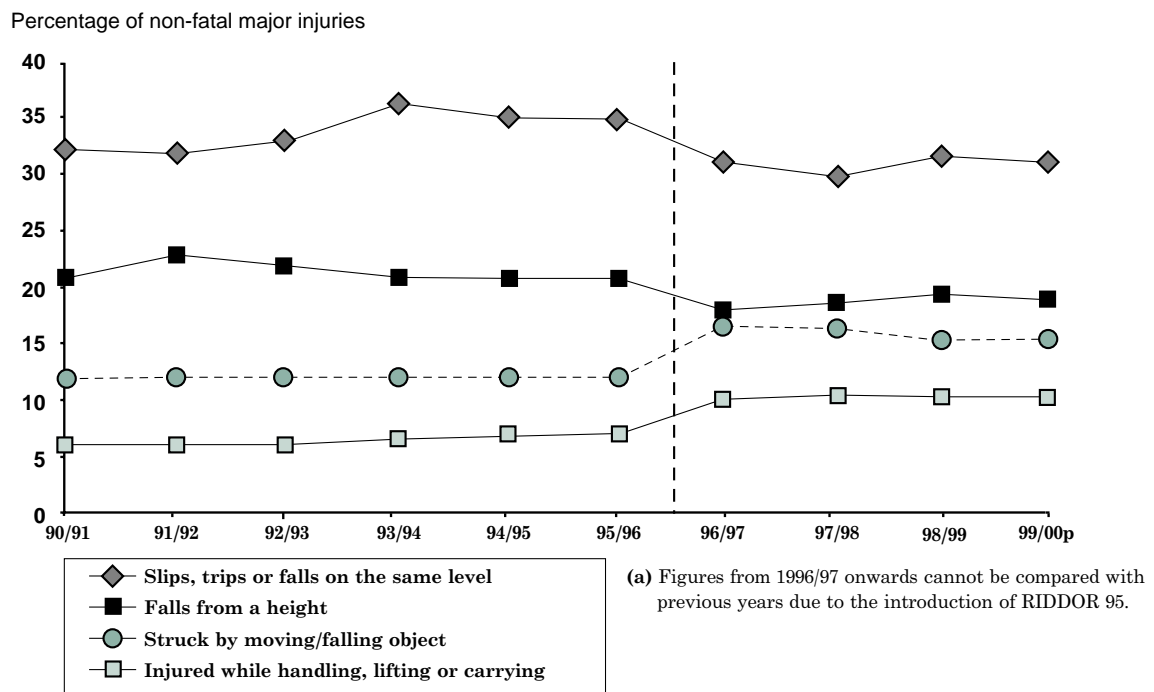
- 31% were as a result of slips, trips and falls on the same level;
- 19% were caused by falls from a height;
- 15% resulted from employees being struck by a moving or falling object ; and
- 10% resulted from employees being injured while handling, lifting or carrying.

1.73 These kinds of accident, and their proportions, are very similar to the previous year, and have been the most common causes of non-fatal major injury to employees since the introduction of RIDDOR 85. Direct comparison with figures from 1996/97 onwards cannot be made due to the introduction of RIDDOR 95.

1.74 The 1999/2000 provisional figure of 686 reported non-fatal major injuries to employees resulting from acts of violence at work is the highest since such injuries became reportable under RIDDOR 95 (2% of all non-fatal major injuries). This contrasts with the lowest figure of 633 in 1998/99.

**FIGURE 1.12**

**Non-fatal major injuries to employees by kind of accident 1990/91 - 1999/2000p (a)**



*Kind of accident by industrial sector*

1.75 Based on provisional figures in 1999/2000, slips, trips or falls on the same level continued to be the most common kind of accident resulting in non-fatal major injury to employees in the service sector, extraction and utility supply, and manufacturing. Of all the non-fatal major injuries to employees in these sectors such accidents accounted for 40%, 27% and 24% respectively, and similar to 1998/99 (40%, 26% and 24%).

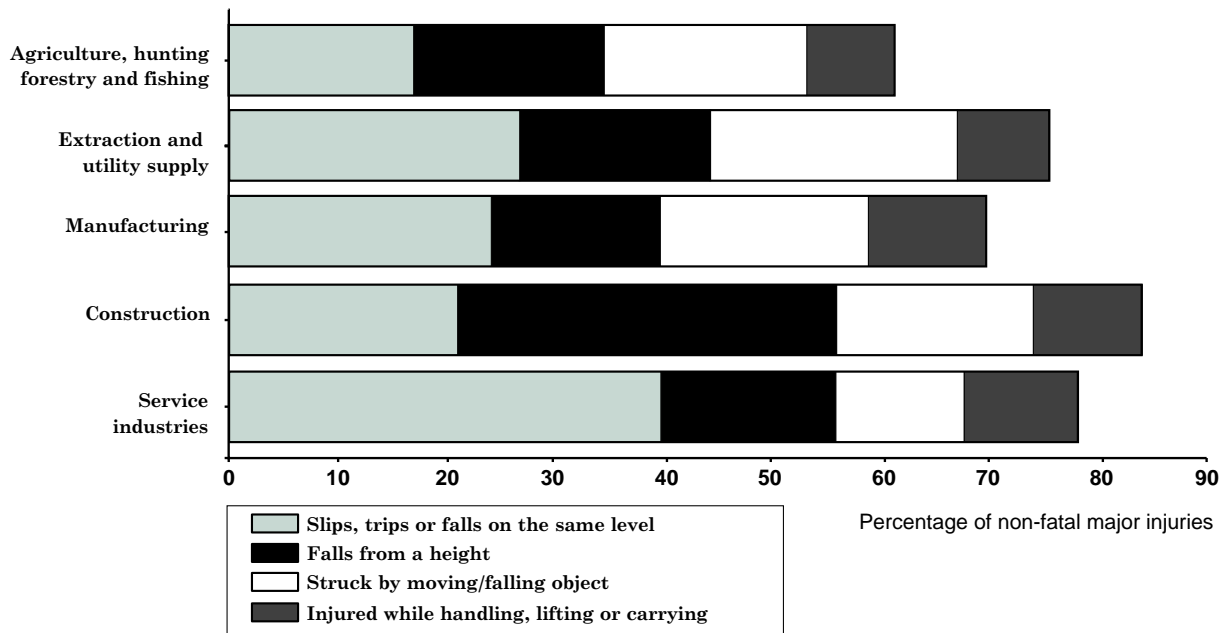
1.76 In the construction sector, slips, trips and falls on the same level were the second most common cause of non-fatal major injury, accounting for 21% of injuries, similar to the previous year. In extraction and utility supply, and manufacturing, being struck by a moving or falling object was the second most common cause of non-fatal major injury.

1.77 Falls from a height were the most common kind of accident in construction, accounting for 36% of injuries to employees for 1999/2000 (provisional figures), and a similar proportion to the previous year. Falls from a height were the second most common kind of accident in the service sector (accounting for 16% of injuries), and agriculture (18%).

1.78 Provisional figures for 1999/2000 relating to major injuries to employees caused by acts of violence at work indicate all sectors, except service industries, reporting similar or reduced figures compared with 1998/99. For the service sector, actual numbers are 659 for 1999/2000 and 579 the previous year. When comparing this sector to all industries, this represents an increase to 96% from 91%.

**FIGURE 1.13**

**Non-fatal major injuries to employees by industrial sector and kind of accident 1999/2000**



### Over-3-day injuries

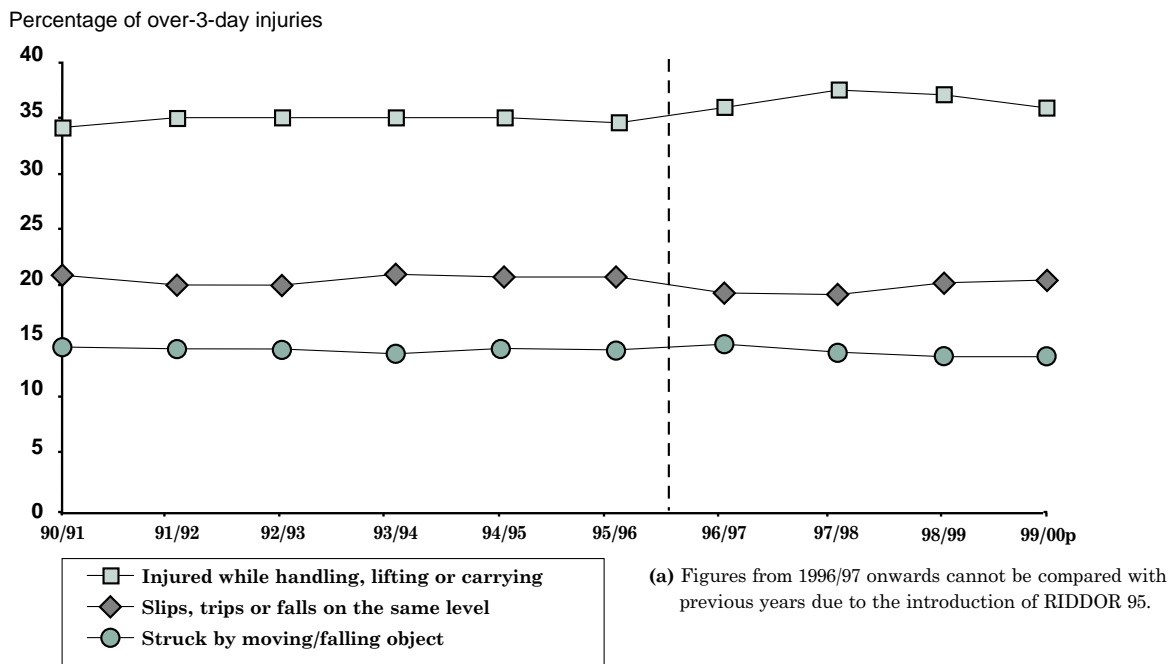
1.79 Based on provisional figures, there were three kinds of accident that accounted for 10% or more of all over-3-day injuries to employees in 1999/2000. Of the 128 889 over-3-day injuries to employees reported to HSE and local authorities:

- 36% were injuries sustained while handling, lifting or carrying;
- 20% were caused by slips, trips or falls on the same level; and
- 14% resulted from employees being struck by a moving or falling object.

1.80 These three kinds of accident have been the most common causes of over-3-day injury to employees since the introduction of RIDDOR 85. Of the 132 295 injuries reported in 1998/99 they accounted for 37%, 20%, and 14% respectively. Direct comparison with figures for years before 1996/97 cannot be made due to the introduction of RIDDOR 95.

1.81 Provisional figures for 1999/2000 indicate there were 5034 reported over-3-day injuries to employees resulting from acts of violence at work, an increase of 9% compared with 4621 for 1998/99. This represents the highest figure since such injuries were reportable under RIDDOR 95.

**FIGURE 1.14**  
Over-3-day injuries to employees by kind of accident 1990/91 - 1999/2000p (a)



*Kind of accident by industrial sector*

1.82 Based on provisional figures, injuries sustained while handling, lifting, or carrying were the most common kind of over-3-day injuries to employees in all five industrial sectors in 1999/2000. This was also the case in the previous three years.

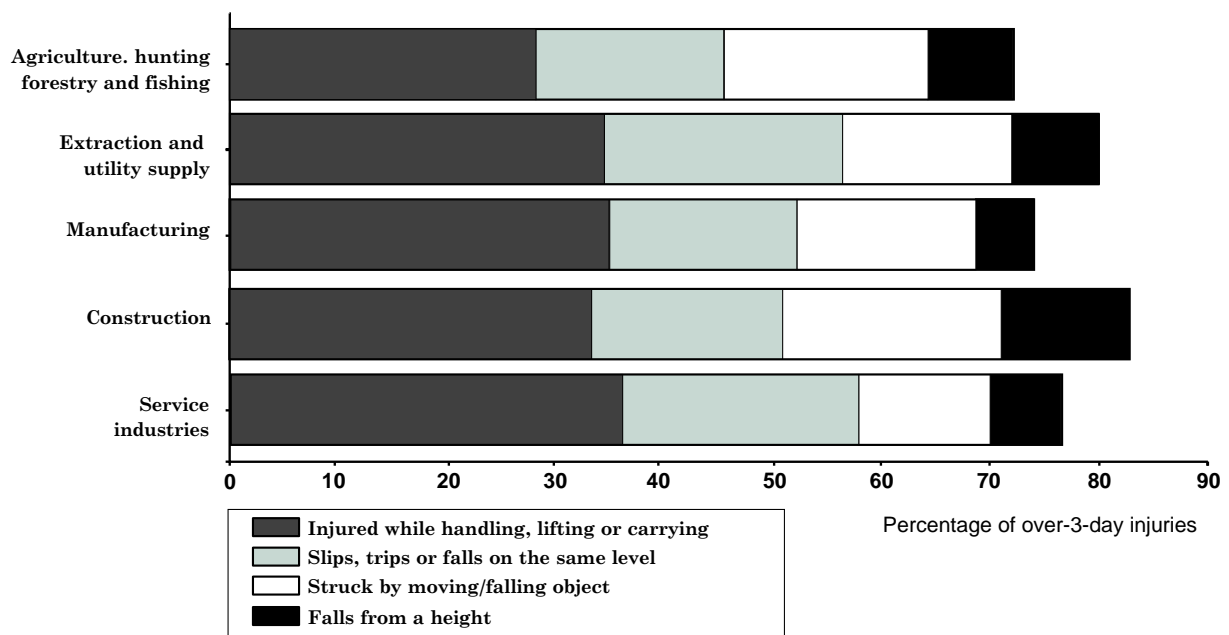
1.83 Slips, trips and falls on the same level was the second most common kind of over-3-day injury to employees in the extraction and utility supply industry, manufacturing, and the service sector in 1999/2000. Such accidents accounted for 24%, 17% and 22% of injuries respectively in these sectors. Such accidents were the third most common cause of injury in the remaining sectors of agriculture and construction.

1.84 The proportion of injuries resulting from employees being struck by a moving or falling object was fairly constant across agriculture, extraction and utility supply, manufacturing, and construction; the average for these four sectors was 17%, the same as 1998/99. However, the proportion of injuries resulting from such accidents was lower in the service sector (11%).

1.85 The proportion of over-3-day injuries to employees resulting from falls from a height was highest in construction, represented by 14% of such injuries in the sector, the same as 1998/99.

1.86 Of the over-3-day injuries resulting from acts of violence at work in 1999/2000, 4905 (97%) were reported in the service sector, compared with 4469 (96%) in 1998/99.

**FIGURE 1.15**  
Over-3-day injuries to employees by industrial sector and kind of accident 1999/2000p



## Type of injury

1.87 Statistics from 1996/97 relate to injuries reported to all enforcing authorities. Statistics for earlier years exclude injury reports made to the Railway, Mines and Explosives Inspectorates, and also injuries reported under offshore installations safety legislation.

1.88 Statistics for injuries reported in 1999/2000 by type of injury are based on provisional rather than estimated final figures.

### Fatal injuries

1.89 Based on the provisional figure of 161 fatal injuries to employees in 1999/2000 the most common were:

- multiple injuries (accounting for 27% of fatal injuries);
- fractures (16%); and
- poisoning, gassing and asphyxiation (10%).

1.90 The three most common types of fatal injury in 1998/99 were:

- multiple injuries, (accounting for 26%);
- fractures (18%); and
- concussion and internal injuries (14%).

1.91 While most types of injury that result in employee fatalities remain fairly consistent in nature, those of concussion and internal injuries have fluctuated considerably. Provisional figures for 1999/2000 show that the proportion of fatalities resulting from this type of injury fell to 7%, from 14% in 1998/99. The proportion of fatalities resulting from poisoning, gassing and asphyxiation increased to 10% in 1999/2000, from 3% the previous year.

1.92 For 1999/2000, the following categories represent the lowest provisional number of fatalities since the introduction of RIDDOR 95: fractures, concussion and internal injuries, lacerations and open wounds, contusions, burns, injuries of more than one type, and injuries not classified elsewhere.

**Table 1.9** Type of injury to employees as a proportion of all fatal injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00p
Multiple injuries	12%	16%	14%	16%	13%	15%	27%	25%	26%	27%
Concussion & internal injuries	5%	5%	4%	5%	9%	7%	14%	19%	14%	7%
Fractures	15%	12%	11%	9%	15%	11%	13%	15%	18%	16%
<b>Total injuries</b>	<b>298</b>	<b>255</b>	<b>253</b>	<b>228</b>	<b>179</b>	<b>193</b>	<b>207</b>	<b>212</b>	<b>188</b>	<b>161</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also excludes injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

### ***Non-fatal major injuries***

1.93 Statistics for non-fatal injuries by type of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.94 Based on the provisional figure of 27 563 non-fatal major injuries to employees in 1999/2000, the three most common were:

- fractures (accounting for 73% of non-fatal major injuries);
- lacerations or open wounds (5%); and
- dislocations (4%).

1.95 Proportions for types of injuries in 1999/2000 were very similar to those in the previous three years. Of the 28 368 reported non-fatal major injuries to employees in 1998/99, the three most common types of injury were fractures (74%), dislocations (5%), and lacerations or open wounds (4%).

**Table 1.10** Type of injury to employees as a proportion of all non-fatal major injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Fractures	75%	75%	74%	76%	74%	76%	72%	72%	74%	73%
Lacerations or open wounds	3%	3%	3%	4%	4%	3%	5%	5%	4%	5%
Amputations	7%	7%	6%	6%	6%	6%	4%	5%	4%	4%
<b>Total injuries</b>	<b>18 925</b>	<b>16 739</b>	<b>16 230</b>	<b>16 137</b>	<b>16 604</b>	<b>16 136</b>	<b>27 964</b>	<b>29 187</b>	<b>28 368</b>	<b>27 563</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also excludes injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures for 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### ***Over-3-day injuries***

1.96 Statistics for non-fatal injuries by type of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.97 Based on the provisional figure of 128 889 over-3-day injuries to employees in 1999/2000, the four most common were:

- sprains and strains (accounting for 46% of over-3-day injuries);
- contusions (20%);
- lacerations or open wounds (11%); and
- superficial injuries (8%).

1.98 Although the total number of over-3-day injuries has fluctuated over the last four years since the introduction of RIDDOR 95 (as Table 1.11 shows), proportions of injury types have been very similar.

**Table 1.11** Type of injury to employees as a proportion of all over-3-day injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Sprains and strains	39%	40%	41%	41%	42%	42%	45%	46%	46%	46%
Contusions	19%	18%	18%	18%	18%	20%	20%	20%	20%	20%
Lacerations or open wounds	8%	7%	7%	7%	7%	7%	11%	11%	11%	11%
Superficial injuries	11%	11%	12%	11%	11%	11%	9%	9%	8%	8%
<b>Total injuries</b>	<b>152 725</b>	<b>145 461</b>	<b>135 422</b>	<b>130 101</b>	<b>135 205</b>	<b>126 300</b>	<b>127 286</b>	<b>134 789</b>	<b>132 295</b>	<b>128 889</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also excludes injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Site of injury to employees

1.99 In this section, the area of the body to which the injury was sustained is referred to as the 'site of injury'.

1.100 Statistics from 1996/97 relate to injuries reported to all enforcing authorities. Statistics for earlier years exclude injury reports made to the Railway, Mines and Explosives Inspectorates, and also injuries reported under offshore installations safety legislation.

1.101 Statistics for injuries reported in 1999/2000 by site of injury are based on provisional rather than estimated final figures.

### Fatal injuries

1.102 Based on provisional figures in 1999/2000:

- Head injuries accounted for 25% of the total number of deaths to employees, compared with 21% in 1998/99. The head has been one of the most common sites of fatal injury ever since the introduction of RIDDOR 85. Several body site injuries accounted for 24% of fatalities in 1999/2000 compared with 27% in 1998/99.
- Injuries to the torso accounted for 12% of the total number of deaths compared with proportions of 14% and 19% respectively in the previous two years. Of these injuries in 1999/2000, 68% were injuries to the trunk compared with 81% in 1998/99.
- In contrast to the increase in the proportion of deaths resulting from injuries to general sites and head locations, injuries to the upper and lower limbs are together expected to account for around 2% of fatalities, compared with a proportion of 9% in 1998/99.

**Table 1.12** Site of injuries to employees as a proportion of all fatal injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00p
Head locations	21%	24%	24%	19%	27%	22%	25%	24%	21%	25%
Torso locations	13%	13%	17%	12%	19%	12%	20%	19%	14%	12%
<b>Total injuries</b>	<b>298</b>	<b>255</b>	<b>253</b>	<b>228</b>	<b>179</b>	<b>193</b>	<b>207</b>	<b>212</b>	<b>188</b>	<b>161</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also excludes injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

### **Non-fatal major injuries**

1.103 Statistics for non-fatal injuries by site of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.104 Based on provisional figures for 1999/2000, the proportions of non-fatal major injuries to employees affecting the four main body sites were similar to the previous three years:

- Upper limb locations continued to be most common site of injuries, accounting for 47% of the total number. Of these injuries in 1999/2000, 31% were injuries to the wrist, the same as the previous year.
- Lower limb locations were the affected site in 28% of injuries. In 1999/2000, 36% of these injuries were to the foot and 32% to the ankle, which is similar to the previous year.
- Torso and head locations were the affected site in 10% and 7% of injuries respectively. Injuries to the torso for 1999/2000 and 1998/99 were 70% and 68% to the trunk respectively, while 34% and 38% of non-fatal major head injuries were to the eye.

**Table 1.13** Site of injuries to employees as a proportion of all non-fatal major injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Upper limb locations	52%	54%	54%	55%	54%	53%	46%	46%	46%	47%
Lower limb locations	26%	26%	26%	27%	27%	27%	29%	29%	29%	28%
Torso locations	7%	7%	7%	6%	6%	7%	11%	10%	10%	10%
Head locations	8%	7%	7%	6%	7%	7%	8%	8%	8%	7%
<b>Total injuries</b>	<b>18 925</b>	<b>16 739</b>	<b>16 230</b>	<b>16 137</b>	<b>16 604</b>	<b>16 136</b>	<b>27 964</b>	<b>29 187</b>	<b>28 368</b>	<b>27 563</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Over-3-day injuries

1.105 Statistics for non-fatal injuries by site of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.106 Based on provisional figures for 1999/2000, the proportions of over-3-day injuries to employees affecting the four main body sites were similar to the previous three years:

- Both upper limb and torso locations continued to be most common sites of injury, accounting for 31% and 30% respectively of the total number. Of the injuries to the upper limb in 1999/2000, 43% were injuries to one or more fingers, the same proportion as in the previous two years. Of the injuries to the torso, 80% were to the back in 1999/2000, the same as in the previous two years.
- Lower limb locations were the affected site in 22% of injuries, 30% were to the ankle compared with 29% in 1998/99.
- Head locations were the affected site in 7% of injuries, of which 28% were to the eye in both 1999/2000 and 1998/99.

**Table 1.14** Site of injuries to employees as a proportion of all over-3-day injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Upper limb locations	33%	32%	32%	31%	31%	32%	31%	31%	31%	31%
Torso locations	29%	29%	30%	30%	31%	30%	31%	31%	31%	30%
Lower limb locations	26%	25%	25%	25%	24%	24%	23%	23%	23%	22%
Head locations	6%	6%	6%	6%	6%	6%	7%	7%	7%	7%
<b>Total injuries</b>	<b>152 725</b>	<b>145 461</b>	<b>135 422</b>	<b>130 101</b>	<b>135 205</b>	<b>126 300</b>	<b>127 286</b>	<b>134 789</b>	<b>132 295</b>	<b>128 889</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Age and sex of injured employees

#### Fatal injuries

1.107 Based on provisional figures in 1999/2000:

- All of the 161 fatally injured employees were male, and this was the first time in recent years that no females were fatally injured. During 1998/99, 184 out of 188 fatalities were males (98%), and 208 out of 212 (98%) in 1997/98. The lowest proportion of fatally injured males compared to females was 95% during 1995/96, when 184 male and 9 female fatalities were recorded. The significantly higher proportion of fatally injured males compared with females reflects the fact that males are more likely to work in higher risk occupations.

- 40% of all males who were fatally injured were in the age range 45 to 59. This age range consists of 21 fatalities each for the ages between 45 and 49, between 50 and 54, and between 55 and 59. A further 10% were above this age range, that is aged 60 and over. 21% of fatal injuries to males occurred in the age range 35 to 44, 18% in the range 25 to 34, and 12% in the range 16 to 24.
- When comparing 1999/2000 (provisional figures) with 1998/99, substantial reductions in fatal injuries have taken place in the age ranges 25 to 34, 35 to 44, and 60 to 64.

**Table 1.15** Fatal injuries to employees by age of injured person 1999/2000p as reported to all enforcing authorities

	<16	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	Unknown	Total
Males	0	6	12	17	11	14	18	21	21	21	9	6	5	161
Females	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>6</b>	<b>12</b>	<b>17</b>	<b>11</b>	<b>14</b>	<b>18</b>	<b>21</b>	<b>21</b>	<b>21</b>	<b>9</b>	<b>6</b>	<b>5</b>	<b>161</b>

### Non-fatal major injuries

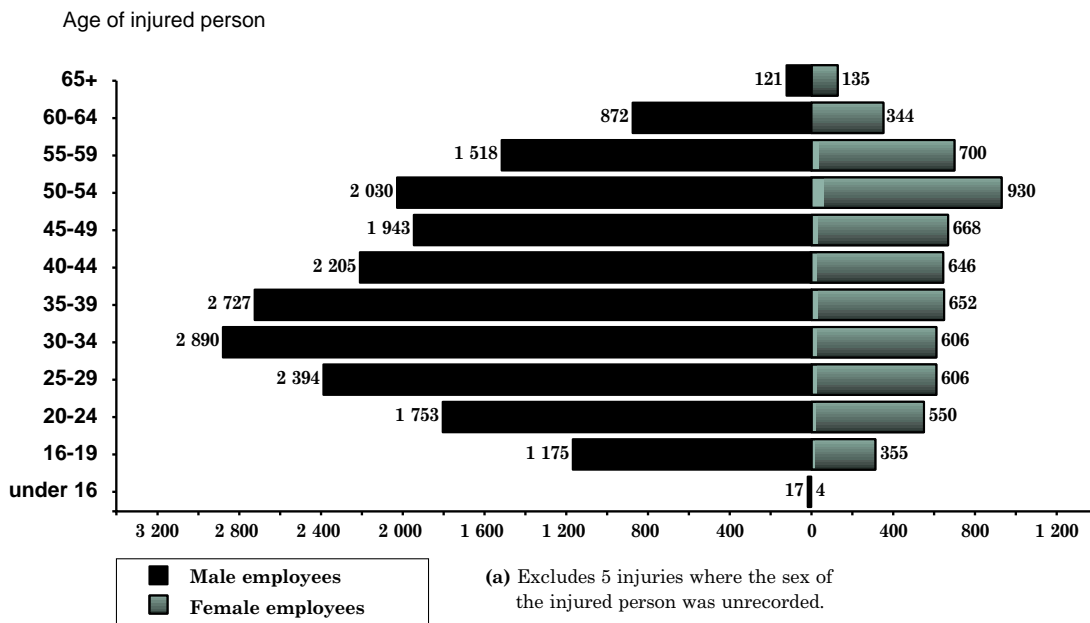
1.108 Figure 1.16 shows the distribution of non-fatal major injuries to male and female employees by age of injured person in 1999/2000. Based on provisional figures:

- 76% of all non-fatal major injuries to employees were to males, a similar figure to the previous two years.
- The most common age of male employees who sustained non-fatal major injuries was 30 to 34, and the most common age of female employees who sustained non-fatal major injuries was 50 to 54.

1.109 These results continue the pattern seen over the last few years, suggesting that a greater proportion of males sustain non-fatal major injuries at a younger age than females.

**FIGURE 1.16**

**Non-fatal major injuries to male and female employees by age of injured person 1999/2000p (a)**



### Over-3-day injuries

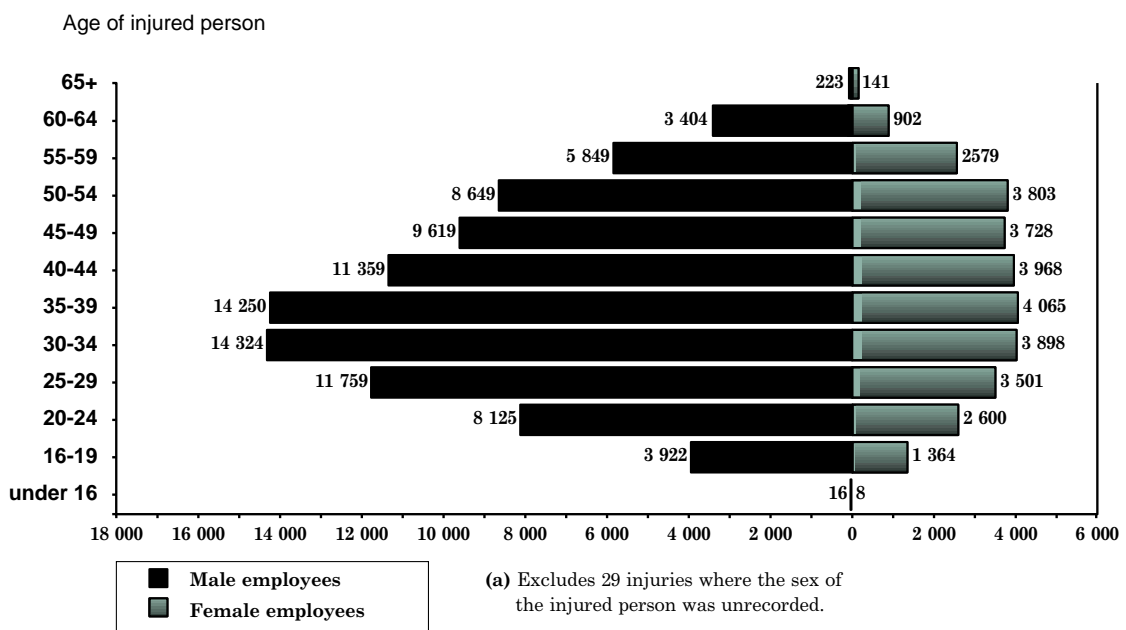
1.110 Figure 1.17 shows the distribution of over-3-day injuries to male and female employees by age of injured person in 1999/2000. Based on provisional figures:

- 75% of all over-3-day injuries to employees were to males, a similar proportion to the previous year.
- The most common age of male employees who sustained over-3-day injuries was 30 to 34.
- Of all the females who sustained over-3-day injuries, 64% were aged between 30 and 54 with similar numbers in each 5-year age group within that range.

1.111 These results continue the pattern seen over the last few years, suggesting that a greater proportion of males sustain over-3-day injuries at a younger age than females.

**FIGURE 1.17**

**Over-3-day injuries to male and female employees by age of injured person 1999/2000p (a)**



## FATAL INJURIES TO EMPLOYEES IN ENGLAND, SCOTLAND AND WALES

1.112 This section provides information on fatal injuries to employees in England, Scotland and Wales for 1995/96 onwards. Statistics are based on provisional rather than estimated final figures and exclude reports made to HSE's Offshore Safety Division.

1.113 Based on provisional figures, the number of fatal injuries to employees decreased in all three countries in 1999/2000 for the second consecutive year, and each country recorded the lowest number of fatalities since 1995/96. However, trends in the number of fatal injuries and the fatal injury rates for Scotland and Wales must be treated with caution because of the relatively small number of fatalities in each country each year.

1.114 In 1999/2000:

- There were 127 fatal injuries to employees in England, a decrease of 14% compared with 1998/99. The fatal injury rate also reduced, to 0.6 per 100 000 employees.
- There were 23 fatalities in Scotland, 3 less than the previous year. The fatal injury rate was 1.1 per 100 000 employees compared with 1.3 in 1998/99.
- There were 9 fatalities in Wales, compared with 14 in 1998/99 and 17 in 1997/98. The fatal injury rate fell to 0.9 per 100 000 from 1.4 in 1998/99.

**Table 1.16** Fatal injuries to employees in England, Scotland and Wales as reported to all enforcing authorities (a), 1995/96 - 1999/2000p

	Number of injuries			Injury rate (b)		
	England	Scotland	Wales	England	Scotland	Wales
1995/96	166	28	10	0.9	1.4	1.1
1996/97	155	28	22	0.8	1.4	2.3
1997/98	164	28	17	0.8	1.4	1.7
1998/99	147	26	14	0.7	1.3	1.4
1999/2000p	127	23	9	0.6	1.1	0.9

(a) Data exclude 13 fatal injuries reported to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf between 1995/96 - 1999/2000.

(b) Per 100 000 employees.

1.115 Although the majority of fatalities occur in England, since it has by far the largest working population, fatal injury rates for employees from 1995/96 onwards were higher for Scotland and Wales. With the exception of 1999/2000 and 1995/96, rates of fatality for Wales were higher than those for Scotland. The average fatal injury rates for England, Scotland and Wales pooled over the five-year period from 1995/96 were 0.8, 1.3 and 1.5 per 100 000 respectively.

1.116 There may be a number of factors which contributed to higher rates of fatality in Scotland and Wales. For example, the number of people employed in each main industry sector was different in each country. The proportion of people employed in the service industry was higher in England than in Scotland and Wales over the five-year period from 1995/96. The proportion of people employed in agriculture was lowest in England. The proportion of people employed in construction was highest in Wales, and extraction and utility supply was highest in Scotland. Since the risk of injury is generally much higher in agriculture, extraction and utility supply industry, and construction, differing employment structures will affect the overall injury rates.

1.117 Table 1.17 shows expected fatality numbers and rates for Scotland and Wales, based on the risk of injury in each industry sector in England, and allowing for the differing employment structure within the five main industry sectors in Scotland and Wales.

**Table 1.17** Expected numbers and rates of fatal injury to employees in Scotland and Wales based on the risk of fatal injury in England, 1995/96 - 1999/2000p

	Scotland		Wales	
	Expected number of injuries	Expected injury rate (a)	Expected number of injuries	Expected injury rate (a)
1995/96	23	1.2	10	1.0
1996/97	20	1.0	9	0.9
1997/98	19	1.0	9	1.0
1998/99	17	0.8	8	0.8
1999/2000p	14	0.7	8	0.7

(a) Per 100 000 employees.

1.118 The expected fatal injury rates for Scotland and Wales were higher than the actual fatal injury rate in England. So the differing employment structures indicate that the overall injury rate would have been higher in Scotland and Wales if the same risk applied to each industry sector in all three countries. However, the actual rates for Scotland and Wales were still higher than the expected rates. Actual rates for Wales were closer to the expected rates than those for Scotland for 1999/2000 and 1995/96. For the other periods, Scotland's actual rates compared to expected rates were closer than Wales.

#### **Fatal injuries by industrial sector**

1.119 Injury statistics for England, Scotland and Wales broken down by industry sector are difficult to interpret due to the relatively small numbers of injuries involved at this level of disaggregation. Apparent trends need to be treated with caution and in some cases no firm conclusions can be drawn.

1.120 Average fatal injury rates for employees in England, Scotland and Wales, pooled over the five-year period from 1995/96, indicate that the risk of fatal injury was lower in England in all five main industry sectors. However, they also show that the risk of fatal injury was:

- higher in Wales than in Scotland in extraction and utility supply, and in the service industries; and
- higher in Scotland than in Wales in agriculture, manufacturing, and construction.

**Table 1.18** Numbers of fatal injuries and fatal injury rates (a) for employees in England by industrial sector, as reported to all enforcing authorities (b), 1995/96 - 1999/2000p

	Agriculture, hunting, forestry and fishing	Extraction and utility supply	Manufacturing	Construction	Service industries
1995/96	13 (6.4)	12 (6.9)	38 (1.1)	53 (8.1)	50 (0.4)
1996/97	15 (7.0)	5 (3.1)	37 (1.1)	50 (7.6)	48 (0.3)
1997/98	17 (7.0)	7 (4.2)	44 (1.2)	45 (5.3)	51 (0.3)
1998/99	12 (5.0)	6 (3.8)	47 (1.3)	37 (4.1)	45 (0.3)
1999/2000p	10 (4.1)	3 (2.0)	31 (0.9)	45 (4.8)	38 (0.2)

(a) Figures in brackets are rates per 100 000 employees.

(b) Data exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf.

1.121 For 1999/2000, all sectors in England, except construction, have reported their lowest fatality numbers and rates for the five-year period from 1995/96. When comparing 1999/2000 with the previous year, the fatal injury rates for employees in extraction and utility supply and manufacturing have decreased by 47% and 31% respectively. In construction, the increase of 8 fatalities is represented by a 17% rise in the fatality rate. In the service sector, a downward trend since 1995/96 is evident in both the number of injuries and the injury rate.

**Table 1.19** Numbers of fatal injuries and fatal injury rates (a) for employees in Scotland by industrial sector, as reported to all enforcing authorities (b), 1995/96 - 1999/2000p

	Agriculture, hunting, forestry and fishing	Extraction and utility supply	Manufacturing	Construction	Service industries
1995/96	6 (16.1)	1 (2.6)	3 (0.9)	6 (5.2)	12 (0.8)
1996/97	2 (6.3)	1 (2.4)	9 (2.9)	12 (11.2)	4 (0.3)
1997/98	2 (6.0)	6 (14.8)	7 (2.2)	9 (7.8)	4 (0.3)
1998/99	3 (8.2)	1 (2.2)	11 (3.5)	7 (6.0)	4 (0.3)
1999/2000p	3 (7.7)	1 (2.3)	3 (1.0)	11 (9.6)	5 (0.3)

(a) Figures in brackets are rates per 100 000 employees.

(b) Data exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf.

1.122 When comparing 1999/2000 with the previous year, increases have been reported in fatality numbers for the construction and service sectors. Agriculture and extraction and utility supply have remained the same and manufacturing has shown a substantial decrease.

1.123 In the service sector, although the number of fatalities has increased by 1, the fatal injury rate has remained constant over the last four years at 0.3 fatalities per 100 000 employees. However, in 1995/96 there were over twice as many fatal injuries, and the injury rate was also substantially higher at 0.8 per 100 000 employees.

**Table 1.20** Numbers of fatal injuries and fatal injury rates (a) for employees in Wales by industrial sector, as reported to all enforcing authorities (b), 1995/96 - 1999/2000p

	Agriculture, hunting, forestry and fishing	Extraction and utility supply	Manufacturing	Construction	Service industries
1995/96	1 (6.2)	0 (0.0)	1 (0.5)	3 (8.7)	5 (0.7)
1996/97	3 (16.4)	1 (9.3)	7 (3.3)	4 (11.0)	7 (1.0)
1997/98	1 (4.3)	1 (10.4)	3 (1.4)	4 (8.8)	8 (1.2)
1998/99	1 (5.4)	2 (19.9)	5 (2.3)	3 (5.8)	3 (0.4)
1999/2000p	0 (0.0)	0 (0.0)	3 (1.5)	3 (4.8)	3 (0.4)

(a) Figures in brackets are rates per 100 000 employees.

(b) Data exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf.

1.124 Numbers of fatalities over the five-year period from 1995/96 in Wales have fluctuated in all sectors, with no apparent trends due to the relatively small numbers involved. However, when comparing 1999/2000 with the previous year, each sector has maintained or reduced both the numbers and fatal injury rates. The average fatal injury rates in each sector pooled over the five-year period were 6.5, 7.9, 1.8, 7.8, and 0.7 per 100 000 employees respectively.

## REPORTED INJURIES TO THE SELF-EMPLOYED 1990/91 - 1999/2000

1.125 The number of reported injuries to the self-employed has fallen substantially over the last three years. Estimated final figures indicate that 1417 injuries were reported in 1999/2000 compared with final totals of 1599 in 1998/99 and 1861 in 1997/98. Of the 1417 injuries reported in 1999/2000:

- 57 were fatal injuries, compared with 65 in 1998/99;
- 640 were non-fatal major injuries, compared with 685; and
- 720 were over-3-day injuries, compared with 849.

**Table 1.21** Injuries to the self-employed by severity of injury 1990/91 - 1999/2000ef as reported to all enforcing authorities

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (a)	97/98	98/99	99/00ef
Fatal	87	71	63	51	81	49	80	62	65	57
Non-fatal major	1 326	1 101	1 115	1 274	1 313	1 166	1 356	815	685	640
Over-3-day	2 077	1 832	2 136	2 531	2 869	2 394	2 282	984	849	720
<b>Total injuries</b>	<b>3 490</b>	<b>3 004</b>	<b>3 314</b>	<b>3 856</b>	<b>4 263</b>	<b>3 609</b>	<b>3 718</b>	<b>1 861</b>	<b>1 599</b>	<b>1 417</b>

(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

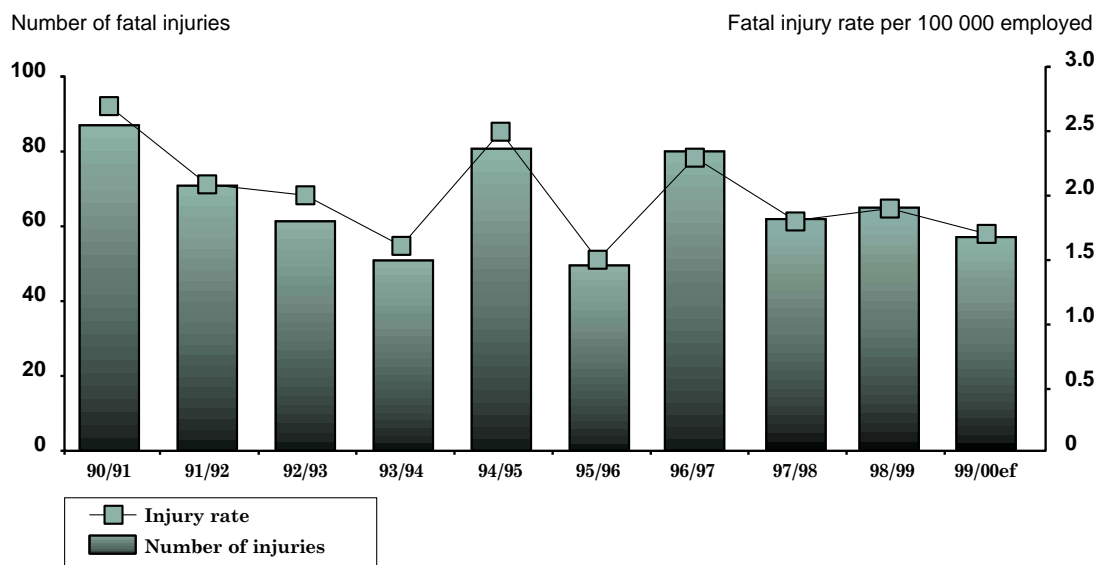
### Fatal injuries

1.126 In 1998/99, 65 fatal injuries to the self-employed were reported to HSE and local authorities, 3 greater than in the previous year. The fatal injury rate increased from 1.8 to 1.9 per 100 000 employed.

1.127 Estimated final figures for 1999/2000 indicate that 57 fatal injuries to the self-employed were reported to HSE and local authorities: 8 less than in 1998/99. This is the lowest number of such fatalities since the 49 reported in 1995/96. The fatal injury rate is expected to decrease to 1.7 per 100 000 self-employed from 1.9 in the previous year.

1.128 The number of fatal injuries to the self-employed, and the fatal injury rate, have fluctuated over the last ten years as shown by Figure 1.18.

**FIGURE 1.18**  
**Fatal injuries to the self-employed 1990/91 - 1999/2000ef**



***Fatal injuries by industrial sector***

*Agriculture*

1.129 This sector has shown a fluctuation in fatalities since the introduction of RIDDOR 95. Estimated final figures indicate that there were 23 fatal injuries to the self-employed in agriculture in 1999/2000, 7 fewer than 1998/99, but 3 more than the number in 1997/98 when there were 20 fatalities.

1.130 Changes in the fatal injury rate follow a similar pattern, with the rate falling from 14.3 per 100 000 in 1996/97 to 8.7 in 1997/98, rising to a high rate of 15.0 in 1998/99. Although the number of injuries in 1999/2000 is expected to be substantially less than the number in 1998/99, the injury rate is expected to be only slightly lower at 13.0 per 100 000.

*Extraction and utility supply*

1.131 Figures for 1999/2000 indicate 1 fatal injury to a self-employed person in the extraction and utility supply industry, the same as the previous two years.

*Manufacturing*

1.132 In 1999/2000, the number of fatal injuries to the self-employed in manufacturing is expected to be 4, the lowest number since the introduction of RIDDOR 95. In 1998/99 there were 6 fatal injuries.

1.133 The 1999/2000 estimated final fatal injury rate was 1.6 per 100 000 compared with 2.2 in 1998/99 and 2.7 in 1997/98. As with the numbers in this sector, the rate is also the lowest since the introduction of RIDDOR 95.

## Construction

1.134 The number of fatal injuries to the self-employed in construction fluctuates each year, and in 1999/2000 increased to 20. This is the same as the 1990s average, which is also 20. In 1998/99 there were 18 fatalities and in 1997/98 there were 22.

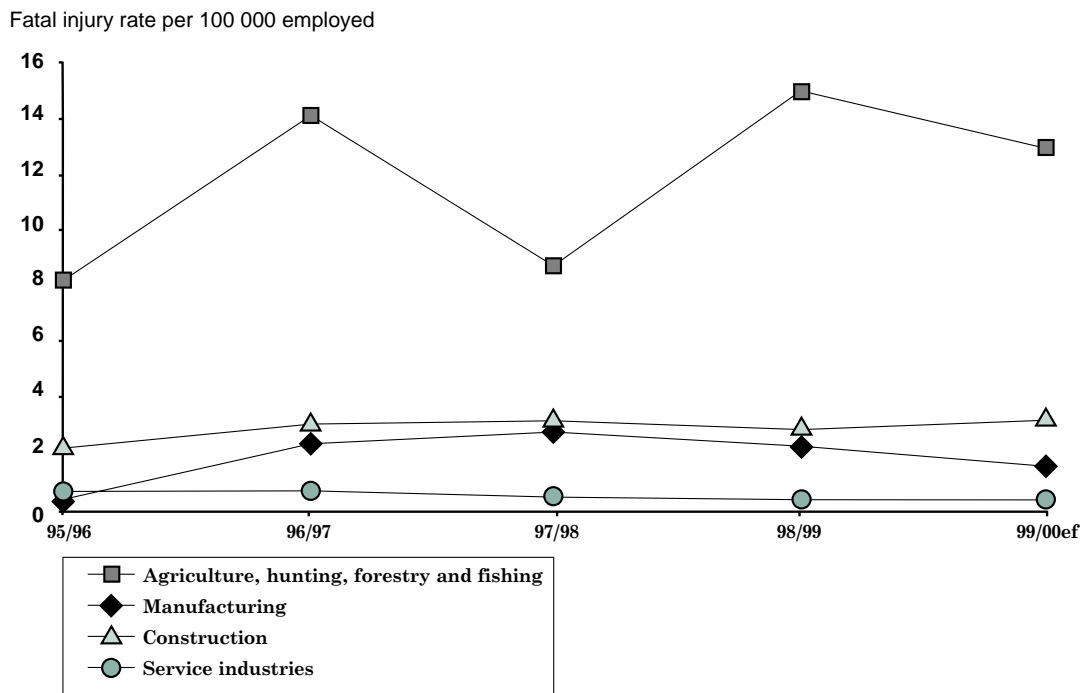
1.135 There has been a further reduction in the numbers of self-employed in this sector, and the fatal injury rate per 100 000 has increased to 3.2 in 1999/2000 from 2.8 in 1998/99. The fatal injury rates for the self-employed in construction have shown a very similar fluctuation, when compared to the number of fatalities.

## Service industries

1.136 The number of fatal injuries to the self-employed in the service sector continues to fall. Estimated final figures indicate that 9 fatalities were reported in 1999/2000 compared with 10 in 1998/99 and 12 in 1997/98. This indicates the lowest number of fatalities in this sector during the 1990s.

1.137 A similar pattern can be seen in the fatal injury rates for the sector. The estimated final rate for 1999/2000 is 0.4 per 100 000, the same as 1998/99. This likewise is the lowest rate of the last decade.

**FIGURE 1.19**  
**Fatal injury rates for the self-employed by industrial sector 1995/96 - 1999/2000ef**



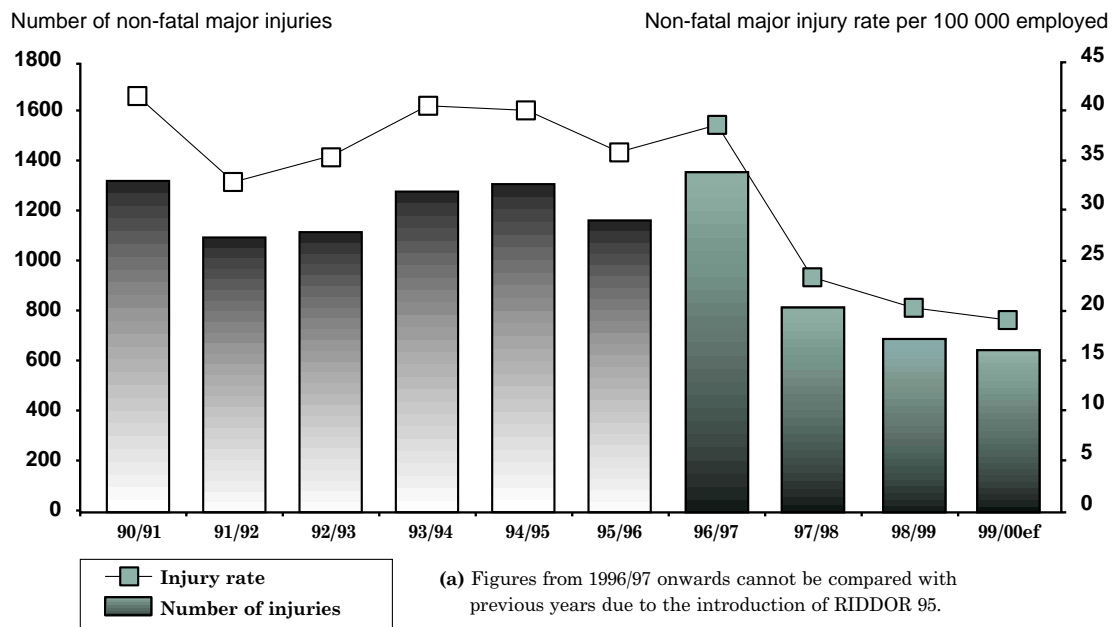
## Non-fatal major injuries

1.138 Statistics for non-fatal major injuries from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95 (see paragraph 1.36).

1.139 The number of non-fatal major injuries to the self-employed has fallen over the last three years. In 1999/2000, the number of reported non-fatal major injuries is expected to fall to 640, from 685 in 1998/99. The rate of reported injury is expected to fall to 19.1 per 100 000, from 20.3 the previous year. Both the number of expected injuries, and the rate, have shown consecutive decreases, and are the lowest since the introduction of RIDDOR 95.

1.140 For the periods 1997/98 - 1998/99, and 1998/99 - 1999/2000, the reductions in non-fatal injuries to the self-employed are 16% and 7% respectively. The corresponding reductions in rates are represented by 13% and 6%.

**FIGURE 1.20**  
**Non-fatal major injuries to the self-employed 1990/91 - 1999/2000ef (a)**



## Non-fatal major injuries by industrial sector

### Agriculture

1.141 Estimated final figures indicate that 71 non-fatal major injuries to the self-employed were reported in 1999/2000, a reduction in the 1998/99 figure of 74, and the lowest since the introduction of RIDDOR 95. The 1999/2000 figures represent a 29% reduction compared with 1996/97, in which 100 non-fatal major injuries were reported.

1.142 Although the number of injuries has reduced since the introduction of RIDDOR 95 the rate of injuries has increased in recent years. The rate for 1999/2000 is expected to be

40.1 injuries per 100 000, compared with 36.9 and 32.3 for 1998/99 and 1997/98 respectively. There has been a substantial reduction (28%) in the numbers employed in this sector.

#### *Extraction and utility supply*

1.143 The final number of non-fatal major injuries to the self-employed in extraction and utility supply is expected to be 41 in 1999/2000, an increase compared with the previous year in which 34 injuries were reported. There were 76 reported non-fatal injuries in 1997/98, and 15 in 1996/97. The increase between 1996/97 and 1997/98 was due to extra injuries being reported to the Mines Inspectorate following an audit that revealed substantial under-reporting in the mining industry.

1.144 Estimates of self-employment of less than 10 000 are generally based on very small sample sizes and are therefore subject to large sampling errors. Estimates for self-employment in the extractive industry over the last five years have been at or below the 10 000 level. Therefore injury rates for the self-employed should be treated with caution.

1.145 The non-fatal major injury rate for self-employed workers in the extraction and utility supply industry is expected to increase by 27% to 560.0 per 100 000 in 1999/2000. The rate was 441.5 in 1998/99 compared with 780.8 in the previous year.

#### *Manufacturing*

1.146 In 1999/2000, the number of non-fatal major injuries to the self-employed in manufacturing is expected to be 66, a substantial reduction (31%) on the 96 reported in 1998/99. This will be the lowest figure since the introduction of RIDDOR 95.

1.147 Changes in the number of reported non-fatal major injuries over the last three years are reflected in the injury rates. In 1999/2000 the rate is expected to be 26.3 per 100 000 (again, the lowest since the introduction of RIDDOR 95), compared with 35.2 in 1998/99 and 35.7 in 1997/98. However, the 31% reduction in the number of injuries between 1998/99 and 1999/2000 corresponds to a reduction in rate of 25%.

#### *Construction*

1.148 Estimated final figures for the construction industry indicate that in 1999/2000 the number of non-fatal injuries to the self-employed decreased to 352. This followed a more substantial decrease in 1998/99 compared with the previous year: 367 injuries were reported compared with 466 in 1997/98.

1.149 The same pattern can be seen in the non-fatal injury rates over the last three years. In 1999/2000 the rate of reported non-fatal injury to the self-employed is expected to be 56.0 per 100 000 compared with 56.5 in 1998/99 and 65.4 in 1997/98.

#### *Service industries*

1.150 Estimated final figures indicate that for 1999/2000, 110 non-fatal major injuries to the self-employed in the service sector were reported to HSE and local authorities, four fewer than the number reported in the previous year. In 1997/98 there were 105 injuries. These numbers are substantially lower than the 303 injuries reported in 1996/97.

1.151 In 1999/2000 the final non-fatal major injury rate for the self-employed in the service sector is 4.8 per 100 000 compared with 5.1 in 1998/99 and 4.6 in 1997/98.

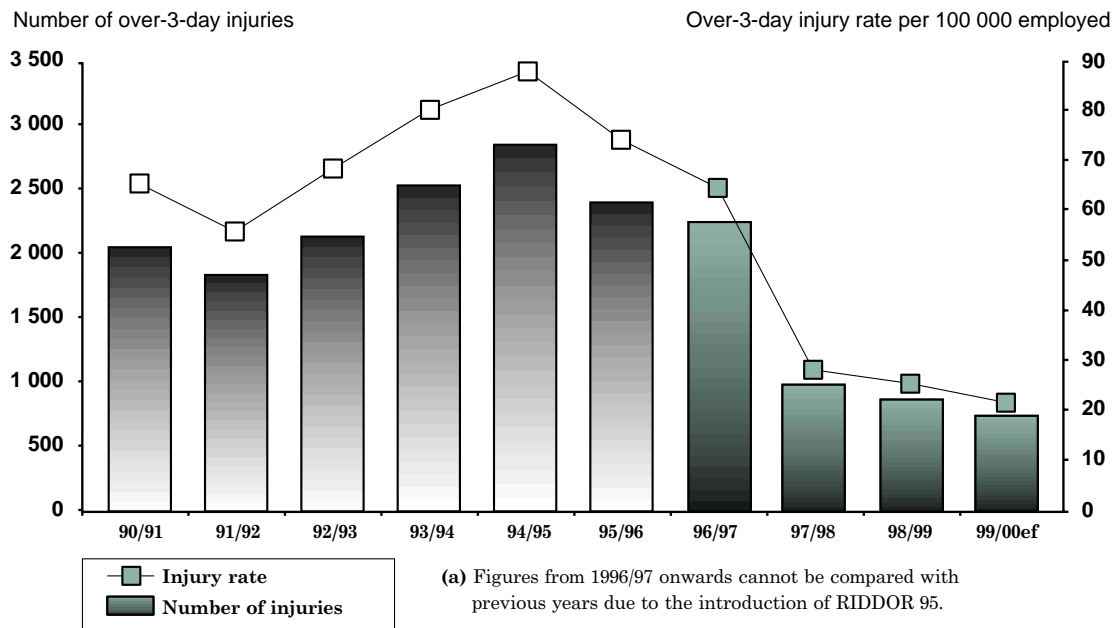
### Over-3-day injuries

1.152 Statistics for over-3-day injuries from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95 (see paragraph 1.49).

1.153 In 1999/2000, the number of over-3-day injuries to the self-employed reported to HSE and local authorities is expected to be 720. This represents a reduction of 15% from the 849 injuries reported in 1998/99. The number of reported injuries in 1997/98 was again higher, at 984. The 1999/2000 figure is the lowest since the introduction of RIDDOR 95.

1.154 The over-3-day injury rate is expected to fall in 1999/2000 to 21.4 per 100 000 self-employed workers. In 1998/99, the injury rate was 25.2 compared with 28.1 in the previous year. The 1999/2000 rate is the lowest since the introduction of RIDDOR 95.

**FIGURE 1.21**  
Over-3-day injuries to the self-employed 1990/91 - 1999/2000ef (a)



### Over-3-day injuries by industrial sector

#### Agriculture

1.155 In 1999/2000, the number of over-3-day injuries to the self-employed in agriculture is expected to be 42, a slight increase compared to 40 for the previous year. The over-3-day injury rate is expected to increase to 23.7 per 100 000 self-employed workers, from 20.0 for 1998/99.

### *Extraction and utility supply*

1.156 Estimated final figures indicate that 112 over-3-day injuries to the self-employed in the extraction and utility supply industry were reported in 1999/2000 compared with 129 in 1998/99 and 151 in 1997/98. However, in the previous year, 1996/97, only 16 injuries were reported. The substantial increase between 1996/97 and 1997/98 was due to extra injuries being reported to the Mines Inspectorate following an audit that revealed substantial under-reporting in the mining industry.

1.157 In 1999/2000, the estimated final injury rate for over-3-day injuries to the self-employed in extraction and utility supply is expected to reduce to 1529.8 per 100 000 compared with 1675.1 in 1998/99. However, changes in the rate of injury for the sector must be treated with caution due to the underlying employment figures (see paragraph 1.144).

### *Manufacturing*

1.158 The estimated final figure for the number of over-3-day injuries to the self-employed in manufacturing in 1999/2000 is expected to be 90, a reduction of 6 from the number reported in 1998/99.

1.159 Changes in the over-3-day injury rate show a slight increase in 1999/2000 when compared to the previous year: the rate is expected to be 35.9 per 100 000 compared with 35.2 in 1998/99.

### *Construction*

1.160 Estimated final figures for construction indicate that the number of over-3-day injuries to the self-employed have again shown a substantial reduction (11%) in 1999/2000, when compared with the previous year. In 1999/2000, the number of injuries is expected to be 338, compared with 381 in 1998/99.

1.161 The over-3-day injury rate is also expected to fall to 53.8 per 100 000 in 1999/2000 compared with 58.7 in 1998/99. The injury numbers and rates for 1999/2000 are the lowest in this sector since the introduction of RIDDOR 95.

### *Service industries*

1.162 Estimated final figures indicate that the number of over-3-day injuries to the self-employed decreased substantially (32%) in 1999/2000, after a further large reduction in 1997/98 compared with the previous year. The number of injuries in 1999/2000 is expected to be 138 compared with 203 in 1998/99. A substantial part of this decrease is accounted for by the fact that the Police (Health and Safety) Act 1997 changed the status of police officers from 'Office Holders' to employees. In anticipation of this legislation, HSE coded all police officers as employees from 1997/98 onwards; previously a proportion had been coded self-employed.

1.163 Changes in the over-3-day injury rate mirror the changes in the number of injuries. In 1999/2000, the final injury rate is expected to be 6.0 per 100 000 self-employed compared with 9.1 in 1998/99. The number and rate of injuries for 1999/2000 are the lowest for this sector since the introduction of RIDDOR 95.

## Injuries to the self-employed by kind of accident

1.164 Statistics for injuries reported in 1999/2000 by kind of accident are based on provisional rather than estimated final figures.

### *Fatal injuries*

1.165 Based on the provisional figures of 55 fatal injuries to the self-employed in 1999/2000, the most common were:

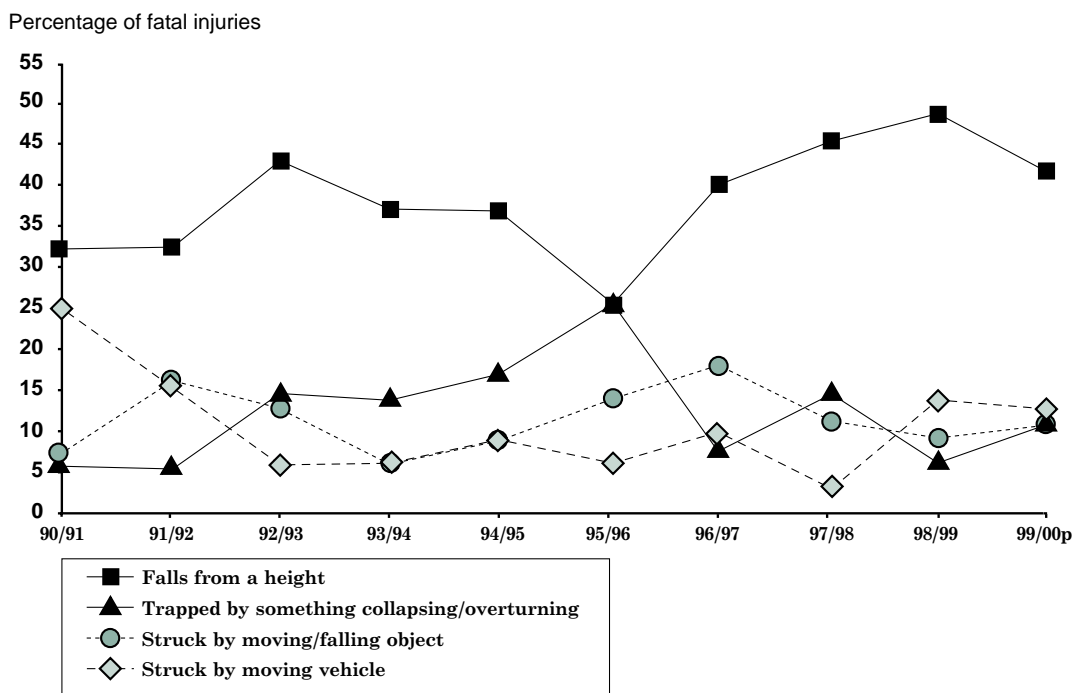
- falls from a height (accounting for 42% of fatal injuries);
- being struck by a moving vehicle (13%);
- being struck by a moving or falling object (11%);
- trapped by something collapsing or overturning (11%); and
- contact with electricity or electrical discharge (9%).

1.166 In 1998/99, the first three kinds of accident accounted for 49%, 15% and 9% respectively of the 65 fatal injuries to the self-employed. In 1998/99, the proportion of fatal injuries resulting from being trapped by something collapsing or overturning, or coming into contact with electricity, were 6% and 2% (ie 1 fatality) of the total number of fatal injuries. Fatalities as a result of being injured by an animal increased, from 3% in 1998/99, to 7% in 1999/2000.

1.167 Although the proportions of fatal injuries resulting from different kinds of accidents have fluctuated over the last few years, falls from a height are clearly the most common cause of fatality among the self-employed, and in particular heights over two metres. For 1999/2000 this was 42%. In 1998/99, such accidents accounted for a larger proportion (49%) of fatal injuries to the self-employed than in any other year since the introduction of RIDDOR 85. This proportion is typically 40% - 50% since the introduction of RIDDOR 95.

**FIGURE 1.22**

**Fatal injuries to the self-employed by kind of accident 1990/91 - 1999/2000p**



### *Kind of accident by industrial sector*

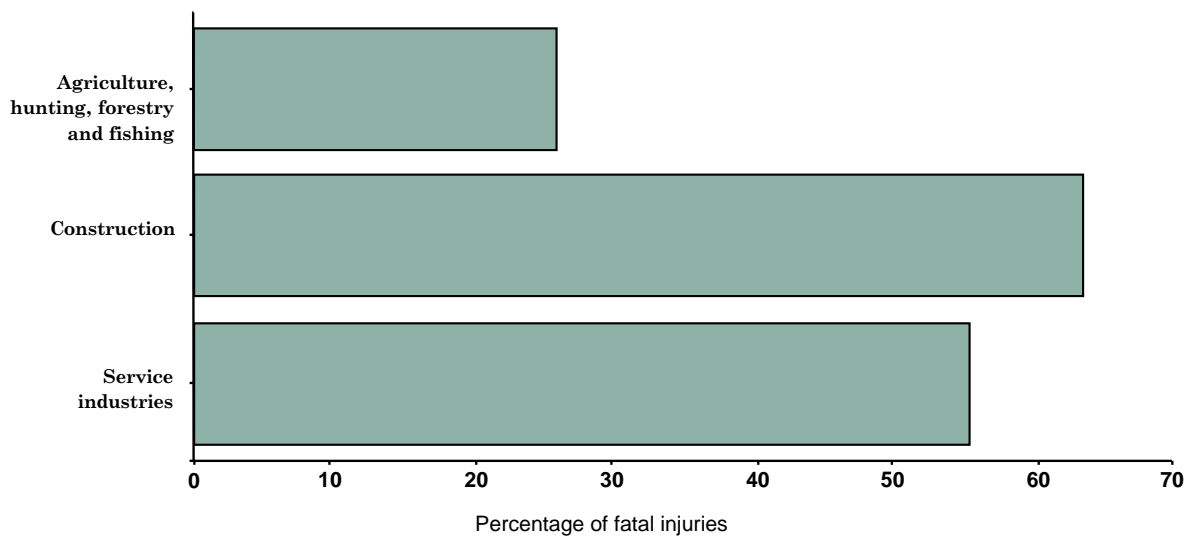
1.168 Detailed breakdowns for fatal injuries to the self-employed by industrial sector and kind of accident results in groups with small numbers of fatalities which should be analysed with caution. For this reason, Figure 1.23 gives a breakdown by industrial sector of only the most common cause of fatality overall to the self-employed, namely falls from a height.

1.169 Based on provisional figures for 1999/2000, such injuries were clearly the most common cause of fatal injury in construction, accounting for 12 of the 19 deaths (63%), compared with 17 out of 18 fatalities (94%) in 1998/99. In the service sector falls from a height accounted for 5 of the 9 deaths in 1999/2000, and a similar proportion of 6 out of 10 for 1998/99. The picture was less clear-cut in agriculture: of the 23 deaths, 6 (26% of the total number) resulted from falls from a height, and 4 each for being struck by a moving or falling object, trapped by something collapsing or overturning, and injury caused by an animal.

1.170 Provisional figures for 1999/2000 indicate 4 fatalities to self-employed workers in construction, caused by contact with electricity or electrical discharge, compared with none the previous year.

**FIGURE 1.23**

**Fatal injuries to the self-employed caused by falls from a height by industrial sector 1999/2000p**



### ***Non-fatal major injuries***

1.171 Based on provisional figures, there were three kinds of accident that accounted for 10% or more of all non-fatal major injuries to the self-employed in 1999/2000. Of the 633 non-fatal major injuries reported to HSE and local authorities the most common were:

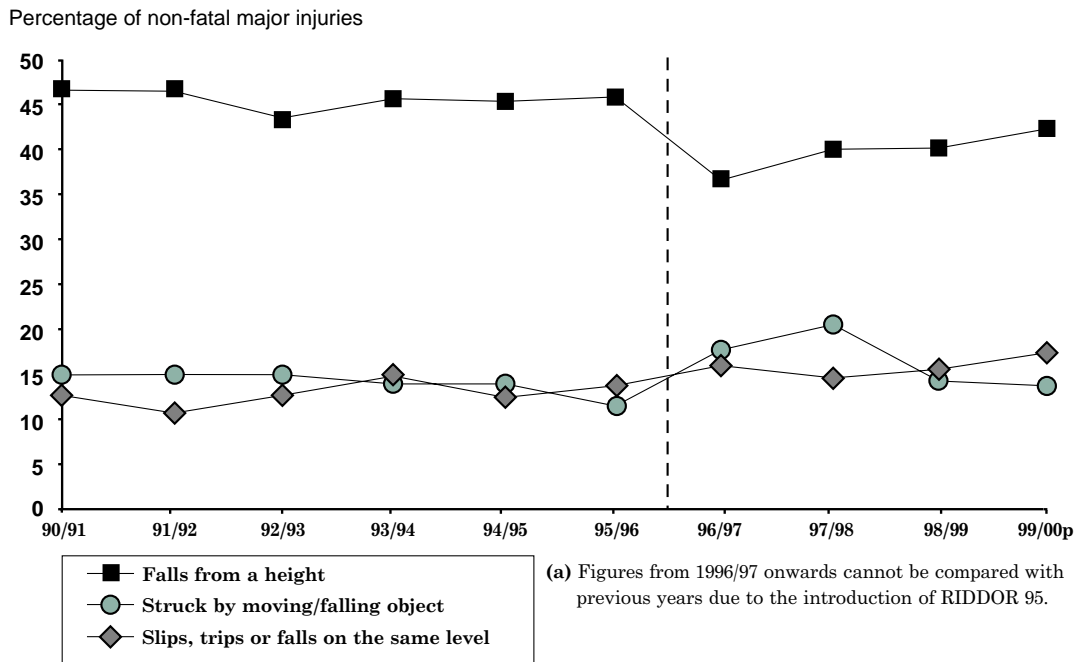
- falls from a height (accounting for 42% of non-fatal major injuries);
- slips, trips and falls on the same level (17%); and

- being struck by a moving or falling object (14%).

1.172 These three kinds of accident have been the most common causes of non-fatal major injury to the self-employed since the introduction of RIDDOR 85. Of the 685 injuries reported in 1998/99 they accounted for 40%, 15%, and 14%, respectively. Direct comparison with figures before 1996/97 cannot be made due to the introduction of RIDDOR 95.

**FIGURE 1.24**

**Non-fatal major injuries to the self-employed by kind of accident 1990/91 - 1999/2000p (a)**



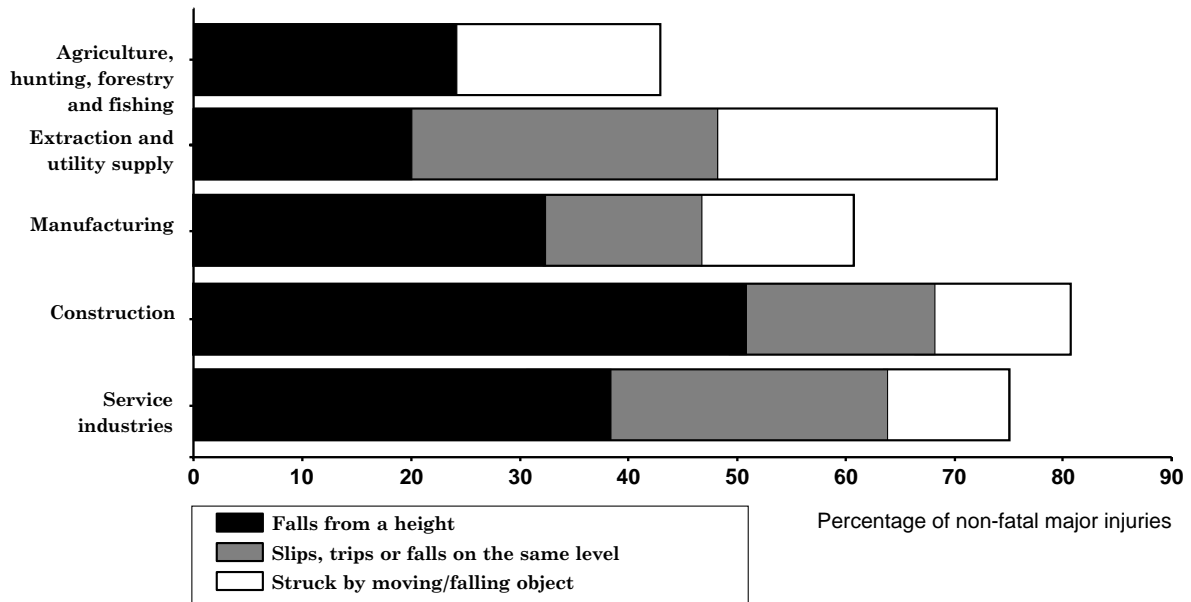
#### *Kind of accident by industrial sector*

1.173 Based on provisional figures, in 1999/2000, falls from a height were the most common cause of non-fatal major injury to the self-employed in four out of the five main industries: construction (accounting for 51% of the total number of non-fatal major injuries), the service sector (38%), manufacturing (33%), and agriculture (25%).

1.174 Slips, trips and falls on the same level were the second most common cause of non-fatal major injuries to the self-employed in the service sector. Such accidents were also fairly common in manufacturing and construction. In the extraction and utility supply industry, slips, trips and falls on the same level was the most common cause of major injury.

**FIGURE 1.25**

**Non-fatal major injuries to the self-employed by industrial sector and kind of accident 1999/2000p**



**Over-3-day injuries**

1.175 Based on provisional figures, there were four kinds of accident which each accounted for 10% or more of all over-3-day injuries to the self-employed in 1999/2000. Of the 710 over-3-day injuries reported to HSE and local authorities the most common were:

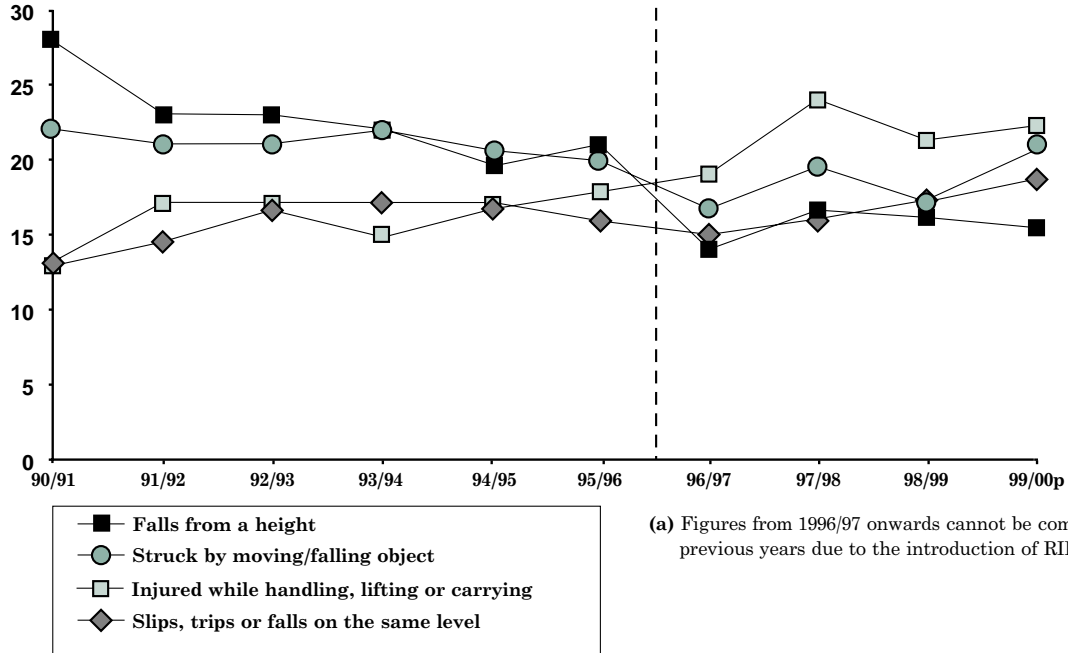
- injuries sustained while handling, lifting or carrying (accounting for 22% of such injuries);
- being struck by a moving or falling object (21%);
- slips, trips or falls on the same level (19%); and
- falls from a height (15%).

1.176 These four kinds of accident have been the most common causes of over-3-day injury to the self-employed since the introduction of RIDDOR 85. Of the 849 injuries reported in 1998/99 they accounted for 21%, 17%, 17% and 16% respectively. Direct comparison with figures before 1996/97 cannot be made due to the introduction of RIDDOR 95.

**FIGURE 1.26**

**Over-3-day injuries to the self-employed by kind of accident 1990/91 - 1999/2000p (a)**

Percentage of over-3-day injuries



*Kind of accident by industrial sector*

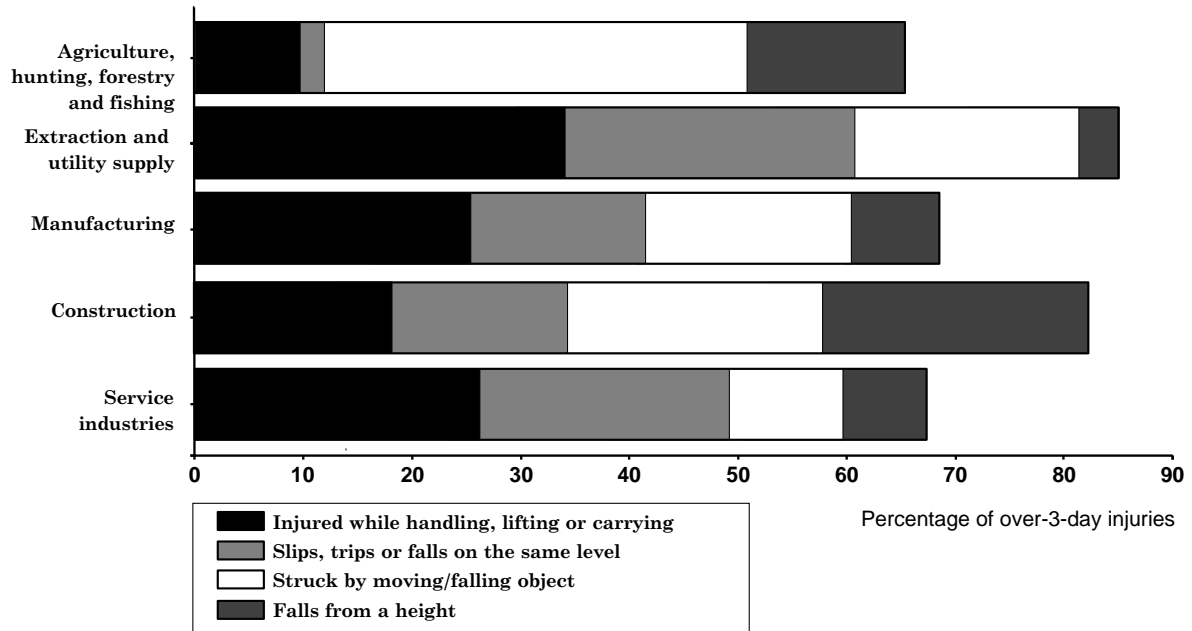
1.177 Based on provisional figures in 1999/2000, being injured while handling, lifting or carrying was the most common kind of accident for over-3-day injuries to the self-employed in extraction and utility supply, manufacturing and in the service sector. This kind of accident accounted for 34%, 25% and 26% of the total number of injuries in each sector respectively, with proportions similar to 1998/99.

1.178 In construction, the most common kind of accident resulting in over-3-day injury to the self-employed was falls from a height, closely followed by being injured by a moving or falling object. Such injuries accounted for 24% and 23% respectively of the total number of over-3-day injuries in the sector. Falls from a height was the second most common kind of accident in the agricultural sector, at 15% for 1999/2000.

1.179 In agriculture, being struck by a moving or falling object was the most common kind of accident resulting in over-3-day injury, accounting for 39% of the total number of such injuries in the sector.

**FIGURE 1.27**

**Over-3-day injuries to the self-employed by industrial sector and kind of accident 1999/2000p**



**Type of injury**

1.180 Statistics from 1996/97 onwards relate to injuries reported to all enforcing authorities. Statistics for earlier years exclude injury reports made to the Railway, Mines and Explosives Inspectorates, and also injuries reported under offshore installations safety legislation.

1.181 Statistics for injuries reported in 1999/2000 by type of injury are based on provisional rather than estimated final figures.

**Fatal injuries**

1.182 Based on the provisional figure of 55 fatal injuries to the self-employed in 1999/2000 the most common were:

- multiple injuries (accounting for 31% of injuries);
- concussion and internal injuries (16%);
- injuries not classified elsewhere (13%); and
- contact with electricity (11%).

1.183 Of the most common types of fatal injury in 1998/99, these were multiple injuries (29%), concussion and internal injuries (22%) and fractures (18%).

**Table 1.22** Type of injury to the self-employed as a proportion of all fatal injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00p
Multiple injuries	11%	16%	16%	6%	12%	8%	25%	32%	29%	31%
Concussion and internal injuries	2%	7%	6%	2%	9%	4%	19%	16%	22%	16%
Fractures	20%	23%	19%	18%	14%	18%	13%	21%	18%	9%
Poisonings and gassings	9%	11%	5%	8%	10%	2%	9%	2%	5%	5%
Contusions	17%	13%	19%	20%	16%	20%	4%	2%	3%	7%
<b>Total injuries</b>	<b>87</b>	<b>70</b>	<b>63</b>	<b>51</b>	<b>81</b>	<b>49</b>	<b>80</b>	<b>62</b>	<b>65</b>	<b>55</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

### Non-fatal major injuries

1.184 Statistics for non-fatal injuries by type of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.185 Based on the provisional figure of 633 non-fatal major injuries to the self-employed in 1999/2000:

- 70% were fractures;
- 7% were lacerations or open wounds; and
- 4% were dislocations.

1.186 For 1999/2000, proportions for the first two of these types of injury are the same as 1998/99. Proportions for the remaining types of injury have changed between these two years.

**Table 1.23** Type of injury to the self-employed as a proportion of all non-fatal major injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Fractures	72%	74%	73%	75%	72%	73%	73%	71%	70%	70%
Lacerations/open wounds	5%	4%	5%	4%	4%	5%	6%	7%	7%	7%
Amputations	5%	6%	6%	7%	6%	5%	4%	6%	5%	3%
<b>Total injuries</b>	<b>1 322</b>	<b>1 093</b>	<b>1 110</b>	<b>1 273</b>	<b>1 313</b>	<b>1 166</b>	<b>1 356</b>	<b>815</b>	<b>685</b>	<b>633</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Over-3-day injuries

1.187 Statistics for non-fatal injuries by type of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.188 Based on the provisional figure of 710 over-3-day injuries to the self-employed in 1999/2000, the most common were:

- sprains and strains (accounting for 29% of such injuries);
- contusions (22%); and
- lacerations or open wounds (21%).

1.189 Although total numbers of reported over-3-day injuries to the self-employed between 1997/98 - 1999/2000 were substantially lower than the total number reported in 1996/97, proportions of each of the most common types of injuries each year remained fairly constant.

**Table 1.24** Type of injury to the self-employed as a proportion of all over-3-day injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Sprains and strains	17%	18%	21%	20%	25%	23%	30%	29%	30%	29%
Lacerations/ open wounds	16%	15%	13%	13%	11%	12%	17%	23%	23%	21%
Contusions	19%	18%	19%	20%	18%	17%	21%	19%	22%	22%
Superficial injuries	10%	12%	11%	11%	11%	12%	9%	10%	6%	8%
Fractures	20%	20%	19%	18%	18%	18%	5%	6%	6%	8%
<b>Total injuries</b>	<b>2 062</b>	<b>1 797</b>	<b>2 113</b>	<b>2 527</b>	<b>2 869</b>	<b>2 394</b>	<b>2 282</b>	<b>984</b>	<b>849</b>	<b>710</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### Site of injury

1.190 In this section, the area of the body to which the injury was sustained is referred to as the 'site of injury'.

1.191 Statistics from 1996/97 onwards relate to injuries reported to all enforcing authorities. Statistics for earlier years exclude injury reports made to the Railway, Mines and Explosives Inspectorates, and also injuries reported under offshore installations safety legislation.

1.192 Statistics for injuries reported in 1999/2000 by site of injury are based on provisional rather than estimated final figures.

## ***Fatal injuries***

1.193 Based on the provisional figures in 1999/2000:

- Head injuries accounted for 42% of the total number of deaths to the self-employed.
- Injuries to the torso accounted for 13% of the total number of deaths to the self-employed. Of these, 57% were injuries to the trunk.

1.194 In 1998/99, the proportion of the total number of fatalities resulting from head injuries was 35% compared with 39% in the previous year. The proportion of the total number of fatalities resulting from multiple injuries was 15% in 1998/99 compared with 11% in the previous year. In 1999/2000 the proportion is 18%.

**Table 1.25** Site of injuries to the self-employed as a proportion of all fatal injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00p
Head locations	22%	33%	27%	29%	27%	24%	29%	39%	35%	42%
Torso locations	9%	10%	17%	25%	25%	29%	20%	24%	23%	13%
<b>Total injuries</b>	<b>87</b>	<b>70</b>	<b>63</b>	<b>51</b>	<b>81</b>	<b>49</b>	<b>80</b>	<b>62</b>	<b>65</b>	<b>55</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

## ***Non-fatal major injuries***

1.195 Statistics for non-fatal major injuries by site of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.196 Based on provisional figures for 1999/2000:

- Upper limb locations continued to be the most common sites of non-fatal major injuries to the self-employed. Such injuries accounted for 37% of the total number, compared with 38% the previous two years. Of these injuries in 1999/2000, 24% were injuries to the wrist, the same when compared with 1998/99.
- Lower limb locations were the affected sites in 29% of non-fatal major injuries, the same as 1998/99, and 30% in 1997/98. In 1999/2000, 32% of these injuries were to the ankle and 26% to the foot, compared with 29% and 27% respectively in the previous year.
- Torso and head locations were the affected sites in 14% and 8% of non-fatal major injuries respectively. Of the injuries to the torso, 58% were to the trunk. Of the injuries to the head, 29% were to the eye.

**Table 1.26** Site of injuries to the self-employed as a proportion of all non-fatal major injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Upper limb locations	38%	38%	41%	40%	40%	41%	40%	38%	38%	37%
Lower limb locations	30%	32%	30%	31%	30%	31%	31%	30%	29%	29%
Torso locations	10%	9%	9%	12%	9%	9%	11%	12%	14%	14%
Head locations	9%	8%	10%	7%	7%	7%	7%	9%	7%	8%
<b>Total injuries</b>	<b>1 322</b>	<b>1 093</b>	<b>1 110</b>	<b>1 273</b>	<b>1 313</b>	<b>1 166</b>	<b>1 356</b>	<b>815</b>	<b>685</b>	<b>633</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

### **Over-3-day injuries**

1.197 Statistics for non-fatal injuries by site of injury from 1996/97 onwards cannot be compared with those for previous years due to the introduction of RIDDOR 95.

1.198 Based on provisional figures for 1999/2000:

- Upper limb locations continued to be the most common sites of over-3-day injuries to the self-employed. Such injuries accounted for 37% of the total number of over-3-day injuries compared with 33% in 1998/99 and 31% in 1997/98. Of these injuries in 1999/2000, 49% were to one or more fingers or thumbs, compared with 50% for the previous two years.
- Torso locations were the affected sites in 23% of over-3-day injuries (the same as 1998/99), of which 71% were to the back (70% in 1998/99).
- Lower limb locations were the affected sites in 22% of over-3-day injuries, 2% less than the proportion for 1998/99. Of these injuries in 1999/2000, 24% were to the ankle, compared with 29% the previous year.
- Head locations were the affected sites in 7% of over-3-day injuries, 3% less than the proportion in the previous year. Of these injuries in 1999/2000, 29% were to the eye, compared with 22% in 1998/99.
- Injuries to more than one location accounted for 9% of reported over-3-day injuries to the self-employed, the same as 1998/99.

**Table 1.27** Site of injuries to the self-employed as a proportion of all over-3-day injuries 1990/91 - 1999/2000p as reported to all enforcing authorities (a)

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (b)	97/98	98/99	99/00p
Upper limb locations	29%	33%	31%	30%	31%	31%	28%	31%	33%	37%
Lower limb locations	33%	31%	32%	31%	31%	31%	25%	25%	24%	22%
Torso locations	17%	18%	19%	19%	19%	19%	22%	24%	23%	23%
Head locations	10%	9%	9%	10%	8%	8%	10%	10%	10%	7%
<b>Total injuries</b>	<b>2 062</b>	<b>1 797</b>	<b>2 113</b>	<b>2 527</b>	<b>2 869</b>	<b>2 394</b>	<b>2 282</b>	<b>984</b>	<b>849</b>	<b>710</b>

(a) Data for 1990/91 - 1995/96 exclude reports made to the Railway, Mines and Explosives Inspectorates. Data also exclude injuries in the offshore oil and gas industry collected under offshore installations safety legislation.

(b) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

## REPORTED INJURIES TO MEMBERS OF THE PUBLIC 1990/1991 - 1999/2000

1.199 Estimated final figures indicate that 25 071 injuries to members of the public were reported to HSE and local authorities in 1999/2000. Of these:

- 437 were fatalities; and
- 24 634 were non-fatal injuries.

**Table 1.28** Injuries to members of the public by severity of injury 1990/91 - 1999/2000ef as reported to all enforcing authorities

	90/91	91/92	92/93	93/94	94/95	95/96	96/97 (a)	97/98	98/99	99/00ef
Fatal	139	105	113	107	104	86	367	393	369	437
Non-fatal	9 981	11 009	10 669	11 552	12 642	13 234	35 694	28 613	23 800	24 634
<b>Total</b>	<b>10 120</b>	<b>11 114</b>	<b>10 782</b>	<b>11 659</b>	<b>12 746</b>	<b>13 320</b>	<b>36 061</b>	<b>29 006</b>	<b>24 169</b>	<b>25 071</b>

(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

1.200 In 1999/2000, the total number of injuries to members of the public increased, after decreases for the previous two years. The estimated final figure of 25 071 injuries represents an increase of 4% compared with 1998/99.

### Fatal injuries

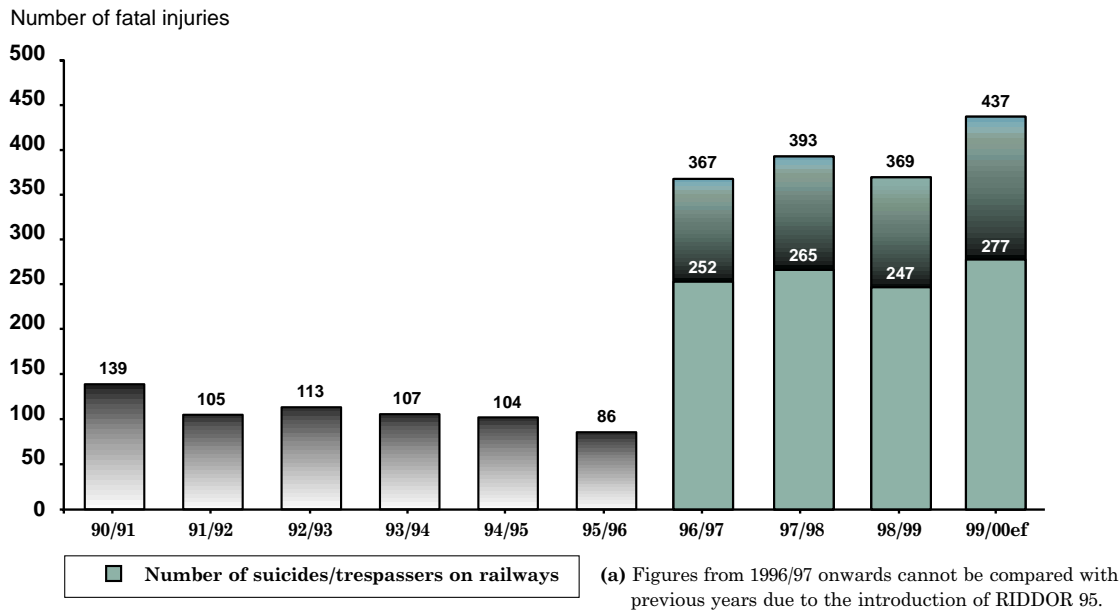
1.201 Estimated final figures indicate that there were 437 fatal injuries to members of the public in 1999/2000, an increase of 18% compared with the 369 fatalities in the previous year, and the highest since the introduction of RIDDOR 95. Such injuries have fluctuated since the introduction of RIDDOR 95: in 1998/99, there were 369 fatalities, 393 reported in 1997/98 and 367 in 1996/97.

1.202 Of the 437 fatal injuries to members of the public in 1999/2000:

- 416 (95%) occurred in the service sector, compared with 355 (96%) in 1998/99, of which 334 (80%) were injuries reported to the Railway Inspectorate. Such injuries have only been reportable since the introduction of RIDDOR 95.
- 277 were injuries resulting from acts of trespass or suicide on railways or other relevant transport systems, the highest figure since the introduction of RIDDOR 95. There were 247 such injuries in 1998/99, 265 in 1997/98, and 252 in 1996/97.
- The remainder were an estimated 82 fatal injuries (20% of the sector), compared with 73 (21%) in 1998/99. Health and social work accounts for 48 of these, and other community, social and personal service activities account for 15. For 1998/99, the Railways Inspectorate reported 282 fatalities (79% of the sector), health and social work 38, and other community, social, and personal services activities 9.

- Of the non-service sector fatalities, there was a decrease in agriculture, with 8 fatalities reported compared to 9 in 1998/99. Increases were reported in construction and manufacturing during 1999/2000, with 7 and 4 fatalities respectively, compared with 3 and 0 in 1998/99. The remaining 2 fatalities in 1999/2000 occurred in extraction and utility supply, the same figure as the previous year.

**FIGURE 1.28**  
**Fatal injuries to members of the public 1990/91 - 1999/2000ef (a)**



### Non-fatal major injuries

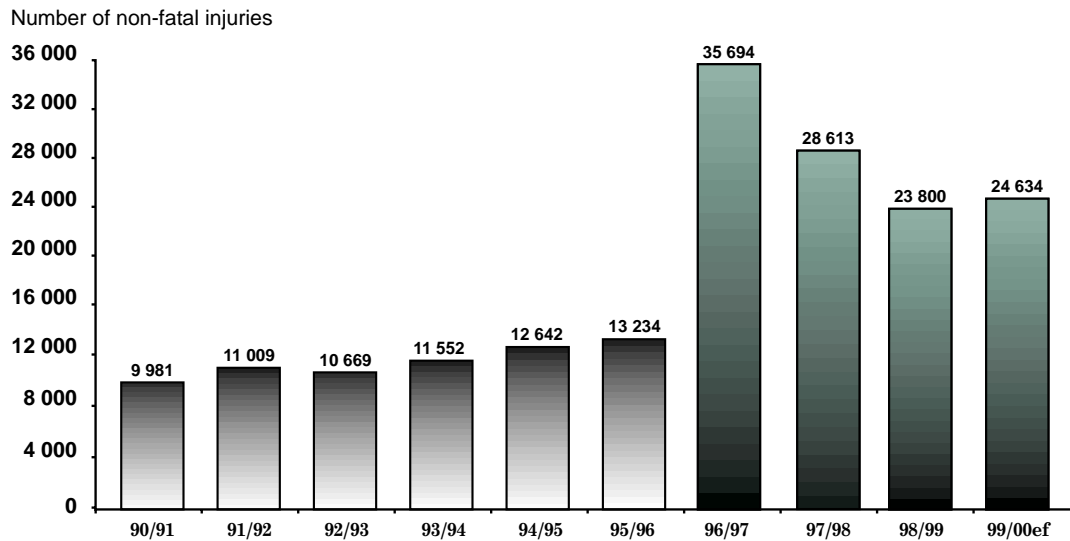
1.203 Estimated final figures indicate that 24 634 non-fatal injuries to members of the public were reported to HSE and local authorities in 1999/2000. This is the second lowest number of injuries since the introduction of RIDDOR 95, and represents an increase of 4% when compared with 1998/99. In 1996/97, the first year of reporting under RIDDOR 95, a substantially greater number of injuries were reported (35 694).

1.204 Of the estimated non-fatal injuries reported to members of the public in 1999/2000 (provisional figures):

- 97% occurred in the service sector, the same as the previous year. 35% of non-fatal injuries in this sector occurred in education, compared with 42% in 1998/99. The other most frequent occurrences for 1999/2000 are represented by: other community, social and personal services (16%); transport storage and communication (14%); wholesale and retail trade, and repairs (13%); and health and social work (10%).
- 401 injuries occurred in the construction industry, an increase of 6% compared with the 378 reported injuries in 1998/99.

- 198 occurred in agriculture, a slight increase compared with the 196 reported non-fatal major injuries in 1998/99.
- The number of injuries to members of the public in manufacturing increased by 16%, from 140 in 1998/99, to 163 in 1999/2000.

**FIGURE 1.29**  
**Non-fatal injuries to members of the public 1990/91 - 1999/2000ef (a)**



(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

## DANGEROUS OCCURRENCES 1990/91 - 1999/2000

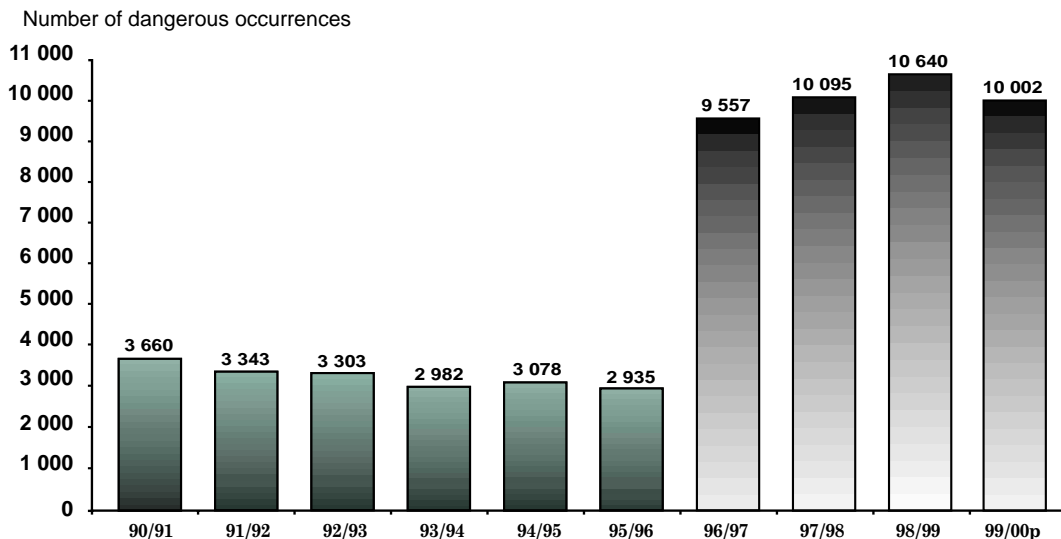
1.205 Selected incidents which have a high potential to cause death or serious injury, but which happen relatively frequently, are reportable under RIDDOR as 'dangerous occurrences'. A dangerous occurrence is reportable whether or not someone is injured.

1.206 Statistics for 1990/91 - 1995/96 relate to reports made under RIDDOR 85 for which there were four sections, known as parts I, II, III, and IV. Part I of the Schedule to RIDDOR 85 relating to the reporting of dangerous occurrences contains a general list for all places of work. Parts II, III and IV contain lists of dangerous occurrences which are specific to mines, quarries and railways respectively.

1.207 Statistics for 1996/97 - 1999/2000 relate to reports made under RIDDOR 95. The updated reporting requirements differ considerably from RIDDOR 85. Due to the changes, figures from 1996/97 onwards cannot be compared with previous years. There are five sections under RIDDOR 95: an extra section (Part V) relating to dangerous occurrences at offshore workplaces was added. Part IV, dangerous occurrences reportable in respect of relevant transport systems, now covers dangerous occurrences which would previously have been reported under separate legislation and not under RIDDOR 85. Under RIDDOR 95 a broader range of more clearly defined dangerous occurrences are reportable.

1.208 Provisional figures for 1999/2000 indicate that 10 002 dangerous occurrences were reported to HSE, a decrease of 638 (6%) compared with the previous year, and 93 less than 1997/98 when 10 095 occurrences were reported.

**FIGURE 1.30**  
**Dangerous occurrences reported to HSE 1990/91 - 1999/2000p (a)**



(a) Figures from 1996/97 onwards cannot be compared with previous years due to the introduction of RIDDOR 95.

1.209 Table 1.29 shows the number of dangerous occurrences reported each year since the introduction of RIDDOR 95, broken down into the five sections, Parts I-V. From 1996/97 onwards at least 50% of reported dangerous occurrences were specific occurrences

reportable in relation to relevant transport systems and slightly over 40% were general occurrences reportable in relation to any workplace.

**Table 1.29** Number and percentage of dangerous occurrences reported to HSE 1997/98 - 1999/2000p

	97/98		98/99		99/00p	
Part I. General	4 273	(42%)	4 333	(41%)	4 358	(44%)
Part II. Mines	96	(1%)	114	(1%)	79	(1%)
Part III. Quarries	105	(1%)	122	(1%)	92	(1%)
Part IV. Transport systems	5 218	(52%)	5 625	(53%)	5 025	(50%)
Part V. Offshore workplaces	403	(4%)	446	(4%)	448	(4%)
<b>Total number of occurrences</b>	<b>10 095</b>		<b>10 640</b>		<b>10 002</b>	

1.210 Based on provisional figures in 1999/2000, the number of general dangerous occurrences reportable in relation to any place of work (Part I), and offshore workplaces (Part V) have both shown a slight increase on the previous year, and both show successive increases since 1996/97. The number of dangerous occurrences in the remaining sections (Parts II-IV) all decreased. Numbers for quarries were the lowest since the introduction of RIDDOR 95.

1.211 Based on provisional figures for 1999/2000, of the general dangerous occurrences reported in relation to any place of work:

- failures of lifting machinery accounted for 25%, the same proportion as in 1998/99;
- escapes of substances 14%, the same proportion as in 1998/99; and
- failures of pipelines 14%, compared with 11% the previous year.

1.212 Based on provisional figures for 1999/2000, of the dangerous occurrences reported in relation to mines:

- occurrences in connection with locomotives accounted for 44%, compared with 42% in 1998/99;
- failures of plant or equipment 27%, compared with 38% in 1998/99; and
- outbreaks of fire or ignitions of gas 23%, compared with 13% in 1998/99.

1.213 Based on provisional figures for 1999/2000, of the 92 dangerous occurrences reported in relation to quarries:

- misfires accounted for 72%, compared with 66% in 1998/99; and
- occurrences involving movement of slopes 14%, compared with 15% in 1998/99.

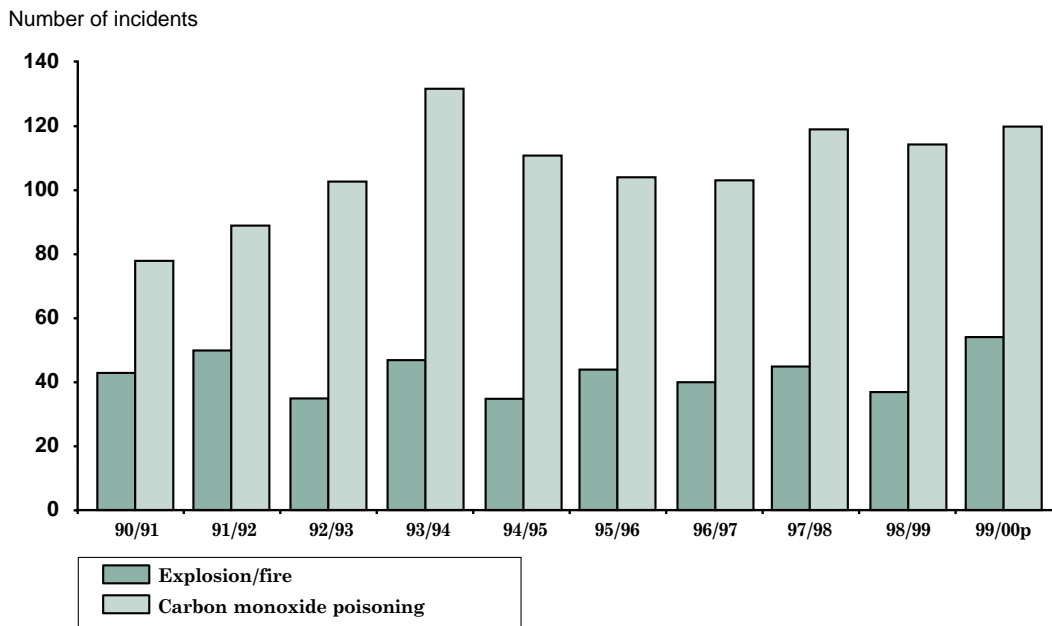
## GAS SAFETY STATISTICS 1990/91 - 1999/2000

1.214 Based on provisional figures, in 1999/2000 there were 173 reported incidents relating to the supply and use of flammable gas, an increase of 15% compared with the 151 incidents reported in 1998/99.

1.215 For 1999/2000 (provisional figures):

- There were 54 incidents involving explosion/fire, the highest since 1989/90, when there were 68 reported incidents. This compares with 37 in 1998/99. The numbers for previous years (1990/91 - 1998/99) have fluctuated around an average of 40 incidents.
- There were 119 incidents involving carbon monoxide poisoning (the same as 1997/98), compared with 114 in 1998/99. The number of these incidents each year increased in the early 1990s, reaching a peak of 132 in 1993/94. Since then the number of incidents has fluctuated from year to year.

**FIGURE 1.31**  
**Incidents relating to the supply and use of flammable gas 1990/91 - 1999/2000p**



### Fatalities resulting from incidents

1.216 Based on provisional figures, in 1999/2000 there were 35 fatalities resulting from incidents relating to the supply and use of flammable gas. This was 13 less than the 1998/99 figure of 48 (the highest number of deaths since the 49 reported in 1989/90).

1.217 Of the 35 fatalities in 1999/2000:

- 26 occurred as a result of carbon monoxide poisoning, 11 less than in 1998/99 (when 5 fatalities were caused by one incident). 3 have been confirmed as suicides, compared with 4 in 1998/99, and 1 in 1997/98.
- 9 occurred as a result of explosions or fires, compared with 11 in 1998/99 and 8 in 1997/98.

**Non-fatal injuries resulting from incidents**

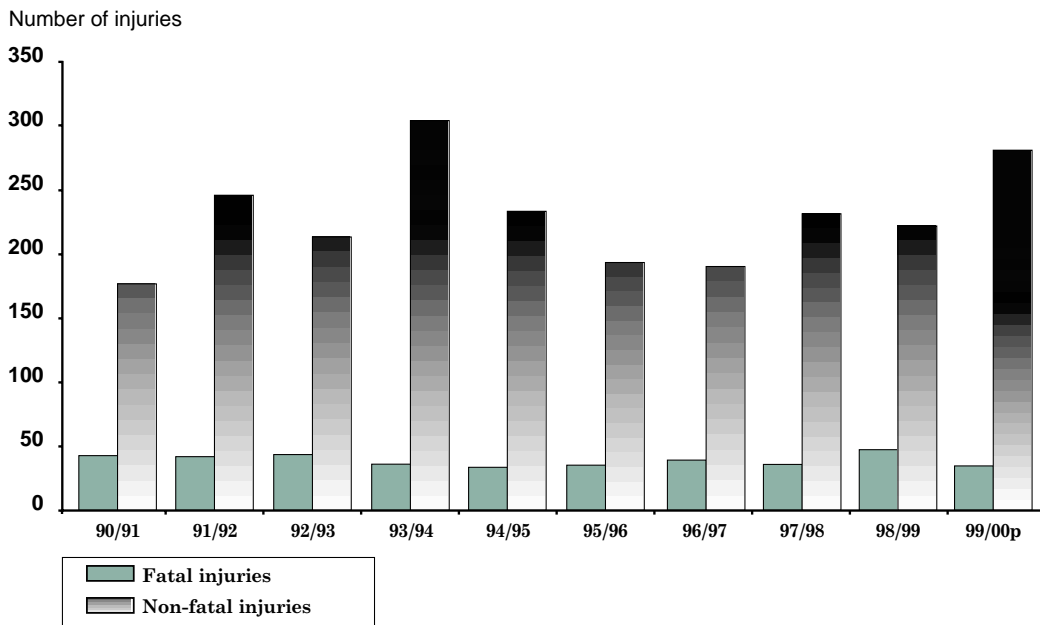
1.218 Based on provisional figures, in 1999/2000 there were 284 non-fatal injuries resulting from incidents relating to the supply and use of flammable gas. This was an increase of 60 compared with 1998/99. Again, numbers of injuries reported each year have fluctuated over the last ten years.

1.219 Of the 284 non-fatal injuries in 1999/2000:

- 225 occurred as a result of carbon monoxide poisoning, 31 more than in the previous year.
- 59 occurred as a result of explosions or fires (the highest since 63 were recorded in 1991/92), compared with 30 in 1998/99 (the lowest number reported since 1989/90), 43 in 1997/98, and 35 in 1996/97. Again, the numbers of these injuries have fluctuated considerably over the last few years.

**FIGURE 1.32**

**Injuries resulting from incidents in relation to the supply and use of flammable gas 1990/91 - 1999/2000p**



## ENFORCEMENT ACTION STATISTICS 1990/91 - 1999/2000

### Enforcement notices

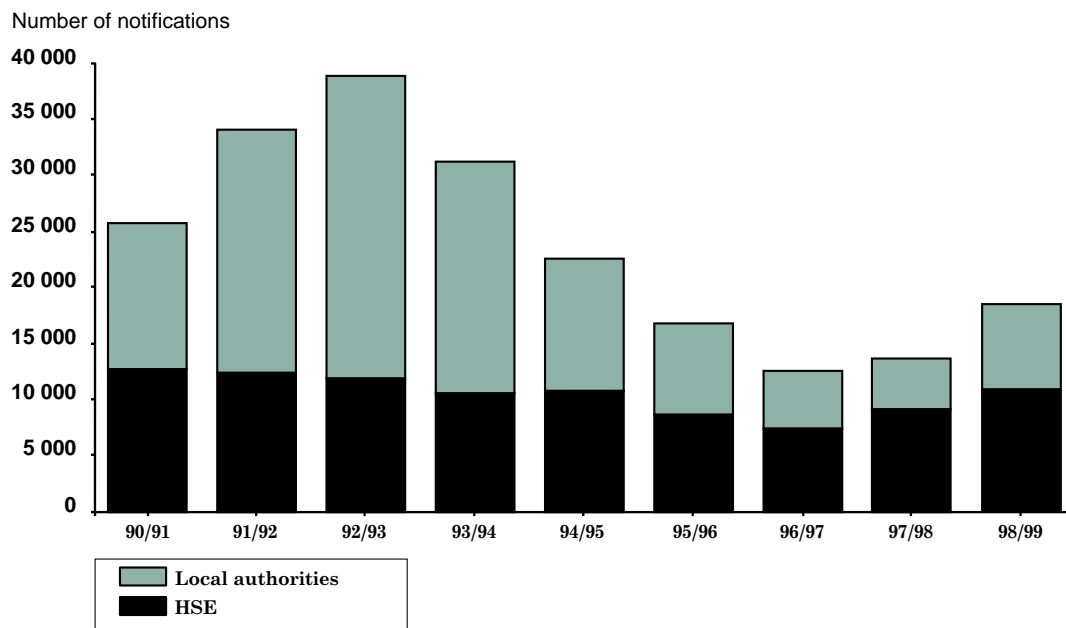
#### *Notices issued by all enforcing authorities*

1.220 Provisional statistics for 1999/2000 for enforcement notices issued by local authorities are not yet available. In 1998/99, 17 370 notices were issued by all enforcing authorities in Great Britain (including local authorities), an increase of 30% compared with the 13 411 notices issued during the previous year.

1.221 In 1998/99:

- 66% of notices issued were improvement notices, compared with 58% in the previous year.
- 5877 prohibition notices were issued, an increase of 3% compared with the previous year. Of these, 94% were immediate prohibition notices, compared with 95% in the previous two years.

**FIGURE 1.33**  
**Enforcement notices issued by enforcing authorities 1990/91 - 1998/99**



#### *Notices issued by HSE*

1.222 Provisional figures for 1999/2000 indicate that 11 304 enforcement notices were issued in Great Britain by HSE, an increase of 4% compared with the number issued in the previous year, and the highest figure since 1992/93. The 10 900 notices issued in 1998/99 represented an increase of 22% compared with 1997/98 when 8911 notices were issued.

1.223 Based on provisional figures in 1999/2000:

- 6954 improvement notices were issued by HSE, an increase of 9% compared with the number issued in the previous year.
- Improvement notices accounted for 62% of the total number of notices issued by HSE compared with 58% in 1998/99 and 50% in 1997/98.
- 195 deferred prohibition notices were issued, 2% of the total number of notices issued by HSE. This was the same proportion as in the previous three years.
- 96% of prohibition notices were immediate, the same proportion as in the previous two years.

1.224 Based on provisional figures for 1999/2000, and compared to the previous year, decreases were recorded for agriculture, and extraction and utility supply industries. Increases in the number of enforcement notices issued were evident in the remaining industry sectors. During 1999/2000 (based on provisional figures):

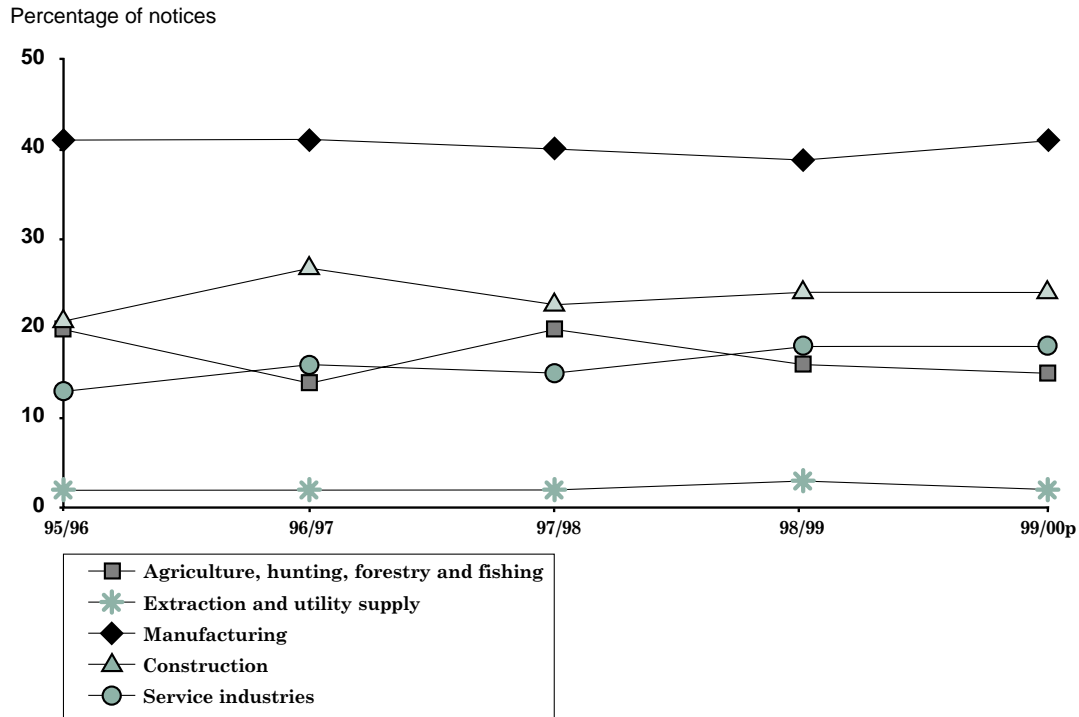
- In agriculture, 1644 notices were issued by HSE, a decrease of 7%. In 1998/99, 1765 notices were issued compared with 1819 in the previous year. In 1999/2000, 15% of the total number of notices were issued in agriculture compared with 16% in 1998/99 and 20% in 1997/98.
- 2% of all notices were issued in extraction and utility supply; 239 notices were issued, compared with 273 in 1998/99 (3% of notices issued, and the highest number issued in recent years), and 169 in 1997/98 (the lowest number in recent years).
- Manufacturing continued to be the sector in which the highest number of notices were issued. The actual number of notices issued increased for the third consecutive year, to 4610. This shows a 10% increase when compared with the 4209 notices issued in 1998/99. The figure for 1999/2000 represents 41% of all industry notices issued, compared with 39% the previous year.
- In construction, there were 2748 notices, 24% of the total number issued across all industries, and the same proportion as in the previous year. This was the highest issued in any year since 1992/93 and represents an increase of 4% compared with the 2654 notices in 1998/99. It is the fourth consecutive yearly increase.
- 18% of the total number of notices were issued in the service sector, the same as the previous year. The proportion of the total number of notices in this sector has generally increased since 1992/93. There were 2063 notices in 1999/2000, the most issued in any year since 1992/93, and the fourth consecutive annual increase. This represents an increase of 3% compared with 1999 notices issued in 1998/99, which in turn was a 46% increase on the 1997/98 figure of 1369 notices.

1.225 Based on provisional figures, in 1999/2000 the proportion of notices which were improvement notices remained the same or increased in all industry sectors, except extraction and utility supply. In construction, 25% of the notices issued were improvement notices compared with 22% in 1998/99, and in agriculture 60% of notices were improvement notices compared with 53% in the previous year.

1.226 Based on provisional figures in 1999/2000, more improvement notices than prohibition notices were issued in all industry sectors with the exception of construction. This has been the case in manufacturing and in the service sector over the last seven years.

**FIGURE 1.34**

**Enforcement notices by industrial sector as a proportion of all notices issued by HSE 1995/96 - 1999/2000p**



***Notices issued by local authorities***

1.227 Statistics for 1999/2000 for enforcement notices issued by local authorities are not yet available. In 1998/99, 6470 notices were issued in Great Britain by local authorities, an increase of 43% compared with 4500 in 1997/98.

1.228 In 1998/99:

- 5140 improvement notices were issued, accounting for 79% of all notices issued by local authorities. This reverses a downward trend of recent years. In 1997/98, 3320 improvement notices were issued.
- 90% of prohibition notices were immediate, a similar proportion to the previous year. The number of deferred prohibition notices increased from 110 in 1997/98 to 130.

**Notices issued by all enforcing authorities in England, Scotland and Wales, 1996/97 - 1999/2000**

1.229 Figures for 1999/2000 for local authorities relating to enforcement are not yet available, and those for HSE are provisional.

1.230 Provisional figures for 1999/2000 indicate 11 304 notices were issued by HSE in Great Britain:

- 8999 notices were issued in England (80% of the total);
- 1401 in Scotland (12%); and
- 904 in Wales (8%).

1.231 For 1998/99, out of a total of 17 370 notices issued in Great Britain by HSE and local authorities:

- 14 322 notices issued in England (82%);
- 1717 issued in Scotland (10%); and
- 1331 notices issued in Wales (8%).

1.232 Before 1998/99 more improvement notices than prohibition notices were issued in England and in Wales, although the opposite was true in Scotland. However, in 1998/99 the number of improvement notices in Scotland increased substantially, making the ratio of improvement notices to prohibition notices more consistent across the countries.

**Table 1.30** Enforcement notices (total improvement and total prohibition) issued by all enforcing authorities (a) in England, Scotland and Wales, 1996/97 - 1998/99

<i>Type of notice</i>	England		Scotland		Wales	
	improvement	prohibition	improvement	prohibition	improvement	prohibition
1996/97	6 724	4 221	489	512	437	231
1997/98	6 532	4 497	541	794	658	389
1998/99	9 529	4 793	1 061	656	903	428

(a) Enforcement action taken by HSE's Offshore Safety Division is allocated according to the legal jurisdiction where the offence occurred.

## Prosecutions

1.233 Prosecution statistics are based on the informations laid by inspectors before the courts in England and Wales and on the charges preferred in Scottish courts. Each information laid or charge preferred relates to a breach of an individual legal requirement and a duty holder may be prosecuted for more than one of these breaches. In the following paragraphs, a charge preferred is treated as being an information laid.

1.234 Conviction statistics are based on the number of informations laid which resulted in a conviction. The remaining informations laid are those which were subsequently withdrawn, resulted in verdicts of not guilty, were adjourned sine die, etc. Some informations laid are 'alternative informations' which are laid in combination with other informations to produce a higher chance of conviction. If, for example, several alternative informations are laid against a duty holder who then pleads or is found guilty of one or more of the charges, then the other

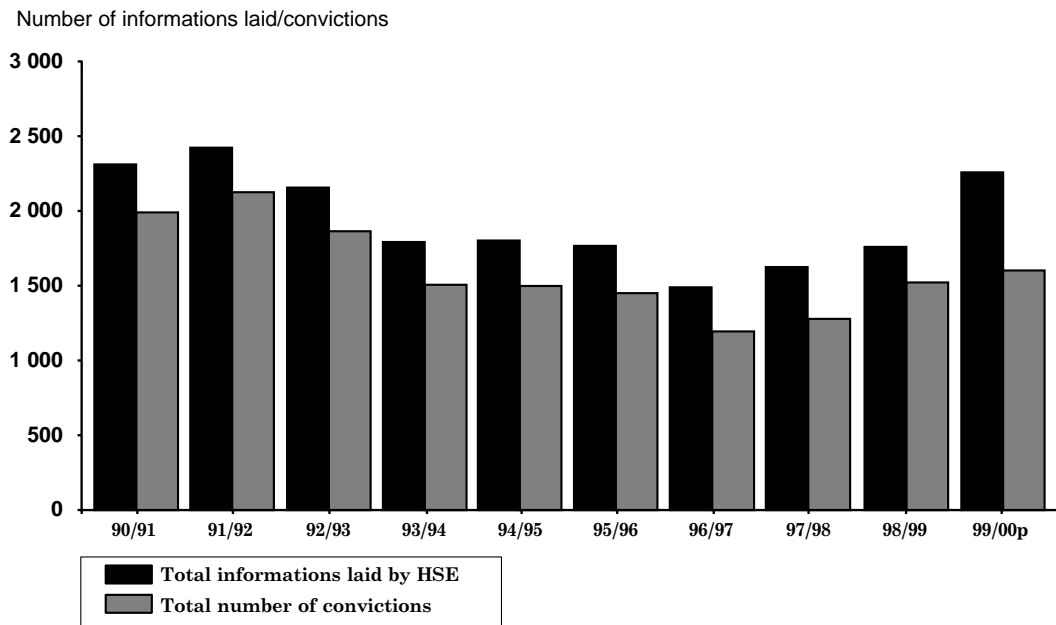
alternative informations may be withdrawn. Some informations are also withdrawn to increase the likelihood of securing convictions on the more serious charges laid against a duty holder.

**Prosecutions by HSE**

1.235 Based on provisional figures (Great Britain), in 1999/2000:

- 2253 informations were laid by HSE, a 28% increase compared with the previous year in which the number of informations was 1759. This represents the highest number of informations laid since 1991/92 (2424), and compares with the 1996/97 figure of 1490.
- The proportion of informations laid by HSE resulting in a conviction was 71%, compared with 86% in 1998/99, and 79% in 1997/98. (See paragraph 1.245.)

**FIGURE 1.35**  
**Total informations laid and number of convictions by HSE 1990/91 - 1999/2000p**



1.236 Based on provisional figures, in 1999/2000, the average fine for convictions against health and safety legislation prosecuted by HSE was £6744, an increase of 39% compared with the average of £4861 in 1998/99. The 1999/2000 figure is the highest the average fine has been to date. However, these figures are distorted by large fines. If fines of £100 000 or more are excluded, the average fine per conviction would have been £4597 in 1999/2000 compared with £3349 in 1998/99 and £3805 in 1997/98.

1.237 Based on provisional figures, in 1999/2000 the number of informations laid increased substantially in all industry sectors, compared with 1998/99. Comparing 1998/99 with 1997/98, all sectors except construction, showed a substantial increase. For 1999/2000, each industrial sector shows the highest number of informations laid within that sector since 1993/94.

1.238 In 1999/2000, provisional figures indicate that the proportion of informations laid resulting in a conviction ranged from 39% in agriculture to 84% in manufacturing. This compares with 1998/99, when the proportions ranged from 69% (extraction and utility supply) to 92% (manufacturing). The conviction rate has fallen in each industrial sector, except for extraction and utility supply which has remained the same. The conviction rate within the manufacturing sector has been among the highest of all industries since 1991/92.

1.239 Provisional figures for 1999/2000 indicate that the average fine for convictions, when compared with 1998/9, increased substantially in all sectors except extraction and utility supply (excluding fines of £100 000 and over).

**Prosecutions by local authorities**

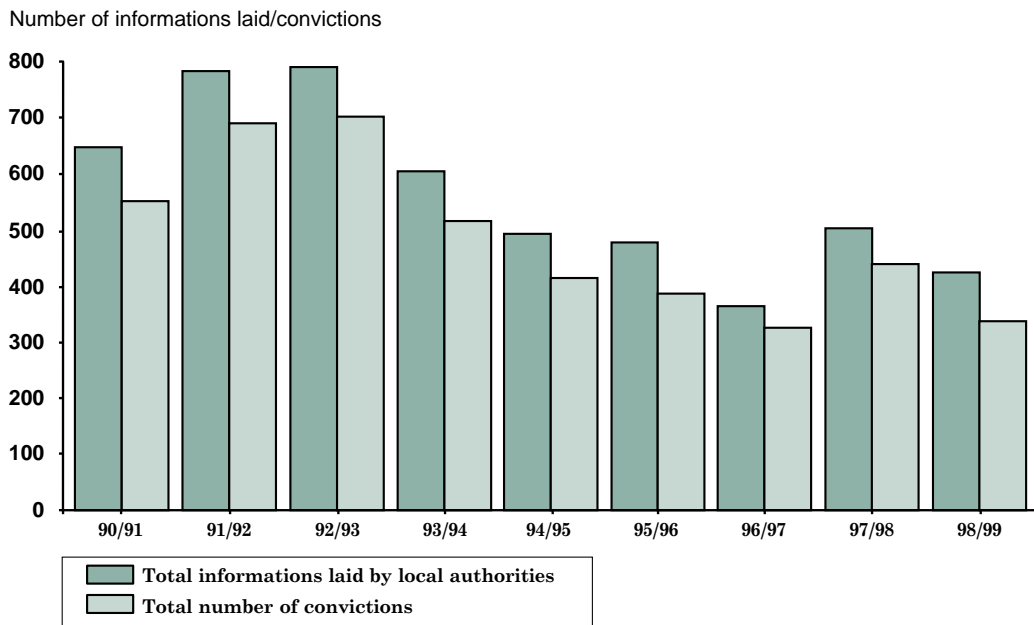
1.240 Statistics for 1999/2000 for prosecutions by local authorities are not yet available.

1.241 In 1998/99:

- There were 424 informations laid by local authorities in Great Britain, compared with 506 the previous year and 364 in 1996/97. In 1998/99 these accounted for 19% of the total number laid by all enforcing authorities, compared with 24% in 1997/98, and 20% in 1996/97.
- 79% of informations laid by local authority inspectors resulted in convictions, compared with 87% in 1997/98.
- The average fine per conviction by local authorities was £4098 compared with £2224 in 1997/98. The figure for 1998/99 included one fine of £425 000 without which the average fine would have been £2289.

**FIGURE 1.36**

**Total informations laid and number of convictions by local authorities 1990/91 - 1998/1999**



**Prosecutions by all enforcing authorities in England, Scotland and Wales, 1996/97 - 1999/2000**

1.242 It should be noted that, due to the small number of prosecutions by local authorities in Scotland and Wales, the conviction rate varies considerably each year.

1.243 Figures for 1999/2000 for local authorities are not yet available. For 1999/2000 (HSE only) out of 2253 informations laid and 1602 convictions in Great Britain:

- 1846 informations laid were in England (82% of the total) and 1270 convictions (79% of total convictions);
- 186 informations laid in Scotland (8%) and 135 convictions (8%); and
- 221 informations laid in Wales (10%) and 197 convictions (12%).

1.244 The provisional conviction rate in Great Britain (HSE only) for 1999/2000 was 71% compared with 86% in 1998/99. Broken down by country:

- In England the provisional conviction rate for 1999/2000 was 69%, compared with 87% in 1998/99;
- In Scotland the provisional rate was 73% compared with to 69% the previous year.
- For Wales the conviction rate of 89% compares with 90% respectively. Since 1996/97, Wales has had the highest conviction rate.

1.245 The figures for 1999/2000 are influenced by the unusually high number of adjournments and adjournments sine die. These include a number of informations adjourned sine die following a single incident involving multiple breaches of asbestos regulations, as well as 81 informations laid but where the cases had been adjourned at the end of 1999/2000. These cases will be brought back to the courts in due course.

1.246 The Great Britain local authority conviction rate for 1998/99 was 79%. For England, Scotland and Wales these proportions were 82%, 56%, and 61% respectively.

**Table 1.31** Number of informations laid and convictions, HSE (a) and local authorities 1996/97 - 1998/99

	England		Scotland		Wales	
	informations	convictions	informations	convictions	informations	convictions
1996/97	1 555	1 282	199	147	100	89
1997/98	1 759	1 427	186	127	188	170
1998/99	1 818	1 566	167	113	198	170

(a) Enforcement action taken by HSE's Offshore Safety Division is allocated according to the legal jurisdiction where the offence occurred.

**Table 1.32** Average fine HSE and local authorities 1996/97 - 1998/99

	<b>England</b>	<b>Scotland</b>	<b>Wales</b>
1996/97	4 386	3 572	7 039
1997/98	3 832	6 898	3 887
1998/99	4 988	3 056	3 382

## TECHNICAL NOTES AND DEFINITIONS

### Sources of injury, dangerous occurrence, and gas safety statistics

1.247 Injury and dangerous occurrence statistics given in this report for 1996/97 - 1999/2000 were compiled from reports made to HSE and local authorities under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR 95). These regulations came into effect on 1 April 1996 and replaced RIDDOR 85, the Railways (Notice of Accidents) Order 1986, and certain provisions of the Offshore Installations (Inspectors and Casualties) Regulations 1973 and the Submarine Pipelines (Inspectors etc) Regulations 1977. Certain provisions of the Regulation of Railways Act 1871 and the Transport and Works Act 1992 were also repealed or amended.

1.248 Certain reporting requirements under RIDDOR 95 differ from those under the previous regulations, RIDDOR 85. Hence many statistics from 1996/97 onwards cannot be compared with those for previous years.

### Injury reporting requirements of RIDDOR 95

1.249 All fatal injuries and certain non-fatal injuries arising from accidents at work (or in connection with work activities) are required to be reported to the HSE or local authorities under RIDDOR 95. The regulations apply to injuries to employees, the self-employed and members of the public. The term *accident* includes acts of physical violence at work and acts of suicide or trespass on railways or other transport systems.

1.250 Non-fatal injuries to employees and the self-employed are reportable as *major injuries* if they are on the list of injuries specified as major under RIDDOR 95. Non-fatal injuries are reportable as *over-3-day injuries* if the injured person is unable to carry out their normal work for four days or more.

1.251 Non-fatal injuries to members of the public are reportable if the injured person is taken from the site of the accident to a hospital. However, if the accident occurred at a hospital, only those injuries on the list of major injuries are reportable.

1.252 Schedule 1, paragraph 2(1) of RIDDOR 95 defines the following as major injuries:

- any fracture, other than to the fingers, thumbs or toes
- any amputation
- dislocations of the shoulder, hip, knee or spine
- loss of sight (temporary or permanent)
- chemical or hot metal burns to the eye or any penetrating injury to the eye
- any injury resulting from an electric shock or electrical burns leading to unconsciousness or requiring resuscitation or requiring admittance to hospital for more than 24 hours

- any other injury leading to hypothermia, heat induced illness or unconsciousness; or requiring resuscitation; or requiring admittance to hospital for more than 24 hours
- unconsciousness caused by asphyxia or exposure to a harmful substance or biological agent
- acute illness requiring medical treatment, or loss of consciousness arising from absorption of any substance by inhalation, ingestion or through the skin
- acute illness requiring medical treatment where there is a reason to believe that this resulted from exposure to a biological agent or its toxins or infected material

### ***Scope of RIDDOR 95***

1.253 The following are not reportable under RIDDOR 95:

- injuries resulting from road traffic accidents involving people travelling in the course of their work, which are covered by road traffic legislation;
- injuries reportable under separate merchant shipping, civil aviation and air navigation legislation;
- injuries to members of the armed forces; and
- fatal injuries to the self-employed arising out of accidents at premises which the injured person either owns or occupies.

### **Dangerous occurrences and gas incidents**

1.254 Selected incidents which have a high potential to cause death or serious injury, but which happen relatively frequently are reportable under RIDDOR 95 as *dangerous occurrences*. A dangerous occurrence is reportable whether or not someone is injured.

1.255 A list of specific dangerous occurrences in the following categories (or parts) are reportable:

- Part I: General (reportable in relation to any place of work)
- Part II: Dangerous occurrences in relation to mines
- Part III: Dangerous occurrences in relation to quarries
- Part IV: Dangerous occurrences in relation to railways and other relevant transport systems
- Part V: Dangerous occurrences in relation to offshore workplaces

1.256 Under RIDDOR 95, conveyors of natural gas and suppliers of LPG (liquid petroleum gas) have a duty to notify HSE of any death or injury which has arisen out of, or in connection with, the supply and use of the gas in question. These reports exclude incidents

at the workplace. Dangerous gas fittings are also reportable; responsibility for reporting them lies with CORGI registered gas businesses.

## **RIDDOR 85**

1.257 Injury and dangerous occurrence statistics for 1986/87 - 1995/96 were compiled from reports made under RIDDOR 85. Under these regulations, the range of reportable injuries and dangerous occurrences were generally not as extensive. In particular:

- Injuries resulting from acts of physical violence at work and acts of suicide or trespass on railways or other transport systems were not reportable.
- The list of defined major injuries was not as extensive. In particular, fractures of the hand, foot, collarbone, shoulder blade and ribs, dislocations of the spine, knee, hip and shoulder were not reportable. Amputations of fingers, thumbs or toes were only reportable if the joint or bone was completely severed.
- Non-fatal injuries to members of the public were reportable only if the injury was on the list of major injuries.

1.258 Under RIDDOR 85, dangerous occurrences were reportable under four sections, similar to Parts I-IV of RIDDOR 95. However, these excluded a number of occurrences which are now reportable under RIDDOR 95. In particular, under Part IV, many of the occurrences relating to railways were not reportable under RIDDOR 85.

1.259 Additional occurrences reportable only in relation to offshore workplaces became reportable under a new section, Part V, of RIDDOR 95.

1.260 Under RIDDOR 85, the responsibility for reporting gas incidents rested with suppliers (or fillers/suppliers of refillable containers).

1.261 Estimates of the effect the changes in RIDDOR had on the statistics between 1995/96 and 1996/97 were published in *Health and safety statistics 1997/98*.<sup>6</sup>

## **Sources of enforcement data**

1.262 Action taken by HSE inspectorates and other enforcing authorities, including local authorities, to ensure compliance with the Health and Safety at Work etc Act 1974, and associated legislation, ranges from general advice through to the issue of enforcement notices and prosecutions. Statistics on the numbers of enforcement notices and prosecutions made by HSE are collected by individual enforcing authorities on an ongoing basis. These statistics are brought together and summarised in this report.

1.263 There are three main types of enforcement notice:

- Improvement notices require employers to put right a contravention of health and safety legislation within a specified time limit.
- Immediate prohibition notices stop work activity that gives, or will give, rise to a risk of serious personal injury.

- Deferred notices are those which stop a work activity within a specified time, for example, because the risk of injury does not require immediate action to control it, or where it would be unwise to interrupt a process in mid-cycle.

1.264 Prosecution statistics are based on the informations laid by inspectors before the courts in England and Wales and on the charges preferred in Scottish courts. Conviction statistics are based on the number of informations laid which resulted in a conviction. The remaining informations laid are those which resulted in withdrawals, verdicts of not guilty, etc.

### **Employment data used to calculate injury rates**

1.265 Injury rates for employees produced by HSE are based on employment estimates produced by the Office for National Statistics (ONS) from the *Labour force survey*. Such estimates are normally subject to a number of revisions based on information from the *Annual employment survey*. When HSE finalises the provisional injury statistics, rates are revised using the employment data available at that particular time. Injury rates are not revised to incorporate subsequent revisions to employment estimates by the ONS. Such revisions are generally small, but as a result, injury rates calculated using HSE's injury statistics and finalised employment data from the ONS may differ slightly from finalised rates published in this report.

## PART 2: OCCUPATIONAL ILL-HEALTH STATISTICS

### INTRODUCTION

2.1 The term occupational ill health covers a wide range of diseases and disorders. Some like lead poisoning and asbestosis are very clearly occupational, since the exposures needed to cause them are highly unlikely to be found in a non-occupational context. Others like musculoskeletal disorders, stress and infections can have both occupational and non-occupational causes, and the link to workplace exposures may not be so clear. Such conditions are better called *work related*, though for brevity we sometimes use the term work related to embrace both occupational and work-related conditions. When there is a long time interval between the start of the relevant occupation and the diagnosis of the disease, as in many cases of cancer, hearing loss or chronic bronchitis for example, then the link may not be immediately obvious. While a specialist doctor can in most cases give an opinion on whether a disease is work related, they will only see a minority of cases, consequently it is difficult to collect complete statistics of occupational and work-related disease. The following section gives some key information on the various sources of information that HSE uses on ill health; readers unfamiliar with these sources may find it helpful to read this background before examining the latest figures.

### SOURCES OF INFORMATION

2.2 No single source of information is available in Great Britain on the nature and full extent of occupational and work-related ill health. HSE's policy is to make the fullest use of a range of sources, and develop new ones where necessary. Different sources of information usually give varying sized estimates of the extent of work-related disease, reflecting differences in severity and the extent to which cases have been confirmed as work related. This is illustrated by comparing the following major sources:

- The *Industrial Injuries Scheme* (IIS), operated by the Benefits Agency on behalf of the Department of Social Security (DSS) gives compensation for specified '*prescribed diseases*' (PDs) which are conditions whose occupational cause is well established. Cases are individually confirmed by medical examination and checking of the work history. (References in the following text to assessed cases means cases assessed under this scheme as having disability rated at 1% or greater).
- *Voluntary surveillance schemes* for the reporting of occupational disorders are co-ordinated by the University of Manchester with HSE funding. They include schemes known as SWORD (Surveillance of Work-related and Occupational Respiratory Disease), EPIDERM (Occupational Skin Surveillance Scheme Reported by Dermatologists), OPRA (Occupational Physicians Reporting Activity) and others which have been added under the umbrella scheme known as ODIN (Occupational Disease Intelligence Network). These schemes count new cases which are caused by work in the opinion of the specialist doctor who sees them. Statistics are presented in this volume for *occupational respiratory, skin, hearing, and musculoskeletal disorders, infections, and psychological disorders (including stress)* based on reports from these schemes. It should be noted that not all cases of occupational disease will be seen by participating specialists, and that coverage by occupational physicians, who form a major component of ODIN, varies considerably according to industry or type of employer (see *Further information on data sources* at the end of this chapter).

- *Household surveys* yield estimates of the number of people who say that they have conditions which they think have been caused or made worse by work. Such surveys obviously depend on lay people's perceptions of medical matters, but such perceptions are of interest in their own right, and responses can be validated in various ways. Surveys are the only way in which one can make any estimate of the large volume of work-related disease which may not be seen or recognised by doctors. HSE has carried out two surveys of self-reported work-related illness, in 1990 and 1995 (referred to as SWI90 and SWI95).
- *Death certificates* are useful for monitoring the most serious forms of some types of occupational lung disease including cancers, but are of limited use for other conditions.

2.3 These sources are described in more detail in *Further information on data sources* at the end of this chapter.

## THE OVERALL PICTURE

2.4 Our most inclusive and broadly based indications of the overall prevalence of work-related ill health are obtained from sample surveys of the national population in which people were asked whether they had any illnesses or problems, in the 12 months before the survey, which had been caused or made worse by their work (current or past). HSE has carried out two such surveys in 1990 and 1995, known as SWI90 and SWI95 (surveys of Self-reported Work-related Illness), using samples of households from the Labour Force Survey. Despite the time that has elapsed since 1995, SWI95 remains our best available source for an overall prevalence estimate.

2.5 In the SWI95 survey respondents who reported a work-related illness were asked for permission for HSE to obtain information from the treating doctor (usually the GP).<sup>5</sup> Such information, where obtained, usually supported the respondent's belief about work relatedness. (In only 11% of cases where medical opinion was obtained did the doctor consider that work was 'unlikely to be' or 'definitely not' a cause of the illness).

2.6 However, medical opinions were only available for about half the reported cases. All individual responses were therefore reviewed, and were excluded from the calculation of national estimates if the reported cause was implausible, taking account of the doctor's opinion when available, but not necessarily taking it as decisive. (Criteria for exclusion are described in the detailed report of the survey.<sup>5</sup> Also excluded were illnesses caused by accidents other than manual handling accidents, and illnesses arising from war conditions).

2.7 Illnesses such as heart disease, hypertension or other circulatory diseases, which respondents believed were caused by 'stress' at work were accepted as being reports of stressful working conditions. Since respondents would not generally have been able to observe the effects of stress on the disease process, such reports were counted in a separate category of stress-ascribed disease, rather than as valid reports of the stated disease being caused or made worse by work.

2.8 The main results from the SWI95 are listed below. (These are national estimates for Great Britain, derived from a sample of some 40 000 respondents):

- The estimated prevalence of self-reported work-related illness in Great Britain in 1995 was 2 million.
- The main categories of illness were musculoskeletal disorders (estimated 1.2 million), stress, depression or anxiety (279 000) and other stress-ascribed disease (254 000).

Thus a total of over half a million individuals were suffering from stress or an illness ascribed to stress. Over one third of the stress-ascribed conditions were coded as hypertension, heart disease or stroke.

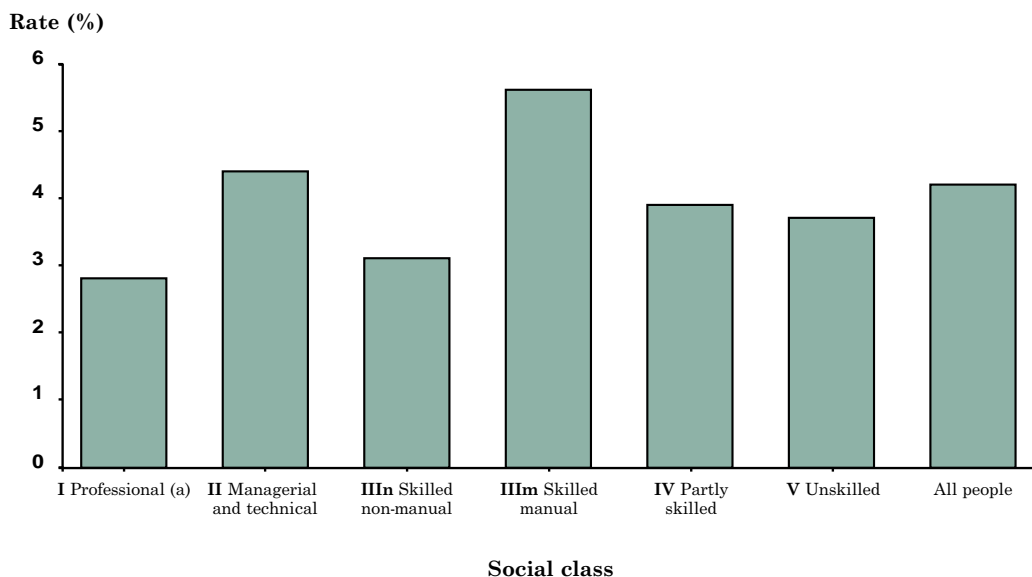
2.9 Other illness categories with substantial estimated numbers affected were:

- lower respiratory disease (202 000);
- deafness, tinnitus or other ear conditions (170 000);
- skin disease (66 000);
- headache or 'eyestrain' (50 000);
- trauma (34 000);
- vibration white finger (36 000); and
- pneumoconiosis (19 000).

2.10 It is estimated from SWI95 that 721 000 of the two million people with a work-related disease were no longer in work. Of the remaining 1.3 million, 672 000 took no time off work and 624 000 lost an estimated 18 million working days through illness. (These figures incorporate some revisions made since publication of the SWI95 report.<sup>5</sup> More details are given in an information sheet available from the address on page 207).

2.11 Figures 2.1 - 2.3 show estimates based on SWI95 of the perceived effects of different kinds of job, grouped into occupational social classes. Workers in skilled manual jobs had the highest prevalence rate (5.6%) of self-reported illness (Figure 2.1). Those in the 'professional' class had the lowest prevalence (2.8%), though this estimate could be subject to some error since it was based on a small number of cases in the sample.

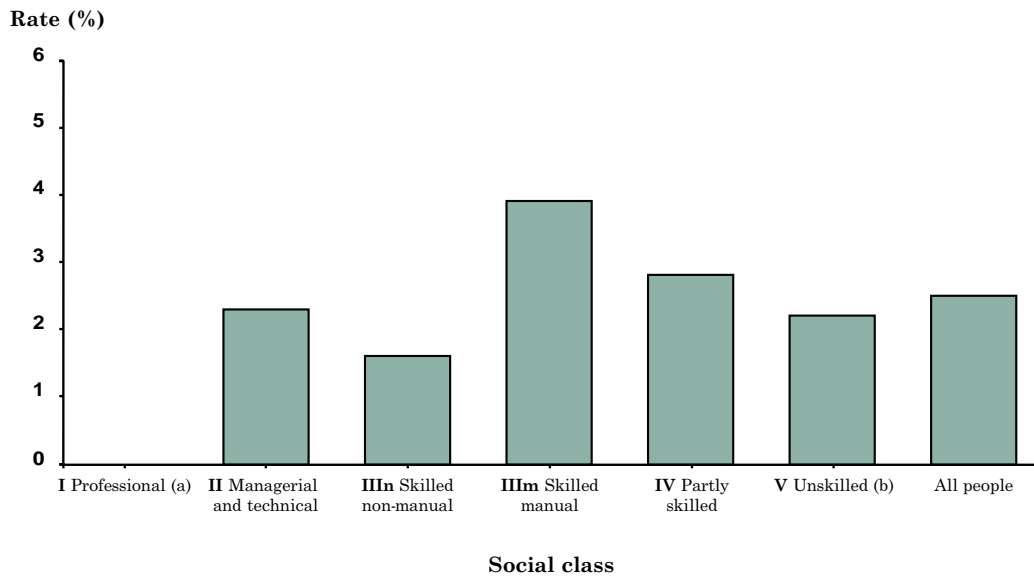
**FIGURE 2.1**  
**Estimated 1995 prevalence rate (%) of all illness, caused by the current or most recent job by occupational social class**



(a) Estimate based on 30 or fewer sample cases.

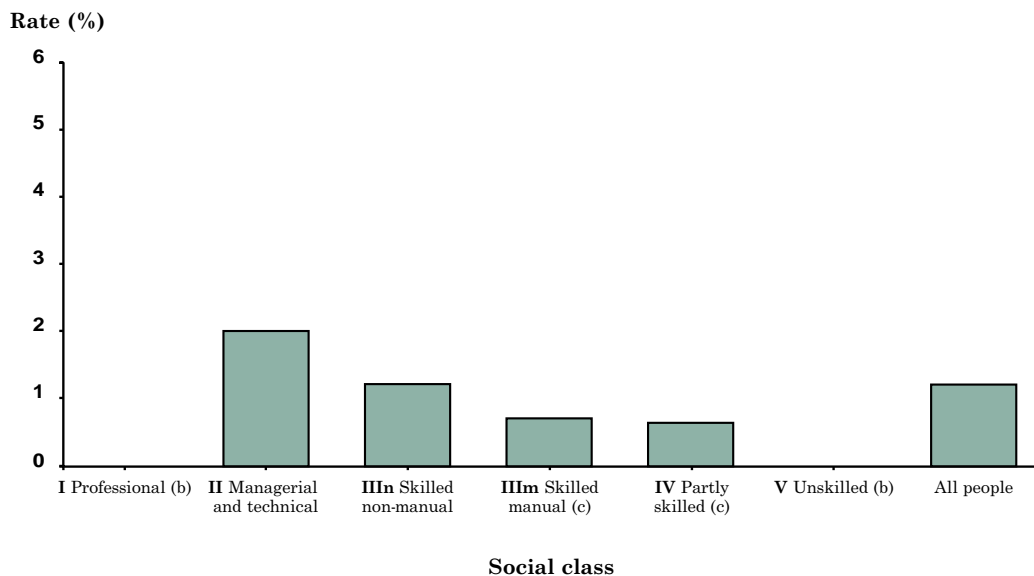
2.12 It appears that different types of illness have different relationships to the various occupational classes. However, only the two biggest disease groups, musculoskeletal disorders and stress and related conditions (ie stress, depression, anxiety and stress-ascribed conditions) have sufficient numbers in the sample to allow detailed analysis. For musculoskeletal disorders (Figure 2.2), skilled manual workers had the highest self-reported prevalence rate (3.9%), while for stress and related conditions (Figure 2.3), managerial and technical occupations (which includes school teachers and nurses) had the highest rate at 2.0%.

**FIGURE 2.2**  
**Estimated 1995 prevalence rate (%) of musculoskeletal disorders, caused by the current or most recent job by occupational social class**



- (a) Sample number too small to provide reliable estimate.
- (b) Estimates are based on 30 or fewer sample cases.

**FIGURE 2.3**  
**Estimated 1995 prevalence rate (%) of stress (a), caused by the current or most recent job by occupational social class**



- (a) Stress, depression or anxiety, or an illness ascribed to stress at work.
- (b) Sample numbers too small to provide reliable estimates.
- (c) Estimates are based on 30 or fewer sample cases.

2.13 Obviously both work and non-work factors can have a role in causing illness. The frequent reporting of musculoskeletal disorders and stress may reflect increasing public awareness of the importance of these conditions and of the possibility of work factors causing them or making them worse. Full details of the results and methods of SWI95 have been published in the report *Self-reported work-related illness in 1995*.<sup>5</sup> While the SWI surveys provide estimates of disease prevalence, other sources of information provide incidence estimates. These can generally be taken as indicating numbers of newly diagnosed cases, though there may be some delay between the onset of disease and its reporting. They provide some information on trends, which is useful since the amount of information currently provided by comparing the two SWI surveys is very limited and uncertain. They also have the feature that all cases have been verified by doctors. (As noted above, doctors' opinions were only available for about half of the SWI95 self-reported cases). Some key information on incidence and trends is given below; further information follows in the section on *Causes and kinds of disease*.

2.14 The time perspective is particularly important when considering the possible effects of agents such as *mineral dusts or fibres (asbestos, coal, silica), noise and vibration*, which typically do not do obvious and immediate harm, but with continued exposure have the potential for hidden damage which may not become apparent until years afterwards. If not properly controlled, noise and vibration can cause long-term disability by deafness or hand-arm vibration syndrome. Asbestos-induced lung diseases can not only cause disability but also shorten life.

2.15 Asbestos exposures are strictly regulated, and there is reason to hope that for workers who know they are dealing with asbestos, risks from current exposures are now low. However, the diseases it may cause have long and very variable intervals (often decades) between the beginning of exposure and diagnosis, so that statistics of recent cases relate to working conditions in the past. Current controls should lead to reductions in the incidence of these diseases in the future.

- Cases of *asbestosis* (pneumoconiosis due to asbestos) assessed for disablement benefit have roughly doubled in the ten years to 1996, though with short term fluctuations. The figure of 407 in 1999 is somewhat higher than in the two preceding years but less than the 479 cases assessed in 1996.

2.16 Two types of cancer are caused by asbestos - *mesothelioma* and *lung cancer*. Because of the timing with which asbestos was brought into widespread use in British industry, it is the generation of males born around the Second World War, and typically beginning work in the 1950s or 1960s, that have so far suffered the highest age-adjusted rates for mesothelioma. The situation is improving in that as younger people are currently less at risk and likely to remain so; since asbestos is now strictly regulated they are unlikely to have the same heavy exposures during their working lives as some of their elders did. However, the legacy of past exposures, combined with the typically long delays between first exposure and death (15 to 60 years), means that deaths from mesothelioma have shown a fairly steady upward increase from the late 1960s up to 1995.

- There were 1527 deaths from mesothelioma in 1998, in line with the long-term upward trend, although the rate of increase in the two previous years did appear to slow down somewhat. Most cases of lung cancer due to asbestos cannot be individually counted but numbers are estimated to be at least equal to mesothelioma deaths.

2.17 Previous analysis of mesothelioma up to 1991 was used by HSE as a basis for predictions that deaths would continue to rise well beyond the year 2000. However, more recent data no longer fit the model that was used and, therefore, it is no longer appropriate to use it. An alternative method of prediction suggests that male mesothelioma deaths may peak at somewhere between 1400 and 2100 annually (lower than the previous projection), with the peak being reached at around year 2005 for the lower maximum and 2020 for the higher. However, these latest estimates rest on so many uncertain and largely unverifiable assumptions that they can only be regarded as informed guesses.

2.18 *Lung cancer* caused by asbestos is much harder to estimate since most cases are clinically indistinguishable from the far greater number caused by tobacco. Because of the difficulty of determining the cause of individual cases, the numbers awarded disablement benefit considerably understate the likely true number, which is probably at least equal to the number of mesotheliomas and may be even greater.

- There were 461 new cases of pneumoconiosis (excluding asbestosis) assessed under the Industrial Injuries Scheme in 1999. The higher figure in the previous year was due to the widening of the terms under which compensation is payable to coal miners for bronchitis, which resulted in many claimants for this disease being examined, and some of them being assessed as having pneumoconiosis instead. Given that the latest figure for bronchitis (see below) is still high (though not as high as in the two preceding years) it seems likely that the pneumoconiosis figure is still to some extent being inflated through the examination of bronchitis claimants. Otherwise the underlying trend in DSS cases appears to be stable or possibly falling. Numbers of RIDDOR reports are much fewer, and in contrast to DSS cases they generally refer to workers who are not yet retired. However, there has been an increase in RIDDOR numbers in the last two years (19 in 1999/2000 compared with 5 in 1998/99).
- There were also 1451 assessed cases of bronchitis or emphysema in coal miners in 1999. This is notably fewer than the figures of over 3000 annually in the two preceding years, but still much bigger than the figure of 269 in 1996 which is probably closer to the true incidence of the disease. The high numbers in the last three years result from a widening of DSS medical and occupational criteria for this disease. Since compensation for bronchitis or emphysema first became available in 1993, and have been considerably affected by this widening of eligibility, there is insufficient information to assess any long-term trend.
- Past levels of noise in the workplace are still giving rise to claims for *deafness*. There were 316 awards in 1999, more than the 258 in the previous year but less than the 413 in 1997. The long-term trend has been downward for some years.
- There were 3155 assessed cases of *vibration white finger* in 1998/99, caused by prolonged use of vibrating hand-held tools. Numbers were similar in the three preceding years. Given that a substantial proportion of cases are in ex-miners, who have been encouraged to claim by the successful settlement of civil litigation for this disease, these figures cannot be taken as representing the true incidence of disease arising from current working conditions, nor can one reliably estimate any real trend from them.

2.19 In contrast to the diseases mentioned previously, the chemical or biological substances that can cause occupational asthma usually do so within weeks or months of first exposure, and statistics for this disease therefore reflect recent exposures.

- An estimated 1118 cases of occupational asthma were seen for the first time by specialists who reported to the SWORD/OPRA schemes in 1999, around 4 cases per 100 000 workers per year. After allowing for under-reporting and cases never seen by chest or occupational physicians, the true incidence is likely to be several fold higher, perhaps 20 or more cases per 100 000 workers.

2.20 *Occupational dermatitis* is another disorder which is usually linked to recent working conditions.

- Reports to EPIDERM and OPRA indicate an annual average of some 4500 cases of work-related skin disease (about 80% contact dermatitis) seen by dermatologists or occupational physicians in 1998 and 1999. Numbers of DSS assessed cases of dermatitis are much smaller (220 in 1998/99) and show a downward trend.

2.21 *Musculoskeletal disorders* affect very many people, and work activities often contribute to the problem.

- An estimated 8500 new cases of work-related musculoskeletal disorders were seen by occupational physicians or rheumatologists in the OPRA and MOSS (Musculoskeletal Occupational Surveillance Scheme) schemes in 1999. In both schemes conditions affecting the hand, wrist or arm were most commonly reported.

2.22 Only a few specific musculoskeletal disorders qualify for compensation from the DSS as 'prescribed diseases' (*tenosynovitis, cramp of the hand or forearm, and the 'beat' conditions*). From 1988/89 to 1992/93 DSS cases showed a marked increase to nearly 1300 in that year (possibly reflecting increasing awareness of work-related upper limb disorders during that time), but have fallen each year since, to 465 in 1998/99.

2.23 There were some 1100 cases of *occupationally acquired infections* seen by communicable disease specialists and reported in the Surveillance of Infectious Disease At Work (SIDAW) scheme in 1998, though this figure substantially underestimates the true incidence of occupational infections. In 1999 there were even fewer SIDAW reports (approximately 600) though most of this fall is probably due to a change in reporting policy, which reduced the reporting of diarrhoeal disease cases.

2.24 The incidence of *work-related mental health problems* estimated from reports by psychiatrists and occupational physicians in the SOSMI (Surveillance of Occupational Stress and Mental Illness) and OPRA schemes is about 6500 cases a year. This almost certainly underestimates the true incidence of such conditions, compare the high prevalence of self-reports of work-related stress, anxiety and depression in the SWI95 survey.

## STATISTICS FOR ENGLAND, SCOTLAND AND WALES

2.25 Information is available from the SWI95 survey on self-reported work-related illness in Scotland and Wales, though estimates are less precise than for Great Britain as a whole because of the smaller sample sizes. The prevalence rates for self-reported illness were slightly lower in Scotland and Wales than in Great Britain as a whole, while the average number of working days lost per worker were higher. However, none of these differences were statistically significant. In Scotland an estimated 4.5% of people who had ever been employed had a work-related illness, the 95% confidence interval (95% CI) being from 3.6%

to 5.4%. The corresponding estimate for Wales was 4.7% (95% CI 3.4% to 6.0%), and for Great Britain 4.8% (95% CI 4.5% to 5.1%). (Confidence intervals represent the range of uncertainty which results from the estimates being derived from samples of the population, not from the entire population. They are calculated in such a way that each range has a 95% chance of including the true value, ie the value that would have been obtained if the entire population had been surveyed). In terms of total prevalence estimates, there were 174 000 people in Scotland with a work-related illness and 100 000 in Wales. The average working time lost per worker from work-related illness was 0.88 days (95% CI 0.39% to 1.37%) in Scotland and 0.80 days (95% CI 0.20% to 1.40%) in Wales. Although the central estimates were larger than for Great Britain (0.65 days, 95% CI 0.53% to 0.77%), the wide range of the confidence intervals reflects the fact that differences between countries were not statistically significant.

2.26 Tables A2.1 and A2.2 show breakdowns of assessed prescribed disease cases for England, Scotland and Wales. The numbers reflect in some degree the different patterns of industry (current or former) in the different countries. Heavy industries which formerly employed large numbers of people in particular areas have left a legacy of industrial disease there. In 1999, 36% of assessed cases in Wales were chronic bronchitis or emphysema (compared with 16% in England and 15% in Scotland), obviously reflecting the former predominance of coal mining as a major industry in Wales. In Scotland 42% of assessments were for vibration white finger (compared with 39% in England and 22% in Wales) probably reflecting the geographical distribution of the shipbuilding industry.

2.27 Death rates for mesothelioma (Table A2.40) are high in Scotland (46 per million males in 1996-98) compared with Great Britain (43 per million males), reflecting past exposures from the shipbuilding industry in the Clydeside area, although it may be noted that rates for some English regions especially the North are higher than the average for Scotland as a whole. The rate for Wales (32 per million males) is lower than in any English region.

## CAUSES AND KINDS OF DISEASE

2.28 In the detailed commentary which follows, groups of diseases have been arranged according to the predominant type of hazard (chemical, physical, biological, musculoskeletal or psychological) which most often causes them. The main diseases are listed in the contents pages at the front of this report. The classification by type of hazard is merely for convenience, and has not been applied so rigorously as to split up groups of diseases which are related from a medical point of view. For example, byssinosis, farmer's lung and some cases of asthma are caused by biological agents, but it is simpler to group them along with the other respiratory diseases which are nearly all caused by chemical agents (with which we include mineral fibres and dusts).

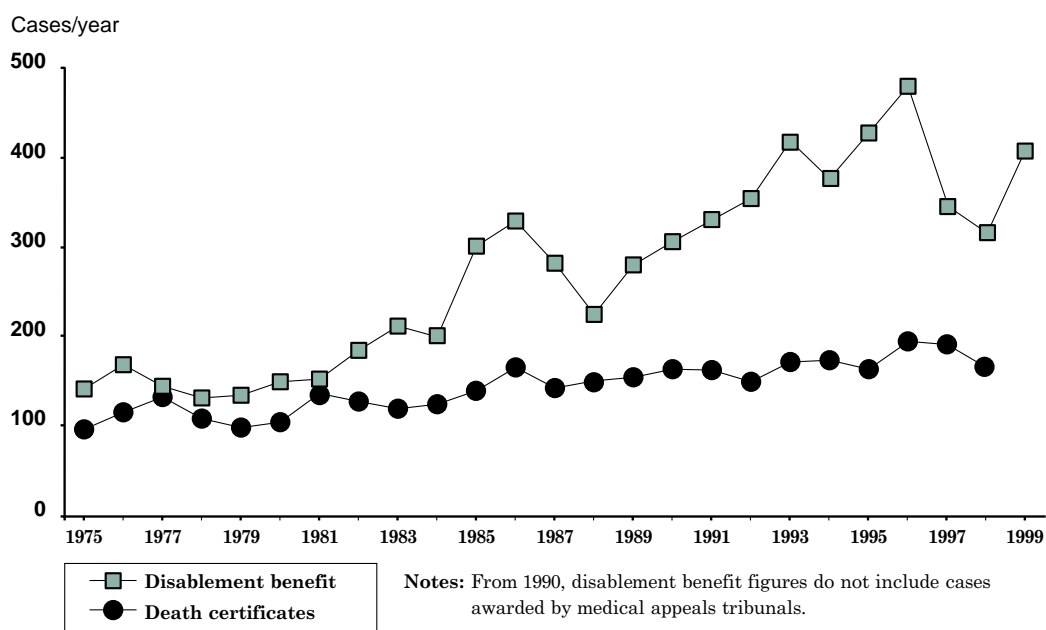
### Chemical hazards

#### *Asbestos-related diseases*

##### *Asbestosis*

- Disablement benefit awards for asbestosis have risen erratically, but rather strongly since the early 1980s, reaching a peak of 479 in 1996 (Figure 2.4 and Table A2.6). Following a fall over the next two years to 316 in 1998, the number of awards rose again to 407 in 1999. Death certificates mentioning asbestosis (excluding those also mentioning mesothelioma) numbered 165 in 1998, a fall from the previous year's figure of 190. Before 1998 the number had been following a slow upward trend since the 1970s (Figure 2.4 and Table A2.38).
- The two industry groups with the highest incidence of DSS assessments for asbestosis, based on 1998 and 1999, figures were construction (including insulation work and stripping), and extraction, energy and water supply.

**FIGURE 2.4**  
**Asbestosis**



2.29 From 1974 to 1986 the proportion of disablement benefit awards for asbestosis falling into the different percentage disablement categories remained very stable (shown in Table A2.7 for 1996 onwards). In 1987 the proportion of awards assessed at 10% or less fell from about a third to about a fifth of all awards, and remained at about this level until the mid-1990s. The proportion has fallen further over the last few years to 15% in 1999 compared with 17% in 1998 and 22% in 1996. Conversely, the proportion of awards assessed at between 20% and 40% disablement increased over the same period to 75% in 1999 compared with 72% in 1998 and 67% in 1996. The median age of first diagnosis had also been constant at just under 60 up to the beginning of the 1980s, it then began to rise slowly and is now above 65.

2.30 These two continuing trends might indicate a tendency for individuals to claim benefit later in the course of the disease than previously. It might also reflect reductions: if groups of workers born more recently have progressively lower rates of asbestosis, the average age at diagnosis of new cases will increase. However, it is still the case that relatively higher numbers of younger (pre-retirement age) workers are affected by asbestosis than is the case for pneumoconiosis in the coal mining industry.

### *Mesothelioma*

- The annual number of mesothelioma deaths has increased rapidly since 1968 (when the HSE register of mesothelioma deaths began) from 153 deaths to 1527 deaths in 1998. Although the rate of increase appeared to slow down in 1996 and 1997, the number of deaths in 1998 continued to follow an overall upward trend established by deaths in earlier years (Figure 2.5 and Table A2.38).
- The number of female mesothelioma deaths has always been much smaller than the number of male deaths and the ratio of male to female deaths has risen from 4:1 in 1975 to 7:1 in 1998, reflecting the higher rate of increase in male deaths over the period, and the much lower proportion of female deaths attributable to asbestos.
- Occupations with the highest risk of mesothelioma for males include: metal plate workers (including shipyard workers); vehicle body builders (including rail vehicles); plumbers and gas fitters; carpenters; and electricians.

2.31 The typically long delay between first exposure to asbestos and death from mesothelioma (seldom less than 15 years, but possibly as long as 60 years) means that deaths occurring now and most of those expected to occur in the future reflect industrial conditions of the past rather than current work practices. This latency period means that the effectiveness of current controls cannot yet be assessed from the mesothelioma mortality figures.

2.32 Previous analysis of mesothelioma deaths up to 1991 was used by HSE as a basis for predictions that deaths would continue to rise well beyond the year 2000, based on an assumption that the pattern of age-specific death rates would be the same regardless of the year of birth. However, more recent data have departed from this prediction, with people born early in the century having higher numbers of deaths and those born more recently having lower numbers than predicted.

2.33 A new projection approach has been used to assess the potential benefits of a proposed duty to survey asbestos in buildings. This approach used the observed mortality up to 1997 and the assumed form of the relationship between asbestos exposure and mesothelioma to

estimate the past track of the population's 'collective dose' of asbestos, and examines the predicted effects of a range of possible future paths for this collective exposure on the future course of mesothelioma deaths. The conclusion was that the likely peak of male mesothelioma deaths would be in the range 1400 (reached around 2005) to 2100 (reached around 2020) annually. These projections rest on a number of uncertain (and largely unverifiable) assumptions and should be regarded as informed guesses rather than firm forecasts.

2.34 Table A2.39 gives a breakdown by age and sex for eight three-year time periods from 1975-77 to 1996-98. The number of male deaths in the youngest age group (under 44) has fallen in each of the last three time periods, and fell by just over one quarter in the most recent time period. The number of male deaths also fell in the most recent time period for those aged 45 to 54, the number of deaths in all other age groups have continued to grow over time and the rate of increase has risen with age. The number of female deaths in the oldest age group has increased in each period. Changes in the number of female deaths for other age groups over time have been more erratic although all age groups have seen an increase in the number of deaths from the first time period shown (1975-77) to the latest period (1996-98) except for those aged under 44.

2.35 Table A2.40 shows the mesothelioma death rate (per million) for Great Britain and the standard regions for the three time periods: 1990-92, 1993-95 and 1996-98. For both males and females the rates for Great Britain follow an upward trend reaching 43 and 6 deaths per million respectively. For males the North of England had the highest death rate in all three time periods. In the latest time period the South West had the second highest death rate followed by East Anglia. Male death rates increased across all three time periods in all regions except the South West. However, the South West had the largest increase in the most recent time period, followed by East Anglia. Both now have death rates greater than the death rate for Great Britain.

2.36 Smaller numbers make the pattern of female regional death rates more variable. The North had the highest death rate in the most recent time period but Yorkshire and Humberside had the largest increase in the death rate with a rise from 5.4 to 8.6 deaths per million. The largest fall in the death rate for females (from 4.9 to 2.7) was in Wales.

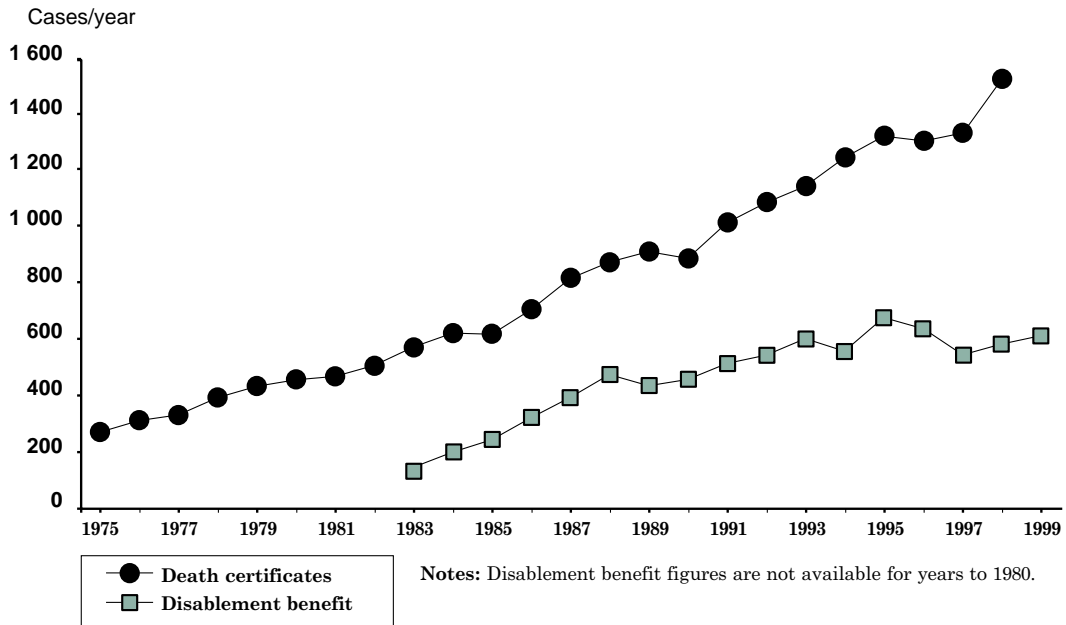
2.37 Analysis based on mesothelioma deaths in England and Wales between 1979 and 1995 (excluding 1981 when industrial action by registration officers made the occupational data less reliable) for males aged 16 to 74 showed the occupations with the highest risks. These can generally be associated with three broad areas of asbestos use: shipbuilding; railway carriage building and the installation and maintenance of lagging or other insulation materials in buildings or industrial plant. Workers in asbestos manufacturing are not brought together under a single occupational code, and do not emerge as an identifiable high-risk group in this analysis. The occupations with the highest risk of mesothelioma from this analysis were: metal plate workers (including shipyard workers); vehicle body builders (including rail vehicles); plumbers and gas fitters; carpenters; and electricians.

2.38 An information sheet containing the full analysis by occupation is available from HSE's Epidemiology and Medical Statistics Unit at the address given on page 207. Two similar information sheets giving statistics on mesothelioma deaths by county district for the years 1976-1991 and 1986-1995 can be obtained from the same address.

2.39 Figure 2.5 shows the number of disablement benefit cases made each year for mesothelioma. Analysis of average rates of new assessments between 1998-99 per 100 000 employees by

industry (Table A2.10) showed that the construction industry (including insulation workers and strippers) had the highest rate, 14 cases per 100 000 employees and extraction, energy and water supply industries had the second largest rate, 4.6 cases per 100 000 employees.

**FIGURE 2.5**  
**Mesothelioma**



2.40 *Asbestos-related lung cancer* as a prescribed disease has consistently given rise to between 50-80 awards each year from 1987-1996 (see Table A2.5). Over the three years 1997-99, annual numbers were somewhat lower at 26, 42 and 38. The number of awards in 1998 and 1999 were similar at 42 and 38 respectively. Reports from the SWORD scheme indicate numbers of similar magnitude (81 cases in 1999).

2.41 There is evidence to suggest that these figures substantially underestimate the true extent of the disease. Studies of particular groups of asbestos-exposed workers suggest that the numbers of excess lung cancers produced is probably at least equal to, and possibly greater than, the number of mesotheliomas, of which there are over 1000 cases a year. This suggests that the number of lung cancer cases attributable to asbestos exposure is many times higher than those receiving benefit or identified by SWORD participating doctors. There is no clinical feature by which lung cancers caused by asbestos can be definitively distinguished from cases in which asbestos has not been involved, and therefore many of these cases may not be recognised as asbestos related by the sufferers or by their doctors.

2.42 *Diffuse pleural thickening* is another disease associated with asbestos exposure, which can lead to impairment of lung function. The number of cases assessed for disablement benefit increased over the early 1990s to 196 in 1994 and then declined over the next three years to 156 in 1997. There was a substantial increase to 227 in 1998 and a further smaller increase in 1999 to 242. The larger number of assessed cases over the last two years may be connected with the admission of unilateral cases of disease (ie cases where only one lung is affected) from April 1997. Previously, DSS regulations limited compensation to cases of bilateral disease, where both lungs are affected.

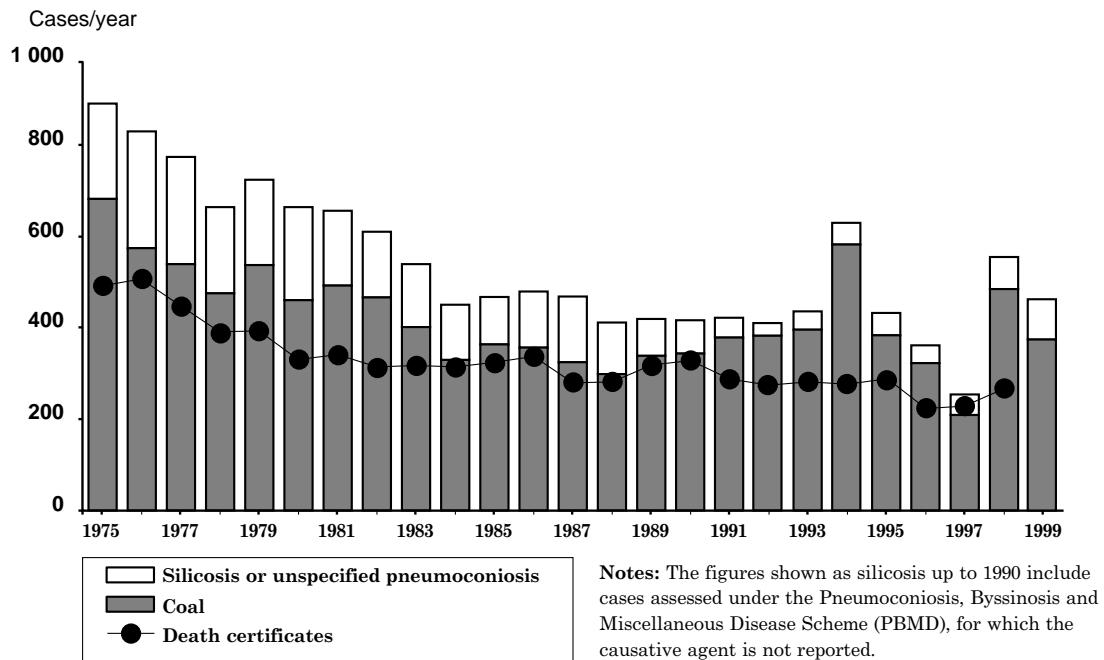
2.43 The number of cases of pleural thickening and similar disorders reported via SWORD under the heading of benign (in the sense of non-cancerous) pleural disease, nearly all of them caused by asbestos, are appreciably bigger. There were 1217 estimated SWORD/OPRA cases in 1999, though this will include cases falling outside the DSS definitions.

**Coalworkers' pneumoconiosis and silicosis**

- There were 461 new assessed cases of pneumoconiosis (excluding asbestosis) in the Industrial Injuries Scheme in 1999, compared with 554 in 1998. This small fall, following a large increase last year, suggests a tailing-off of the effect on pneumoconiosis awards from the change in the criteria for chronic bronchitis and emphysema (see paragraph 2.46). RIDDOR reports are much fewer than DSS assessments, but recent figures do show an increase (19 cases in 1999/2000 compared with 5 in 1998/99).
- Industries affected by pneumoconiosis (excluding asbestosis) include mining, quarrying, foundries and potteries, with the majority of compensated cases (88%) arising from the coal industry, in the others silica is the predominant cause.

2.44 Most DSS cases of pneumoconiosis occur among retired workers, nearly 80% of coal workers assessed in 1999 were aged 65 or over (Table A2.7), because of the prolonged development of the disease. Only in exceptional cases does the disease appear within less than ten years from first exposure to dust, and typical cases take considerably longer. This means that cases now coming forward via the Industrial Injuries Scheme largely reflect the working conditions of the past. Over 85% of cases assessed in coal workers in 1996 had reported first exposures to coal dust before 1950.

**FIGURE 2.6**  
**Coalworkers' pneumoconiosis and silicosis**



2.45 The compensation figures for pneumoconiosis are believed to be a relatively good indication of disease incidence because compensation is well established within affected industries. Because of the long and variable delay from first exposure to diagnosis, the broad trend in numbers compensated gives a clearer picture of disease incidence than any year to year fluctuation (Figure 2.6 and Table A2.6). Mortality data for pneumoconiosis (shown in Figure 2.6) exhibits a long-term downward trend. The compensation scheme figures for 1998-99 and 1994 appear out of line with this long-term trend and are probably caused by changes to the Industrial Injuries Scheme (IIS) with respect to chronic bronchitis and emphysema. Claimants who fail to meet the criteria for these diseases often receive awards in respect of pneumoconiosis so factors which influence the numbers of claimants for chronic bronchitis and emphysema will have a knock-on effect on the numbers of assessed cases for pneumoconiosis. Numbers of RIDDOR reports of pneumoconiosis are much fewer than DSS assessments, and unlike them they generally refer to workers who have not yet reached retirement. There has been an increase in recent RIDDOR figures (19 in 1999/2000, compared with 5 in 1998/99 and 3 the year before). Investigation by Her Majesty's Mines Inspectorate indicates that a number of these cases appear to be linked to excessive working hours (and hence excess personal dust exposures) at some collieries in recent years. HSE is working to prohibit such harmful exposures by means of appropriate regulatory changes.

2.46 Chronic bronchitis and emphysema became prescribed diseases in September 1993 for coal miners with a specified level of lung function impairment and a minimum of 20 years underground exposure to coal dust. As often happens when a disease is newly prescribed, there were a large number of claimants initially, resulting in a total of over 4000 assessed cases up to the end of 1994. Numbers fell back in 1995 and 1996 to around 270 per year, which is probably closer to the annual incidence of new cases meeting the DSS criteria, but then rose dramatically in 1997 and 1998 to over 3000 per year, as a result of the relaxation in the criteria for benefit, effective from April 1997 (Table A2.5). The number of cases in 1999 has fallen to 1451, suggesting that the backlog of claimants satisfying the current criteria is reducing as claims are processed. It is expected that the numbers of cases per year will continue to fall until the backlog has been dealt with, when the annual number of cases should stabilise at a level which more accurately reflects the true number of new cases per year.

### ***Occupational asthma***

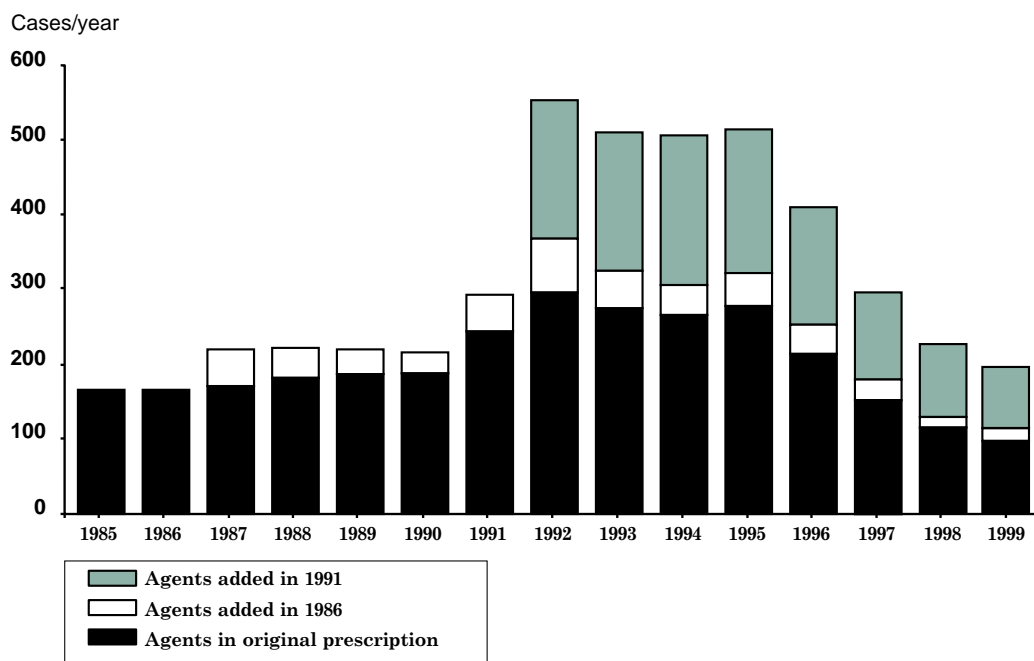
- An estimated 1118 cases of occupational asthma were seen for the first time by occupational and chest physicians who reported to the SWORD/OPRA project in Great Britain in 1999, around 4 cases per 100 000 workers per year. After allowing for under-reporting and cases never seen by chest or occupational physicians, the true incidence is likely to be considerably higher, perhaps 20 or more cases per 100 000 workers.
- Trends in occupational asthma are difficult to assess from the available data sources, but there appears to have been little change in annual incidence over the last ten years; at most there may have been a small fall over the last three years.
- Isocyanates were the most commonly cited agents for both SWORD/OPRA and Industrial Injuries Scheme (IIS) cases in 1999, with flour/grain being the second most commonly incriminated agent group for both sources.

- Over half of all SWORD/OPRA occupational asthma cases in 1998/99 came from the manufacturing sector, with the highest rate in the manufacture of food and beverages (25 cases per 100 000 workers per year).
- The occupation with the highest incidence rate of occupational asthma was spray painters, where the estimated rate based on SWORD/OPRA data in 1998/99 was 118 cases per 100 000 workers per year.
- The 1995 Self-reported Work-related Illness survey estimated that there were 151 000 people in the working population with asthma symptoms which they believed to be work related.

2.47 A substance causes occupational asthma when specific workplace exposures result in a biological change in a person's airways, so that subsequent exposure to the same substance triggers an asthma attack. Because the range of industries in which these respiratory sensitisers may be used is quite broad, and not all employees in these industries will necessarily be exposed, it is difficult to estimate with any confidence the total number of workers at risk.

2.48 Indications of the total incidence of the disease, and some idea of the relative importance of the different sensitising agents, can be obtained from the reports of new cases seen by chest physicians reporting to the SWORD project and occupational physicians reporting to the OPRA project, and from new Disablement Benefit assessments under the DSS Industrial Injuries Scheme. Occupational asthma has a much more rapid onset than, for example, pneumoconiosis and so it is likely that new assessments or SWORD/OPRA cases reflect current or recent working conditions rather than those of the past. However, there is some delay in newly diagnosed cases being assessed and claims can be made retrospectively within ten years of exposure to prescribed agents.

**FIGURE 2.7**  
**Occupational asthma: disablement benefit cases**



2.49 Summary data for Disablement Benefit for occupational asthma is given in Table A2.8 and Figure 2.7. In the past (from March 1982, when benefit for occupational asthma first became payable, until September 1991) compensation could only be claimed for occupational asthma in respect of a specified list of substances, initially only agents 1 to 7 in Table A2.8. Seven new categories of sensitising agent (agents 8 to 14) were added to the list in September 1986 and a further ten (agents 15 to 24) in September 1991, including an 'open category' which allows benefit to be paid for occupational asthma caused by an agent not specifically listed, provided a causal link is proven in each case. Table A2.8 and Figure 2.7 show the number of assessed cases rose considerably in 1992 following the addition of these new categories, in particular the open category, which accounted for about half of the total rise between 1991 and 1992. Agents on the original list of seven agents continue to account for just over half the total number of cases.

2.50 The numbers of assessed cases have fallen considerably in each of the last three years. At least part of the fall in 1997 could be due to changes in DSS data collection procedures which took effect from that year. However, the number of cases fell again in 1998 and still further in 1999 suggesting a genuine fall in the numbers seeking compensation.

2.51 Between 1996 and 1999 SWORD/OPRA recorded more than three times as many cases of occupational asthma in Great Britain (3987) as were assessed under the Industrial Injuries Scheme (1126). The latter is known to exclude certain categories of sufferer (see earlier section on sources). The SWORD figures themselves are also affected by under-reporting. Many cases will not be reported, including those not seen by chest physicians (who tend to see only the more serious cases), those occurring in individuals who do not have access to occupational physicians, and those that are simply never diagnosed.

2.52 Previous reviews of the data<sup>6</sup> have estimated that the true incidence of occupational asthma diagnosed by consultant physicians may be as high as 1500-2000 or 6-8 cases per 100 000 workers, per year. As most cases of occupational respiratory disease are not seen by a consultant physician, the total incidence of the disease may be several times higher still, perhaps as many as 20 or more cases per 100 000.

2.53 Tables A2.12 (SWORD) and A2.13 (OPRA) show estimated number of cases of occupational asthma seen for the first time by the chest physicians and occupational physicians reporting, respectively, to the SWORD and OPRA schemes in Great Britain in 1998 and 1999, along with equivalent figures for other respiratory diagnoses. Figures from the two schemes have been added together to derive the estimates based on both sources, which are discussed in this report, in line with previous editions of *Health and safety statistics*. The coverage of British industry by occupational physicians, and hence the numbers of cases reported by them, varies by type of industry and employment. This needs to be borne in mind in examining breakdowns by occupation and industry (see paragraphs 2.165-2.166). This year, for the first time the SWORD/OPRA data presented relates to Great Britain (GB), as opposed to the United Kingdom, reflecting the fact that the HSE is the regulatory agency for health and safety in GB only. This should be borne in mind when making any comparisons with previous years' data. All data presented and discussed in this publication now relates to Great Britain only.

2.54 The SWORD/OPRA estimated numbers of new cases of occupational asthma are subject to some change from year to year due to variations in reporting arrangements and in the level of participation by those physicians involved in the scheme. This year the figure for occupational asthma (1118) is considerably higher than last year's figure (806) this is partly due to an overall increase in participation which has resulted in large increases for most

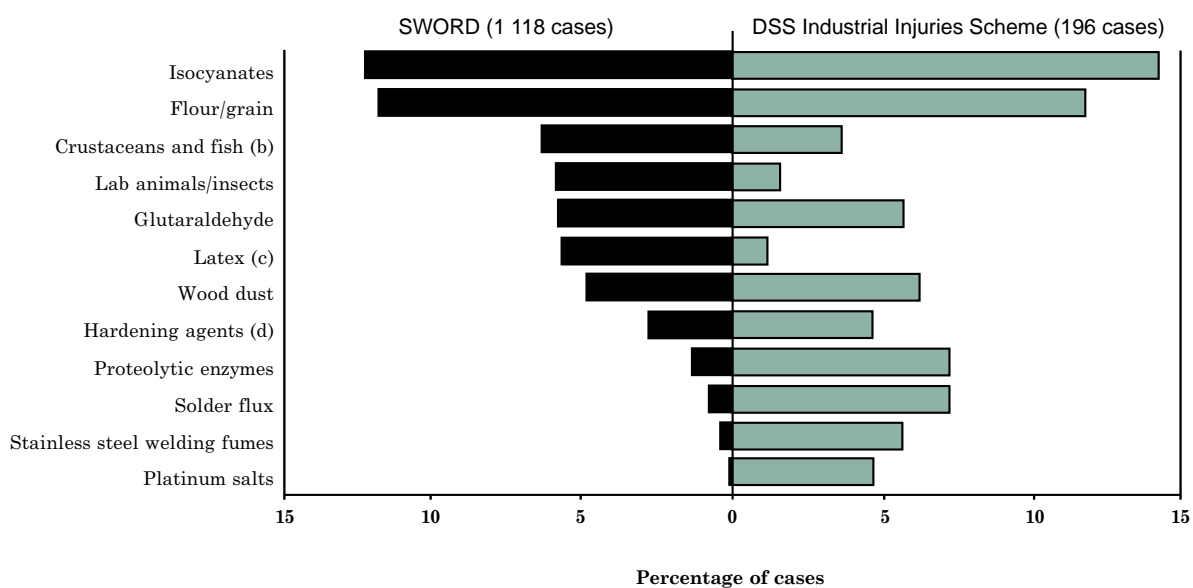
diagnostic categories. A better assessment of trends for occupational asthma (and other individual diseases) can be made by considering movements over a slightly longer time period, and by taking account of the proportion of all disease reports which make up asthma cases.

2.55 Over the past three years occupational asthma numbers have fluctuated around an average rate of almost 1000 cases per year which is similar to the number seen over the previous three years. However, the proportion of total SWORD/OPRA reports for which occupational asthma accounts has fallen slightly from around 31% in 1994-96, to 26% in 1997-99. While this percentage will, of course, be affected by changes in trends for other diagnostic categories as well as asthma it may, taken alongside the small fall in numbers of Industrial Injuries Scheme cases, suggest a slight fall in the incidence of occupational asthma in the last three years.

2.56 In terms of the agents incriminated in occupational asthma cases, SWORD/OPRA tends generally to record a wider range of agents and to pick up more quickly an increase in prominence for particular agents than does the Industrial Injuries Scheme. There is also some evidence<sup>7</sup> that SWORD/OPRA tends to represent better the incidence of occupational asthma among females than do numbers of IIS cases: in 1999, females accounted for 32% of occupational asthma cases seen by the doctors participating in the SWORD/OPRA schemes and only 23% of IIS cases. Figure 2.8 shows the percentage of SWORD/OPRA and IIS cases attributable to the specific agent categories which accounted for 30 or more SWORD/OPRA cases, or 5 or more disablement cases in 1999 (excluding the open category). It should be noted that, in some cases, the agent categories for the SWORD data are approximations to the DSS categories. For example, the category 'hardening agents' for SWORD/OPRA consists entirely of reports attributed to epoxy resins while the SWORD category 'crustaceans and fish' is clearly wider than the DSS category 'crustaceans'.

**FIGURE 2.8**

**Occupational asthma 1999 by DSS prescribed agents (plus latex) (a)**



- (a) Agents on chart account for 71% of DSS cases and 57% of SWORD cases.
- (b) Includes fish for SWORD data only.
- (c) Latex is included in DSS 'open category'.
- (d) Only 'Epoxy resin hardening agents' feature in this category.

2.57 As Figure 2.8 shows, both sources recorded 'isocyanates' and 'flour/grain' as the top two agent categories which between them accounted for 23% of SWORD/OPRA cases and 26% of IIS cases. Looking further down the list of the most prominent agents, SWORD/OPRA recorded a higher percentage of cases attributable to the two agent categories 'crustaceans and fish' and 'animals and insects' (each 6% of the total, compared with 3% and 2% respectively for comparable DSS categories). Conversely, the agent categories 'proteolytic enzymes' and 'soldering flux' each accounted for 7% of all IIS cases, compared with less than 1% for the SWORD/OPRA data. This analysis seems consistent with the observation that SWORD/OPRA better represents the incidence of respiratory disease among females, as the agents which SWORD/OPRA show as being more prominent are in occupations with a higher proportion of female employees, such as laboratory technicians. Interestingly, both sources this year showed 'latex' as accounting for 6% of all cases: in previous years SWORD/OPRA has shown a much higher proportion than the IIS figures.

2.58 Tables A2.14 and A2.15 show the numbers of new cases of occupational asthma seen by the physicians participating in SWORD/OPRA in 1998 and 1999, by occupation and industry, respectively. Rates per 100 000 workers are given for the two schemes added together in the final column. It should be borne in mind when interpreting these figures that access to occupational physicians will vary considerably from one industry or occupation to another and that chest physicians will mainly see the more serious cases, so the occupational and industrial distribution of SWORD/OPRA cases may differ from the true picture. Bearing this in mind, the analysis shows that the three occupations with the highest rates of occupational asthma were: 'coach painters and other spray painters'; 'bakers and flour confectioners'; and 'welding trades'. The industries with the highest rates were: 'manufacture of food products and beverages'; 'manufacture of chemicals'; and 'manufacture of motor vehicles'.

2.59 Table A2.9 shows new cases of occupational asthma assessed at 14% disability and above for the period 1993-98. From October 1986, benefit has been payable for only this category of disablement and, since that date, the majority of cases have been assessed at 14% or above. The proportion assessed at this level has been over 80% for several years. The table also shows that very few cases were assessed at 50% disability or more.

2.60 The Survey of Self-reported Work-related Illness provides the only estimate of the prevalence (as opposed to incidence of new cases) of work-related asthma symptoms: 151 000 cases were reported in 1995. Allowing for variation due to sampling, the true figure is likely to lie between 117 000 and 185 000. Three-quarters of respondents first became aware of their condition over five years ago, and 90% reported that it was caused by inhaling a substance, most commonly dust or fibres. The general comments made at the beginning of this section regarding self-reported work-related disease apply to these figures.

### ***Other respiratory diseases***

#### ***Byssinosis***

2.61 Byssinosis is an illness associated with exposure to cotton dust with both acute and, in some cases, long-term effects. Changes in the compensation rules, most recently in 1979, have periodically produced sharp increases in the numbers of compensated cases, but these are now decreasing (Table A2.5) and there are now only a handful each year compared with ten years earlier. The number of death certificates per year with byssinosis recorded as the

underlying cause of death is also decreasing: there were five in 1998 (Table A2.41). Only two cases of byssinosis have been reported to SWORD/OPRA in recent years: one in 1994 and another in 1998.

#### *Farmer's lung and other allergic alveolitis*

2.62 The SWORD/OPRA schemes recorded an estimated average of 36 new cases of occupational allergic alveolitis per year in Great Britain in the two years 1998 - 1999, almost all seen by chest physicians. There can be wide variation in the numbers of cases reported for individual years but there does not appear to be a strong trend in either direction.

2.63 By far the highest annual rates (by industry) of allergic alveolitis ever reported to SWORD/OPRA were in 'farming or veterinary activities', where the attributed agents were 'hay', 'mushrooms' and 'avian proteins'.

2.64 Allergic alveolitis is the general term for a group of diseases characterised by an allergic reaction to organic material. Farmer's lung, which arises from the inhalation of mouldy hay, grain and straw, is the most common form of the disease. Few cases are recorded through the compensation system (Table A2.5). The latest figure of 13 cases in 1999 is the highest for ten years as usually numbers are below 10 per year. The number of deaths where Farmer's lung (or a similar condition) was the underlying cause is generally of a similar order of magnitude (Table A2.41). As the disease only rarely progresses to a life-threatening level, this suggests that there are substantially more cases than those receiving compensation. Evidence from SWORD/OPRA supports this: an average of 36 new cases per year were reported during the two-year period 1998 - 1999 (Table A2.12 and A2.13 which show SWORD and OPRA cases separately), many more than the number of Disablement Benefit cases. One possible explanation for the small number of cases is that farmers, who constitute the largest group of sufferers, are often self-employed and therefore ineligible for compensation.

#### *Allergic rhinitis*

2.65 From March 1996 the prescribed disease called 'inflammation or ulceration of the upper respiratory tract or mouth' was redefined by the DSS as 'allergic rhinitis', with a list of recognised prescribed agents as for asthma. Under the earlier prescription any occupation exposed to harmful dust, liquid or vapour could qualify.

2.66 There were 135 assessed cases of this condition in 1998/99 compared with 199 in 1997/98. This is the third successive year in which the number of cases have fallen. The 1996/97 figure is likely to have been reduced by changes, both to the prescription rules and possibly to the method of data collection for IIS statistics. However, the further substantial falls in the two subsequent years suggest that the number of new cases may genuinely be beginning to ease off.

#### ***Dermatitis and skin disorders***

- Occupational skin disease is common, with the SWI95 estimating the prevalence of self-reported work-related skin disease in Great Britain as 66 000. Approximately two thirds of these cases were dermatitis or eczema.

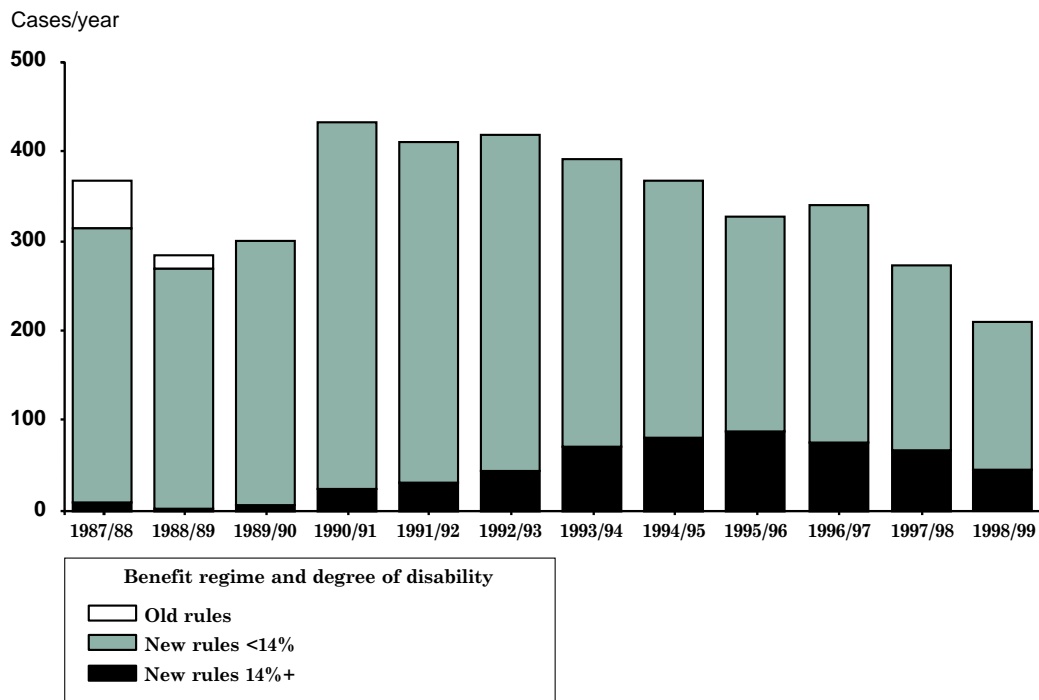
- Over the period 1998/99, there were an estimated 4500 cases of work-related skin disease seen each year by specialist physicians. Approximately 80% of these cases were of contact dermatitis.
- The annual number of cases of occupational dermatitis assessed as having some degree of disablement continues to fall from around 400 in the early 1990s to around 200 in the late 1990s. Trends in incidence from the EPIDERM and OPRA surveillance schemes are difficult to assess, but the indications are that the estimated annual number of cases seen by reporting doctors may be approaching 5000 per year.
- The occupations estimated to be at highest risk according to dermatologists reporting to EPIDERM are 'rubber process operatives', 'electroplaters, galvanisers and colour coaters', 'hairdressers and barbers', and 'window dressers and floral arrangers'. The occupations estimated to be at highest risk according to occupational physicians reporting to OPRA are 'electroplaters, galvanisers and colour coaters', 'chemical process plant operatives', 'glass products and ceramics makers', and 'chemists'.
- The industries estimated to be at highest risk according to dermatologists reporting to EPIDERM are 'fishing', 'hairdressing' and 'mining and quarrying'. The industries estimated to be at highest risk according to occupational physicians reporting to OPRA are 'manufacture of chemicals and chemical products', 'motor vehicles', 'non-metallic mineral products', and 'other transport equipment'.
- The most common agents according to dermatologists reporting to EPIDERM are 'rubber chemicals and materials', 'wet work', and 'soaps and cleaners'. The most common agents according to occupational physicians reporting to OPRA are 'rubber chemicals and materials', 'soaps and cleaners', 'other unspecified chemicals' and 'personal protective equipment'.

2.67 The best estimate of the prevalence of work-related skin disease comes from the SWI95. The report provides an estimated prevalence of self-reported work-related skin disease of 66 000 cases (95% CI 43 000 to 88 000) for Great Britain.

2.68 The best source of information on the incidence of work-related skin disease, and contact dermatitis in particular, is from the EPIDERM and OPRA voluntary surveillance schemes<sup>8</sup> covering cases seen by dermatologists and occupational physicians (see section on *Further information on data sources*).

2.69 Since, however, the figures from EPIDERM/OPRA are subject to variability due to sampling, a better source of information on trends in occupational dermatitis is data from DSS disablement benefit cases. Figure 2.9 shows the number of cases assessed as having more than 1% disability for the years 1987/88-1998/99. The number of cases has shown a continuing steady decline from the early 1990s: the number fell from 433 in 1990/91 to 220 in 1998/99, the latest year for which data are available. There were around 4500 cases of dermatitis reported to EPIDERM and OPRA in 1996, and in the years 1997-99, there were around 4100, 4500 and 4800 cases respectively. Although trends are difficult to predict from the surveillance schemes, the indications are that the estimated annual number of cases of skin disease seen by reporting doctors is approaching 5000. (Chrome dermatitis or ulceration has been a prescribed disease since March 1996, there have been 12 cases in total up to 1998/99.)

**FIGURE 2.9**  
**Occupational dermatitis: disablement benefit cases**



2.70 From 1996-99, there were an estimated 9614 cases of work-related skin disease seen for the first time by dermatologists reporting to EPIDERM and an estimated 8253 cases seen by occupational physicians reporting to OPRA (Tables A2.16 and A2.17). Assuming that there is little overlap between the schemes, these estimates can be added to produce an overall annual incidence of approximately 4500 cases per year (equivalent to about 15 cases per 100 000 workers per year, see Tables A2.18 and A2.19). Although there is some indication that the number of cases is rising (see paragraph 2.69).

2.71 For EPIDERM and OPRA combined, the majority of estimated cases of skin disease were: contact dermatitis (80%); with skin neoplasia, usually due to exposure to sunlight, (6.8%); other dermatoses (4.9%); contact urticaria (4.3%); and infective skin disease (3.6%). The only other diagnoses contributing more than an estimated 1% of cases (Tables A2.16 and A2.17). Of the total, 60% of cases were estimated to be reported for males. An estimated 14% of cases occurred among males and females aged 16 to 24, with a peak at 25 to 34 of 26%, declining to 4% of cases aged over 65. For contact dermatitis the age pattern is slightly different for males and females, with increasing incidence with age in males, but higher in younger age groups in females.<sup>8</sup>

2.72 Occupations in which more than 10 cases of contact dermatitis were reported to EPIDERM/OPRA combined in 1998-99 are set out in Table A2.18. The overall rate of contact dermatitis estimated reported to dermatologists over this time period was 8 cases per 100 000 workers per year, and for cases reported to occupational physicians was an estimated 6 cases per 100 000 workers per year. The occupations with the highest estimated rates of contact dermatitis reported to dermatologists were: rubber process operatives (207 cases per 100 000 workers per year); electroplaters, galvanisers and colour coaters (174 cases per 100 000);

hairdressers and barbers (134 per 100 000); and window dressers and floral arrangers (126 per 100 000). The occupations with the highest rates of contact dermatitis reported to occupational physicians were: electroplaters (221 cases per 100 000 per year); chemical process plant operatives (170 per 100 000); glass products and ceramics makers (155 per 100 000); and chemists (121 per 100 000). The rate of contact dermatitis has not been reported as high for electroplaters, galvanisers and colour coaters in previous analyses.<sup>6, 8, 9</sup>

2.73 Industrial groupings in which more than 10 cases were reported in either 1998 or 1999 for EPIDERM or OPRA are set out in Table A2.19. The industries with the highest estimated rates of contact dermatitis reported to dermatologists were: fishing (88 cases per 100 000 workers per year); hairdressing (71 per 100 000); and mining and quarrying (49 per 100 000). The industries with the highest estimated rates of contact dermatitis reported to occupational physicians were: manufacture of chemicals and chemical products (56 per 100 000 per year); manufacture of non-metallic mineral products (54 per 100 000); manufacture of motor vehicles (56 per 100 000); and of other transport equipment (41 per 100 000).

2.74 The most common agents, averaged over 1998 and 1999, which were associated with more than 10 cases in 1998 or 1999 for EPIDERM or OPRA are set out in Table A2.20. For dermatologists the most prevalent substances were: rubber chemicals and materials (average estimated 16%); wet work (13%); and soaps and cleaners (11%). For occupational physicians the most prevalent substances were: rubber chemicals and materials (average estimated 17%); soaps and cleaners (14%); other unspecified chemicals (13%); and personal protective equipment (12%).

2.75 An additional source of information on the incidence of work-related dermatitis is from reports made under RIDDOR. Contact dermatitis has been a reportable disease since 1996. There were 461 cases reported in 1997/98, 493 cases in 1998/99, and 571 cases in 1999/2000. It is difficult to infer trends from RIDDOR, especially since there is clearly very substantial under-reporting by comparison with EPIDERM/OPRA.

## **Cancers**

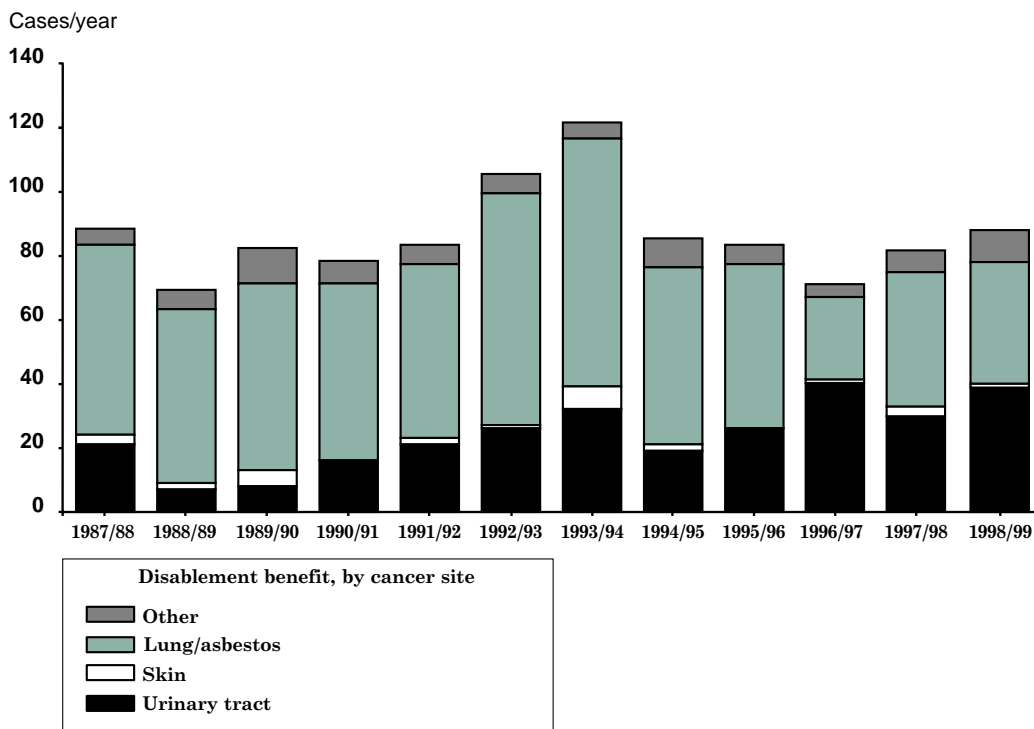
- Many kinds of cancer have well-established occupational causes. Apart from asbestos-related cancers, these include angiosarcoma of the liver, bladder cancer, nasal carcinoma, as well as lung and skin cancers due to various occupational agents and industrial processes. Most of these cancers are recognised and qualify for compensation as prescribed diseases under the Industrial Injuries Scheme (IIS).
- The number of IIS disablement benefit cases reached a peak of around 120 in 1993/94 but has remained fairly constant at around 80 per year since then. This almost certainly under-estimates the true number of cases occurring.
- It can be estimated that between 3000 and 12 000 cancer deaths per year in Great Britain may be due to occupational causes. This represents between 2% and 8% of all cancer deaths in Great Britain per year.

2.76 It is a difficult task to try and assess the role of occupational exposures in causes of cancer. This is particularly so bearing in mind that many cancers are likely to be caused by a complex interplay of many factors, many of which may not be occupational in origin. In addition to these complexities, many solid tumours can have latencies of over 20 years, making the association of disease with relevant occupational exposures particularly difficult to establish.

2.77 Apart from mesothelioma which is dealt with in an earlier section, there are various types of cancer which have a well established occupational origin, eg angiosarcoma of the liver arising from exposure to vinyl chloride monomer, bladder cancer from exposure to beta-naphthylamine, nasal carcinoma from exposure to hard wood dust, and lung and skin cancers due to various agents or industrial processes. Most of these cancers qualify for compensation under the industrial injuries (IIS) disablement benefit scheme.

2.78 The total number of IIS disablement benefit cases associated with cancer other than mesothelioma is typically between 70 and 120 cases per year, with asbestos-related lung cancer and papilloma of the bladder being the only two normally reaching double figures (Tables A2.3 and A2.4). (As has been noted in the section on asbestos-related diseases, the true number of asbestos-related lung cancers probably considerably exceeds the number assessed for disablement benefit, because of the difficulty in recognising occupational causation in individual cases). From 1994/95 onwards the annual number of cancers of the urinary tract has remained fairly constant at around 30 to 40. The number of lung cancers due to asbestos is declining from a peak of 77 in 1993/94 to around 40 over the last two years for which data is available (Figure 2.10). Some of these cancers are also reportable under RIDDOR, but reports are usually much fewer in number (Table A2.11). The latent period before the disease is manifest means that many sufferers will no longer be employed in the relevant occupation, and so such cases will not be reportable.

**FIGURE 2.10**  
**Occupational cancer other than mesothelioma**



2.79 An important early estimate of the overall proportion of cancer attributable to occupational exposure remains that put forward by Doll and Peto in 1981 in a report<sup>10</sup> to the US Congress. They estimated that 4% (plausible range of estimates 2% to 8%) of cancer

mortality was due to occupational causes. This equates to approximately 6000 deaths per year in Great Britain (plausible range 3000 to 12 000). A more recent article<sup>11</sup> suggested an attributable fraction for lung cancer (the major component of occupational cancer) of 9-10% for males and 2-4% for females. These figures are compatible with the earlier estimates derived by Doll and Peto. Clearly, cancers which are compensated under the IIS or reported under RIDDOR are only a small percentage of the cases occurring.

### ***Exposure to lead***

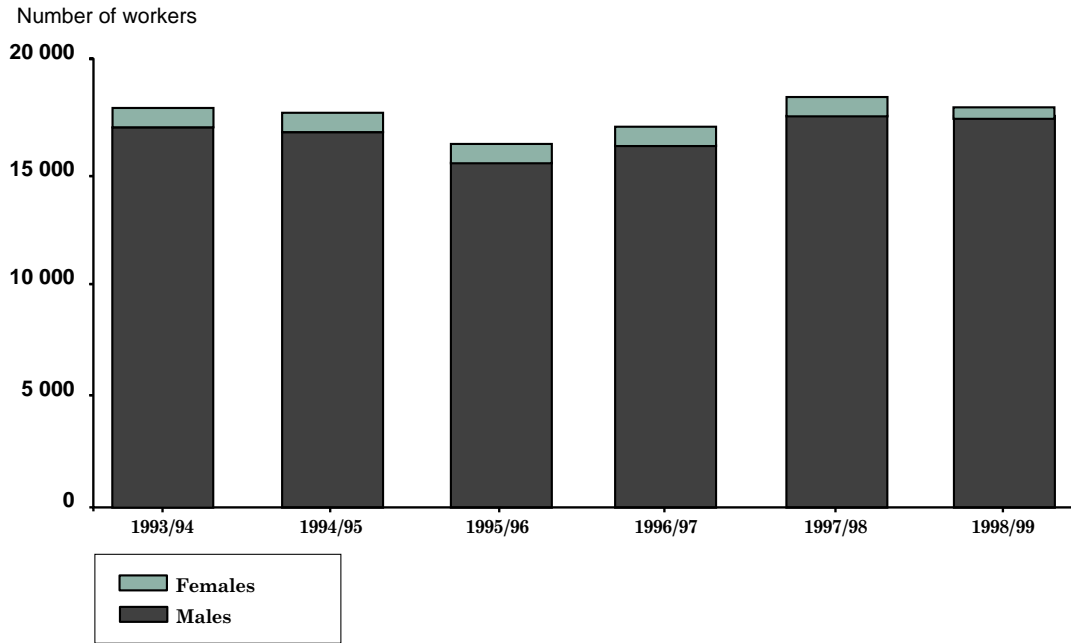
- The total number of lead workers under medical surveillance fell slightly in 1998/99 following rises in the previous two years.
- New suspension levels were introduced by the Control of Lead at Work (CLAW) Regulations 1998. These are 60 µg/100ml (micrograms of lead per 100 millilitres of blood) for males, and 30 µg/100ml for females of reproductive capacity.
- The proportion of male workers with blood-lead levels at or above 60 µg/100ml was 1.9% (322 workers), the lowest ever recorded.
- The proportion of female workers with levels at or above 30 µg/100ml was 6.4% (50 workers), a little higher than in 1997/98 but lower than in the previous year.
- Lead batteries was the industrial sector where the proportion of workers with blood-lead levels above the suspension levels was highest, for both males and females.
- The total number of young people (aged under 18 years) employed in all lead sectors was just under 50.
- 179 males and 18 females were suspended from working with lead in 1998/99, a large rise on previous years which reflected the lowering of the suspension levels under the 1998 Regulations.

2.80 Table A2.42 and Figure 2.11 summarise the statistics on the blood-lead levels of male and female workers with significant exposure to lead, derived from returns under the CLAW Regulations 1980 and 1998.

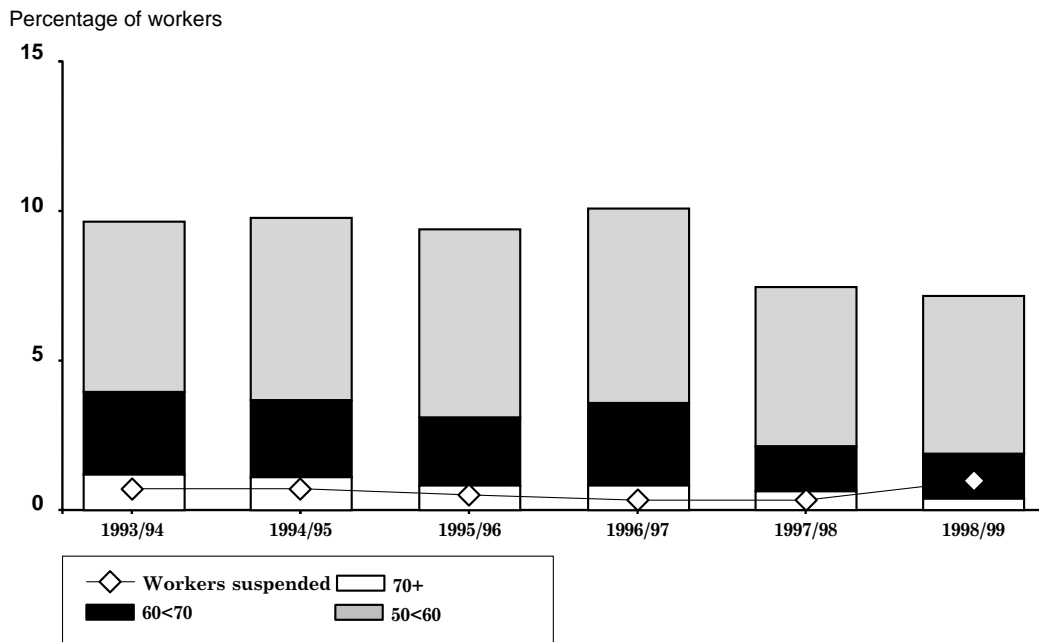
2.81 The total number of workers under surveillance in 1998/99 was some 18 000, of whom 96% were male. The number of male workers under surveillance was down slightly on the previous year but still higher than in any other year since 1993/94. The number of female workers under surveillance fell for the third year in succession to the lowest ever recorded.

2.82 Figures 2.12 and 2.13 show how the proportions of male and female workers with high blood-lead levels have moved over recent years. Three cut-off points are illustrated: the suspension levels under the 1980 Regulations; the suspension levels introduced with effect from 1 April 1998 by the 1998 Regulations; and the action levels under the 1998 Regulations. These are 70, 60 and 50 µg/100ml respectively for males (and for females not of reproductive capacity), and 40, 30 and 25 µg/100ml for females of reproductive capacity (data on the latter two categories is only available from 1996/97).

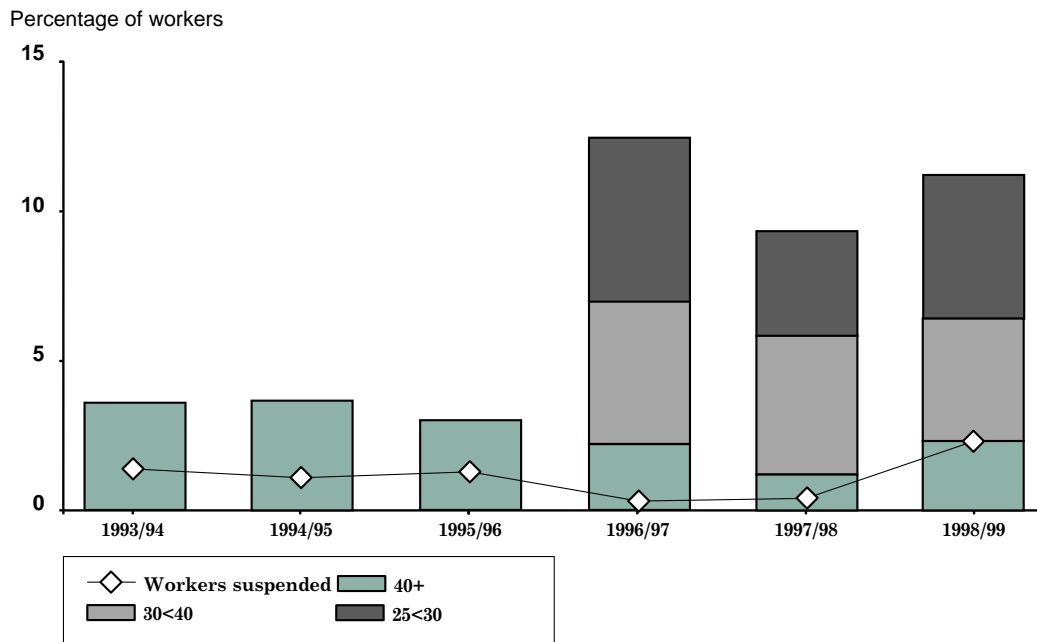
**FIGURE 2.11**  
Lead workers under medical surveillance



**FIGURE 2.12**  
Blood-lead levels of male workers



**FIGURE 2.13**  
**Blood-lead levels of female workers**



2.83 It can be seen that the proportions of workers with high levels have tended to move downward over the years and that the falls between 1996/97 and 1997/98 were especially marked. This is true for both male and female workers and for each of the three cut-off points. As was suggested in last year's *Health and safety statistics*, it appears that a reduction in blood-lead levels was occurring in anticipation of the 1998 CLAW Regulations coming into effect at the start of the 1998/99 reporting year.

2.84 In 1998/99 the decline for male workers continued but at a reduced rate and concentrated in the 70 µg/100ml and above category, which fell from 0.6% (110 workers) to 0.4% (71 workers). For female workers there were small rises in the proportions above all three cut-off points. However, these proportions remained lower than in 1996/97, except that relating to levels of 40 µg/100ml and above, which at 2.3% (18 workers) was slightly higher.

2.85 Table A2.43 analyses the 1998/99 statistics for the 13 industrial sectors covered by both sets of CLAW Regulations. Just over 80% of the male workers, and just under 80% of the female, were employed in five sectors (four of which were the same for males and females). For males the top sectors were: smelting, refining, alloying, casting (27% of the total); lead batteries (22%); other processes (15%); metallic lead/alloys (10%); and manufacture of inorganic and organic lead compounds (7%). For females the top five were: smelting, refining, alloying; casting (21%); other processes (16%); glass making (14%); metallic lead/alloys (14%); and lead batteries (12%).

2.86 There were three sectors where the proportion of males with levels of 60 µg/100ml or above was more than 3%: lead batteries (4.0%); scrap (3.8%); and shipbuilding, breaking and repairing (3.1%). In the demolition sector, where the proportion had been high in

previous years, only 1.2% of workers had levels of 60 µg/100ml or above, which was below the average for all sectors. Of the 50 females with levels of 30 µg/100ml or over, 30 were in the lead batteries sector. (Because the numbers of females with high blood-lead levels in individual sectors are very small, percentages could be misleading and so the data in Table A2.43 is given as absolute numbers).

2.87 Table A2.43 also shows, for the first time this year, the number of young people (aged under 18 years) employed in each sector. There were only 47 such young people, around half of them in the glass-making sector. Only 1 of them (in the smelting, refining, alloying, casting sector) had a blood-lead level above 30 µg/100ml.

2.88 A worker whose maximum reading is at or above the suspension level will not necessarily be suspended from working with lead, a repeat measurement may be below the level, or in the case of females the worker may not be of reproductive capacity. In 1998/99, the number of males suspended was 179 (1.0% of the total), roughly three times as many as in the previous year. This clearly reflects the lower suspension levels introduced in 1998/99 (see paragraph 2.82). However, the proportion of males suspended relative to the number at or above the relevant suspension level rose only slightly (from 50% to 56%).

2.89 The number of females suspended from work showed an even larger proportionate increase, to 18 compared with 3 in 1997/98, but again it rose by much less when expressed relative to the number at or above the suspension level in force at the time, from 30% to 36%. Moreover, the numbers involved are small and they tend to fluctuate from year to year.

2.90 Neither the number of workers with measurements over the suspension level nor the number suspended should be interpreted as the number of 'lead poisonings'; the purpose of the arrangements under the CLAW Regulations is to remove workers from exposure to lead before any toxic effects can occur. The numbers of cases of lead poisoning compensated by the IIS, or reported under RIDDOR, have been no more than 10 in each year since these both began, as shown in Tables A2.3 and A2.11 respectively.

### ***Acute poisonings and injuries from chemicals***

- Over the four-year period since the introduction of RIDDOR 95, 1 April 1996 to 31 March 2000, the average number of reportable injuries per year was 1713, of which 75% were to male workers.
- Major injuries (as defined by RIDDOR 95) occurred in 36% of cases, and over-3-day injuries in nearly 64%.
- The SWORD/OPRA schemes together recorded an average of 166 cases per year of illness resulting from inhalation accidents in 1998-99 (mostly reported by occupational physicians), rather fewer in the previous few years.
- 108 investigated incidents in which pesticides had been alleged to cause ill health went before the Pesticide Incidents Appraisal Panel (PIAP) in the two years to March 2000. The Panel confirmed that the ill health was linked to pesticide exposure, or assessed the link as likely, in 19% of cases.

2.91 Injuries caused by chemicals at work, such as acute poisonings, burns, scalds, and gassings, are reportable under RIDDOR as industrial injuries, (and also as reportable illnesses in the case of certain substances, see Table A2.11). Given that injuries in general are substantially under-reported in RIDDOR (as is noted in Part 1 of this report), it should be assumed that figures for chemical injuries will similarly be incomplete. The figures given below refer to events reported under RIDDOR where the coding indicates exposure to a harmful substance or asphyxiation (but not drowning). However, the coding system is designed to cover a wide range of mechanical, as well as chemical injuries, and it is sometimes difficult to distinguish chemical burns from those due to hot water, steam or hot solids; or asphyxiation due to poisonous gases from drowning or smothering by other inert substances.

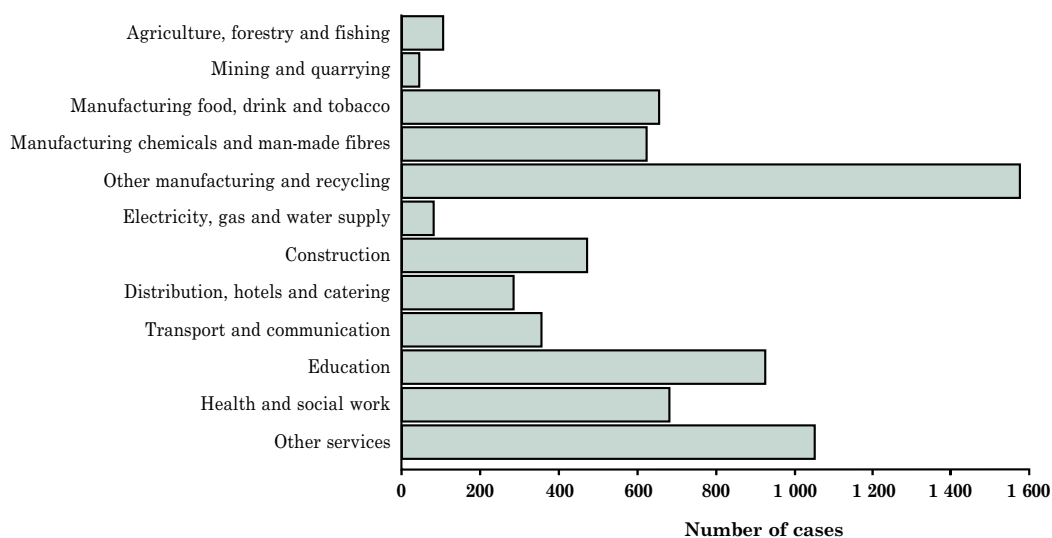
2.92 The majority of injury reports under RIDDOR were for employees (87%), with only 1% of reports coming from the self-employed. Results from the LFS suggest that the level of reporting under RIDDOR is much lower in this group than for employees. The remaining 12% of RIDDOR reported injuries were to members of the public, of which over 80% were to students.

2.93 Reportable injuries occurred more frequently in younger people. Of injured people whose age was recorded, almost two thirds were under the age of 40. Burns were the most common type of injury, occurring in 49% of cases. A further 22% of injuries resulted from asphyxiation, poisoning or gassing; 13% were superficial injuries.

2.94 The majority of injuries resulted from exposure to liquids (62%). A further 26% resulted from exposure to gases and 8% from exposure to dust or solids. More detailed agent codes were recorded in 37% of cases of these: acids and caustic alkalis were responsible for 16% of injuries; gases including carbon monoxide; for 13% and petroleum products; and solvents for 4%.

2.95 'Plant and machine operatives' was the occupational group in which the most injuries occurred over the four-year period, accounting for 31% of injuries. Almost 25% of these were injuries to chemical, paper and plastics operatives. Craft and related occupations accounted for 16% of injuries, of which nearly 30% occurred in metal machining, fitting and instrument making trades. Of the total number of injuries, a further 10% were to students, 9% to people in professional/technical or associated occupations, 2% to managers and 2% to people in clerical/secretarial occupations.

**FIGURE 2.14**  
**Chemical injuries reported under RIDDOR, April 1996 to March 2000**



2.96 Analysis by industry showed that 48% of injuries occurred in services, 42% in manufacturing and 7% in construction. Within services and manufacturing: 14% of injuries were in education; 10% in health and social work; 10% in food, drink and tobacco manufacture; and 9% in chemical and man-made fibre manufacture.

2.97 A recent published paper from the SWORD scheme<sup>12</sup> reported that over 70 substances were implicated in inhalation accidents over the three-year period 1996-1998. Gaseous agents and combustion products accounted for 50% of cases, organic chemicals for 23% and inorganic chemicals 15%. Of the specific agents, the five most common were: anaesthetic gases (accounting for 11.1% of cases); acids and caustics (10.8%); solvents (8.6%); carbon monoxide (6.8%); and smoke (6.5%).

2.98 The PIAP evaluates cases investigated by HSE's field staff or by local authorities where the use of pesticides has been alleged to cause ill health among workers or members of the public. In the two years from April 1998 to March 2000 there were 155 such incidents involving 330 people. PIAP has yet to consider 47 of these cases but 19% (26 cases) of those on which it has reached a decision were considered as 'confirmed' or 'likely' links to pesticide exposure. 72% of all the incidents reported to PIAP involved crop spraying. Of the pesticide active ingredients reported to be involved, the bulk were classified as fungicides (34 %) or herbicides (27%), with the most common chemical types for being pyrethroid (11%) and conazole (8%). For those incidents assessed as 'confirmed' or 'likely', the most common chemical type was organophosphate (10%).

2.99 26% of the people involved in the incidents reported were employees or self employed, the remainder being members of the public. The ill-health effects were considered by the panel to be 'moderate' (requiring GP or hospital accident and emergency treatment) for most of the people involved.

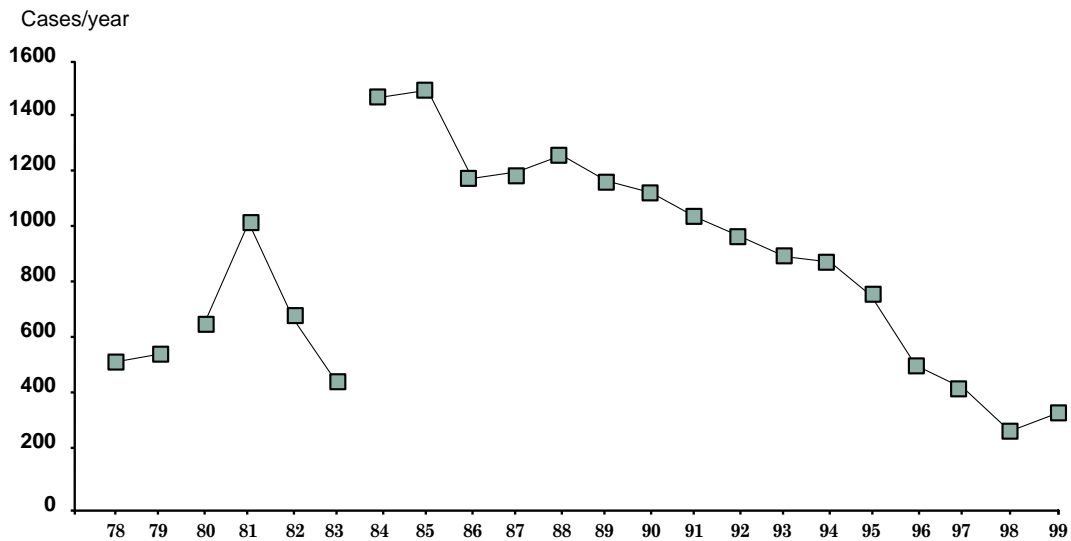
## **Physical hazards**

### ***Noise-induced deafness***

- In 1999, the number of new cases of noise-induced deafness qualifying for disablement benefit increased to 316. Over previous years, numbers fell steadily, from 1170 in 1979 to 258 in 1998.
- 48% of new cases qualifying for benefit in 1999 were in the occupation group of metal machinery and related trades workers. Other frequently occurring occupations were: extraction (mining) and building trade workers (14% of cases qualifying in 1999); machine operators and assemblers (11%); stationary plant and related operators (7%) and labourers in mining, construction, manufacturing and transport (7%).
- The estimated number of cases seen for the first time in 1999 by occupational and audiological physicians in the OPRA and OSSA (Occupational Surveillance Scheme for Audiologists), reporting schemes was 714. The main occupational groups with the highest incidence rates were 'craft and related occupations', and 'plant and machine operatives'. More specific occupations with high incidence rates included labourers in coal mines, foundries and engineering, printers, machine tool and press operatives, and rail engine drivers.
- The SWI95 survey gave an estimate of 170 000 cases of self-reported deafness, tinnitus or other ear conditions caused by work.

2.100 Figure 2.15 shows annual (calendar year) numbers of new awards of disablement benefit for occupational deafness. There must be at least 50 decibels of hearing loss in order to qualify for benefit, the degree of disability being calculated from the hearing loss in such a way that 50 decibels in both ears equates to 20% disability. Under current rules, a worker must have been employed for a minimum of ten years in specified noisy occupations. Previous relaxations in the rules in 1979 and 1983 gave rise to peaks in the numbers of assessed cases in 1981 and 1985. Figures for recent years have been steadily falling. The number of awards reached its lowest level in 1998 before rising again in 1999.

**FIGURE 2.15**  
**Occupational deafness: disablement benefit cases**



Notes: Breaks in the graph indicate changes to prescription rules.

The figures for 1984-1986 include some unsuccessful appeals and references to medical appeals tribunals and are therefore unreliable. Between 1987-1990 these were being recorded at a rate of about 21% of assessed cases.

2.101 The requirement of 50 decibels or more of hearing loss represents quite a substantial impairment. For deafness, unlike other prescribed diseases, the information available from DSS does not give, on a comparable basis, the number of cases with insufficient disability to qualify for an award. However, estimates based on DSS audiological examinations in 1998 show that of almost 2000 claims disallowed because the claimants had less than 50 decibels hearing loss, over 800 had between 35 and 49 decibels of hearing loss.

2.102 Based on reports to occupational physicians in the OPRA scheme there were an estimated 278 new cases of occupational hearing loss in 1999, substantially fewer than in previous years. 1999 represents the second full year of operation of the Occupational Surveillance Scheme for Audiologists (OSSA). There were an estimated 436 cases compared with 582 in 1998. Based on figures for 1998 and 1999 (Table A2.21), the median age of people reported in the scheme was approximately 62 years of age.

2.103 DSS estimate from a 10% sample of their records that a total of 14 700 people were receiving disablement benefit for occupational deafness in April 1998. The difference between this prevalence estimate and our much higher one for self-reported ear conditions (170 000 in the SWI95 survey) was probably due mainly to the latter survey including many sufferers who did not meet the DSS criteria.

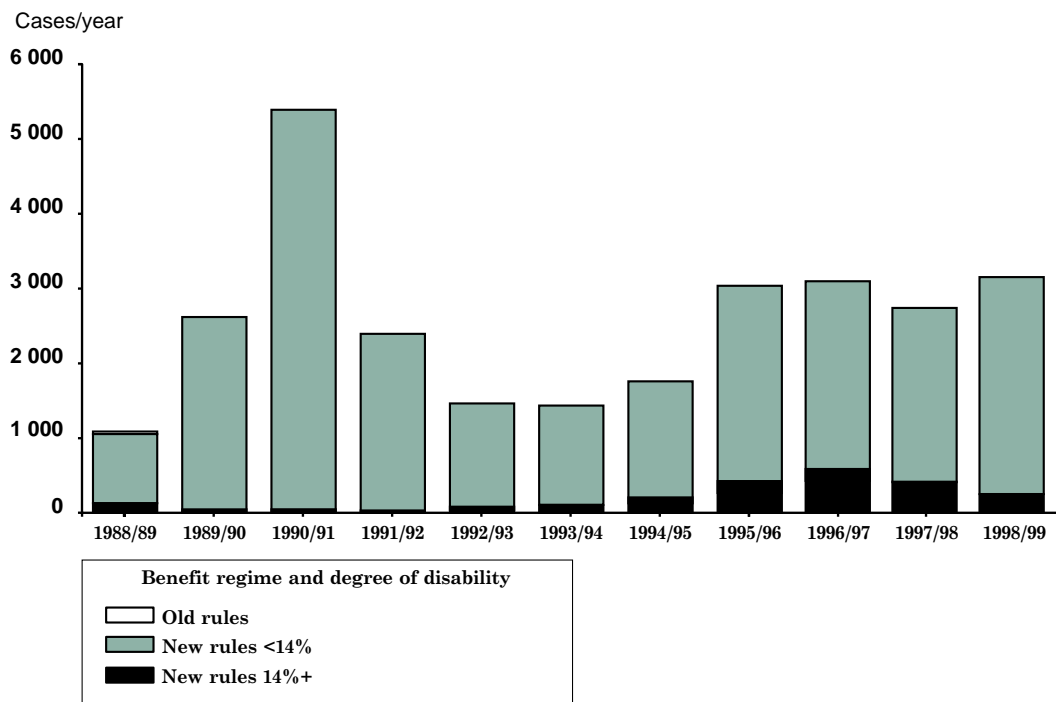
2.104 Analysis of the industries in which people, newly awarded benefit in 1998 and 1999, had worked shows elevated rates in the extraction, energy and water supply, manufacturing, and construction groups (Table A2.10). Analysis of reports from the OPRA and OSSA schemes shows a similar picture with high rates in the mining and quarrying industry, the manufacture of basic metals, motor vehicles and other transport equipment and the supply of gas, electricity and water (Table A2.24).

### ***Hand-arm vibration syndrome***

- The number of new cases of *vibration white finger* (VWF) assessed for disablement benefit was 3155 in 1998/99 and has remained fairly constant over the last four years with an average of some 3100 cases annually. Earlier figures have fluctuated widely, rising to 5403 in 1990/91, falling to 1425 in 1993/94, then rising to 3016 in 1996/97.
- Of the cases assessed in 1998 and 1999 (calendar years), 81% of workers had been employed in coal mining (a substantial increase in the proportion compared with the figure of 69% in 1997), 5% in ship building, repair or breaking, 5% in other manufacturing industries and 5% in construction.
- An estimated total of 751 new cases of hand-arm vibration syndrome (HAVS) were seen by occupational physicians and rheumatologists in the OPRA and MOSS surveillance schemes in 1999. A similar number of HAVS cases (845) were reported in 1999/2000 under RIDDOR.
- A Medical Research Council (MRC) survey in 1997-98 gave a national prevalence estimate of 301 000 sufferers from VWF.

2.105 *Vibration white finger* (VWF) (Figure 2.16 and Table A2.3) is a disorder of the blood supply to the fingers and hand which can be caused by regular use of vibrating hand-held tools. VWF is the most common prescribed disease in recent years (apart from bronchitis and emphysema in coal miners, where the numbers have been artificially inflated by relaxations in the eligibility criteria). Sufferers from VWF may also have a permanent loss of sensation in their fingers, causing difficulty in picking up and manipulating small objects. Nearly two-thirds of the people who reported VWF in the SWI95 survey also said, in answer to a specific question, that they had difficulties of that kind. However, while VWF and carpal tunnel syndrome (see later on in this section) qualify for compensation by DSS, the loss of sensation is not. Approximately 40% of those reporting VWF in SWI95 also reported work-related deafness or other ear problems, reflecting the fact that work which exposes people to hand-arm vibration is often noisy.

**FIGURE 2.16**  
**Vibration white finger: disablement benefit cases**



2.106 The marked fluctuations in annual numbers of DSS assessed cases are unlikely to be a true reflection of the underlying incidence of the disease, especially as the length of vibration exposure needed to produce the disease is usually both long and variable. Over 80% of cases assessed in 1998 and 1999 were in current or former coal miners compared to nearly 70% in 1997. The marked reduction in the size of the coal industry in recent years, leading to redundant miners making claims, is one likely influence on the numbers. Based on 1998 and 1999 assessments, the median age of coal miners compensated for VWF was 58, with only 31% aged 65 or older. Related influences on the number of claims are likely to include active concern shown by trade unions, the efforts of welfare rights advisers, and the publicity given to a civil litigation case involving miners in early 1996. A minority of VWF cases are assessed at 14% or more disability (8% of assessments in 1998/99).

2.107 The estimated number of cases of HAVS/VWF seen for the first time in 1999 by occupational physicians in the OPRA scheme was 535, compared with 605 in 1998 and 143 in 1997. The distribution of ages of affected individuals was similar in 1998 and 1999, the most common age group being 35 to 44 years of age with the vast majority of cases occurring in males.

2.108 An estimated 216 cases in 1999 and 84 cases in 1998 were seen by rheumatologists participating in the MOSS scheme. The majority of cases were in males, with cases more evenly spread over the different age groups than in the OPRA scheme.

2.109 Prevalence estimates for VWF have been derived from SWI95 and more recently from a specific survey commissioned by HSE and carried out by the MRC in 1997/98.<sup>13</sup> Both surveys were based on questionnaires administered to representative samples of the

population, but there were differences in methodology. When comparing the results, it should be borne in mind that the symptoms of finger blanching that are characteristic of VWF can also occur in the general population independently of vibration exposure. Also, although severe cases of VWF are undoubtedly painful and disabling to the sufferer, sufferers may under-report minor cases if they do not regard them as sufficiently serious a problem to be worth mentioning.

2.110 The MRC survey gave an estimated prevalence of 268 000 males and 33 400 females in Great Britain suffering from VWF, with symptoms that would meet the DSS assessment criteria. This is considerably in excess of the SWI95 estimate of 36 000, but the difference is probably explained by the likelihood that many SWI95 respondents may not have attributed their symptoms to their work, or may have given negative responses because SWI95 asked about work-related disorders in general without specific prompting about VWF. The MRC survey specifically asked whether people had the kind of symptoms that are typical of VWF, and estimated the prevalence of VWF by comparing the prevalence of symptoms in vibration-exposed and non-exposed groups, regardless of whether individuals did or did not attribute their symptoms to vibration exposure. Among the groups identified by the survey as having high exposures to hand-arm vibration were bricklayers and masons, gardeners and groundsmen, carpenters and joiners, electricians and electrical maintenance fitters, and builders and building contractors.

2.111 Other disorders may also be caused by vibration, such as *carpal tunnel syndrome* (CTS), where symptoms are thought to arise in part from entrapment or compression of nerves in the wrist. CTS caused by hand-held vibrating tools was made a prescribed disease from April 1993. In 1998/99, 478 new cases were assessed for disablement benefit compared with 400 in 1997/98 and 297 in 1996/97. Based on the total number of cases in 1998 and 1999 (calendar years), coal mining accounted for 42%, construction 13%, and ship building, repair or breaking 5%. This disease may have other occupational causes, such as repetitive twisting or gripping movements of the hand, but such cases do not qualify for compensation by DSS (see the section on musculoskeletal disorders).

2.112 Hand-arm vibration syndrome and carpal tunnel syndrome are among the diseases which are most commonly reported under RIDDOR. In 1999/2000 there were 845 cases of HAVS and 207 cases of CTS compared with 621 and 115 cases respectively in 1998/99 (Table A2.11). However, the numbers are so low in comparison with DSS figures for VWF and CTS as to suggest substantial under-reporting.

2.113 Musculoskeletal disorders may also be associated with *whole body vibration* (WBV), such as affects drivers of lorries, tractors, off-road vehicles, etc. Various studies have indicated that drivers of commercial or industrial vehicles may be prone to musculoskeletal disorders, especially of the back. However, it is not a simple matter to determine how many cases are specifically caused by WBV since the sufferers are liable to be exposed to other possible causes such as prolonged sitting in the driving posture, manual lifting when loading or unloading goods, or climbing when entering or leaving vehicles, where the driver's seat is high off the ground.

2.114 In SWI95, an estimated 31 000 road transport operatives (95% CI 16 000 to 47 000) and 11 000 other transport and machinery operatives (95% CI 2000 to 19 000) suffered from back problems which they attributed to work. However, very few respondents specifically mentioned vibration as a perceived cause, the complaints being most often attributed to

other causes including manual handling, bending or stooping, or prolonged sitting or driving (without specific mention of vibration).

2.115 The MRC survey referred to above also looked at occupational vehicle use and possible health effects. It yielded a prevalence estimate of some 150 000 people suffering from back pain attributable to riding on industrial vehicles. However, this estimate should be treated with reserve since the difference in the frequency of back pain between those using and those not using industrial vehicles was not statistically significant, and consequently the prevalence estimate has wide confidence limits which include the value zero. The findings resembled those of SWI95, in that as other causative factors (eg lifting weights of 10 Kg or more, working with hands above shoulder height) appeared to be more frequent causes of back pain than industrial vehicle use.

### ***Exposure to ionising radiation***

2.116 There are normally few cases of compensated or reported radiation injury in any one year. For example, the number of cases of prescribed industrial diseases in 1998/99 relating to radiation effects was 3 (Table A2.3). This reflects the careful control of occupational radiation exposure in Great Britain.

2.117 In Great Britain there is widespread monitoring of workers potentially exposed to ionising radiation, and therefore classified under the Ionising Radiation Regulations 1999,<sup>14</sup> during the course of their work. The results of this monitoring are recorded by Approved Dosimetry Services (ADSs). HSE approves suitable dosimetry services to make assessments. It is a condition of approval for dose record keeping that annual dose summaries for classified individuals should be sent to the Central Index of Dose Information (CIDI).

2.118 CIDI is HSE's national database of occupational exposure to ionising radiation and is operated under contract by the National Radiological Protection Board (NRPB). All records are treated confidentially in accordance with the appropriate legislation. CIDI has several functions:

- to receive annual dose summaries from which to generate statistical information;
- to provide an index to show which ADS is, or has been, responsible for the dose record keeping of classified workers and to act as back-up dosimetric information for a worker;
- to verify annually that the number of classified workers is known and is consistent with the number of registrations and terminations of classified workers since the previous year; and
- to act as the link between the old and new ADS when a worker changes employers.

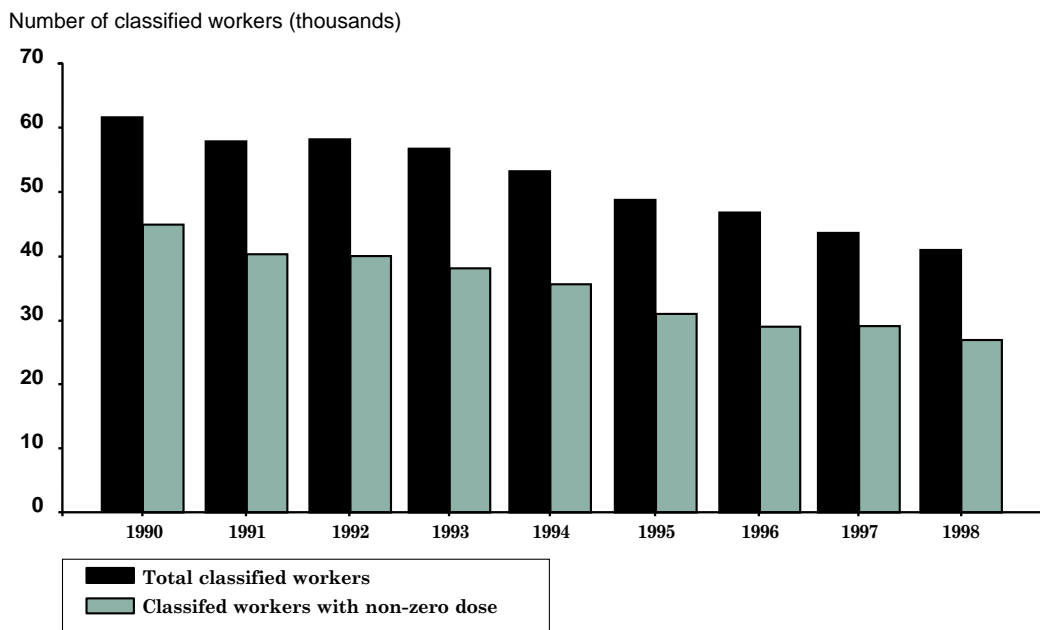
2.119 Statistical summaries of CIDI data have been published for the years 1986-1998. The statistical summary for 1998<sup>15</sup> shows that doses were reported for 41 295 workers with a collective whole-body dose, after standard corrections, of 32 Sv, giving a mean whole-body dose per classified worker for 1998 of 0.8 mSv. Of the 41 295 classified workers, only 26 911 had a non-zero dose, giving a mean whole-body dose per classified worker receiving a non-

zero dose in 1998 of 1.2 mSv. In 1998, 1456 (3.5%) classified workers received a dose of more than 5 mSv, 100 (0.2%) received a dose of more than the principal investigation level of 15 mSv, and only one (<0.01%) worker received a dose of more than 50 mSv.

2.120 The largest occupational categories in 1998 for all classified radiation workers (notional doses included) were reactor maintenance (8015 workers, 19% of all classified workers), other nuclear industrials (4157, 10%), fuel reprocessing (3721, 9%), and reactor operations (3609, 9%). The occupational categories with the largest collective dose were reactor maintenance (4.9 personSv, 15.2% of total collective dose), fuel reprocessing (4.3 personSv, 13.4%), reactor operations (4.0 personSv, 12.4%) and other nuclear industrial (3.6 personSv, 11.1%). The occupational categories with the largest mean occupational dose were other underground miners (12.5 mSv, based on 64 workers), dental work (4.2 mSv, 3 workers), and medical radiography (2.4 mSv, 52 workers).

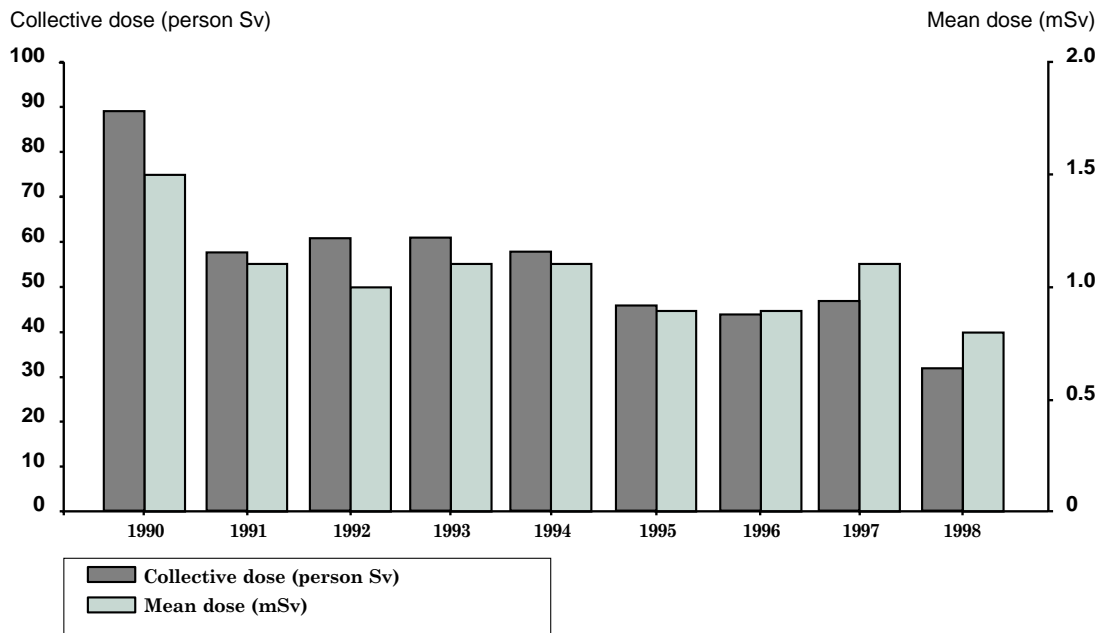
2.121 There was a steady decline in the number of classified workers during the 1990s, with the number dipping below 50 000 in 1995. A similar picture can be seen for the number of classified workers with non-zero dose, with the number dipping below 30 000 in 1996 (Figure 2.17).

**FIGURE 2.17**  
**Number of classified workers on the Central Index of Dose Information (CIDI)**



2.122 In 1997 the CIDI data carried one huge personal exposure of nearly 10 Sv. This was subsequently replaced by a Special Entry made under regulation 13 of the Ionising Radiation Regulations 1985 (now replaced by the 1999 Regulations). This mainly explains the increase in the collective dose figure for this year, compared with the previous year. During 1997 the non-ferrous metal industry in the UK finally ceased with the closure of the last few tin mines in Cornwall. Around 150 people ceased to be classified radiation workers all of whom had been receiving annual exposures of around 12 to 13 mSv. This partly explains the reduction in mean personal exposure for 1998 compared with 1997 (Figure 2.18).

**FIGURE 2.18**  
**Collective and mean doses on the Central Index of Dose Information (CIDI)**



## Biological hazards

### *Infections*

- SIDAW reported around 600 new cases of occupationally acquired infections in 1999, although this figure substantially underestimates the true incidence of occupational infections in Britain.
- The underlying trend in recent years from RIDDOR and DSS data, which focus on a limited group of usually more serious infections, suggests relatively little change in the numbers of occupational infections. The fall in SIDAW reports in 1999 relates to a change in reporting requirements rather than any genuine decrease in work-related infections.
- By far the most common types of work-related infections reported by consultants in communicable disease control (CCDCs) to the SIDAW scheme were diarrhoeal diseases, comprising nearly 80% of cases in 1999.

2.123 The health effects of workplace biological hazards are mediated primarily by two mechanisms. These are infection, and immunological reactions such as asthma, byssinosis and farmer's lung, which have been discussed in the preceding section dealing with chemical agents.

2.124 Occupational infections include:

- *zoonoses* (infections from live or dead animals), to which occupations such as farmers, veterinarians and slaughtermen are at risk;
- infections from human sources, to which many occupations such as health care workers, social workers and sewage workers may be exposed; and
- infections from other environmental sources such as legionella.

2.125 Surveillance schemes SIDAW (Surveillance of Infectious Disease At Work), EPIDERM, SWORD and OPRA, along with DSS disability benefit and RIDDOR data, provide the principal sources of information on work-related infections. These are all described in the section *Further information on data sources*.

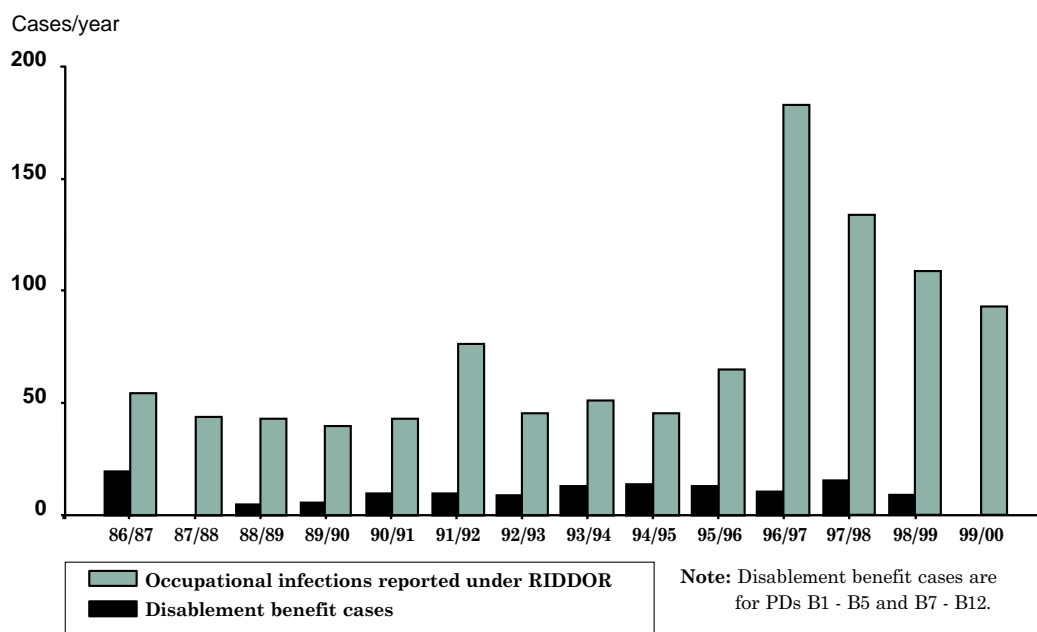
2.126 An estimated 619 cases of work-related infections were seen for the first time by consultants in communicable disease control (CCDCs) reporting to SIDAW in 1999, compared with an estimated 1138 new cases reported in 1998 (Table A2.25). This fall in cases relates to a change in reporting requirements for diarrhoeal diseases, with CCDCs only asked to report case numbers within outbreaks of such diseases from October 1999. This simplification of reporting for diarrhoeal diseases was brought in to make the task of reporting less time consuming. Despite such changes diarrhoeal diseases still comprise 78% of all work-related infections reported by CCDCs in 1999, although it is likely that the SIDAW scheme will see a further fall in cases in 2000 due to this effect.

2.127 The age distribution of work-related infections indicates more reported cases among younger working age groups which is in contrast to the pattern for many work-related diseases. Furthermore, slightly more cases are reported among females than males, although this difference is not as great as in earlier years when all diarrhoeal disease cases were reported. These age and sex differences probably reflect the age and sex distribution within occupations with the greatest number of cases. Analysis by occupation and industry shown in Tables A2.26 and A2.27 indicates most cases occur among health care workers, particularly care assistants and attendants, and among workers in food production and catering occupations.

2.128 The total estimated incidence of work-related infections provided by SIDAW considerably underestimates the true incidence of work-related infections. Generally CCDCs reporting to SIDAW will be more likely to see infections that receive a relatively high degree of attention or intervention. This may be influenced by the severity of the infection, the duration of infection, and its impact on a person's work or activity.

2.129 A different range of work-related infections specific to the skin and respiratory systems are reported through other surveillance schemes (see paragraph 2.71). An estimated 141 new cases of infective skin disease were reported to EPIDERM and OPRA in 1999 compared with 204 in 1998 (Tables A2.16, A2.17). Of respiratory diseases caused by infections (notably including tuberculosis), an estimated 63 new cases were reported to SWORD and OPRA in 1999 compared with 87 in 1998 (Table A2.12 and A2.13).

**FIGURE 2.19**  
**Occupational infections**



2.130 DSS disability benefit and RIDDOR data provide other sources of information on occupational infections although these give even lower annual estimates of cases than the surveillance data. Some infections (Tables A2.3 and A2.4) are prescribed diseases, although these figures will only include those with some long-term and usually severe disability. RIDDOR reports provide data on a number of specific infections under defined conditions and other infections are reported under a general category of other infections reliably attributable to specified kinds of work (Table A2.11). This 'other infections' RIDDOR category showed a large increase in reporting in 1996/97, although since then there appears to be a declining trend back to pre-1996/97 levels. The peak in this particular RIDDOR category, along with the relatively stable reported numbers in other RIDDOR categories and DSS disability benefit cases, suggests a change connected with the revised wording used to define this category in RIDDOR 95. Furthermore, the 1994 revisions to the Control of Substances Hazardous to Health Regulations 1994 (COSHH), and in particular the associated biological agents Approved Code of Practice, probably temporarily raised employers awareness of the need to report occupational infections contributing to this peak in RIDDOR cases. Apart from this, RIDDOR and DSS data appear not to suggest any strong underlying upward or downward trend in occupational infections in recent years.

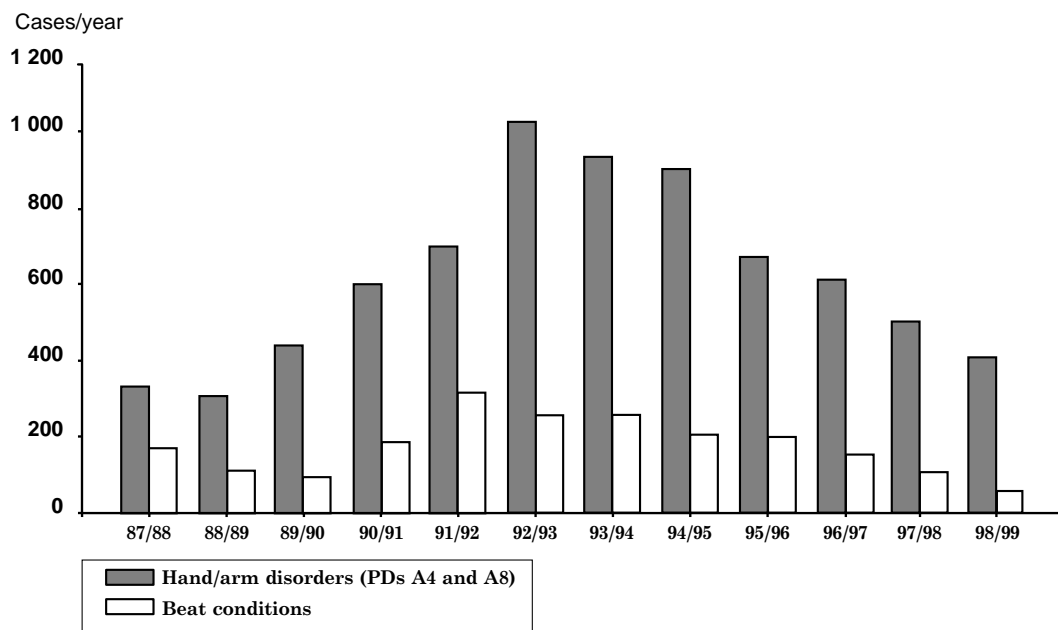
### Musculoskeletal disorders

- In 1998/99, there were 465 new cases assessed for disablement benefit due to a prescribed musculoskeletal disorder. The number of assessed cases reached a peak in 1992/93 and has decreased each year since then.
- The 1995 SWI survey estimated 1 155 000 people in Great Britain believed they were suffering from a musculoskeletal disorder caused by work.

- Each year there are thousands of new cases of musculoskeletal disorders that require some level of specialist intervention. An estimated 8500 cases were seen for the first time in 1999 by rheumatologists and occupational physicians reporting to the MOSS and OPRA surveillance schemes.
- Occupations with the highest rates for musculoskeletal disorders in the SWI95 survey were: coal mining; nursing; construction and other processing.

2.131 Musculoskeletal disorders are the most common form of work-related ill health in Great Britain. There are five sources of statistics for occupational musculoskeletal disorders. The first of these sources is the Industrial Injuries Scheme that provides statistics on the number of assessed cases confirmed as having some disability (1% or more) from a 'prescribed disease'. A limited number of specifically work-related musculoskeletal disorders are classed as prescribed diseases under the scheme, namely beat hand, beat knee, beat elbow, cramp of the hand or forearm and inflammation of tendons of the hand, forearm or associated tendon sheaths (tenosynovitis). Except for beat knee these are all upper limb disorders.

**FIGURE 2.20**  
**Musculoskeletal disorders: disablement benefit cases**



2.132 The number of assessed cases having 1% or more disability has continued to fall from 1283 in 1992/93 to 465 in 1998/99. In the latest year (Table A2.3, Figure 2.20), the majority of assessed cases were for tenosynovitis (74%). For beat conditions, all of the assessed cases were males, whereas the majority of assessed cases for hand and forearm conditions (72%), were females. The proportion of cases that were assessed as having 14% or greater disability for all musculoskeletal conditions was similar to previous years, at 40%.

2.133 Analysis of the average rates of new assessments in 1998-99 by industry (Table A2.10) shows that the extraction, energy and water supply industries had the highest rate

of assessed cases with 11 cases per 100 000 employees. The manufacturing industry had the second highest rate of cases with a rate of 5 cases per 100 000 employees.

2.134 The second source of statistics is the 1995 Survey of Self-reported Work-related Illness (SWI95). This survey showed that musculoskeletal disorders were the most commonly reported work-related illness. In Great Britain an estimated 1 155 000 people were suffering from a musculoskeletal condition caused by their work. Among these, an estimated 5% were suffering from more than one musculoskeletal condition.

2.135 Of the estimated number of individuals suffering from a musculoskeletal disorder, 44% were suffering from a disorder that affected their back *only*, 32% their upper limbs and neck *only* and 9% *only* their lower limbs. A further 16% of individuals were suffering from a disorder that affected more than one part of their body or their whole body and 3% a condition that affected an internal part of their body, eg hernia. Half of the individuals with a musculoskeletal condition had been suffering for at least five years reflecting the substantial number of persistent cases.

2.136 SWI95 occupational rates are given for individuals who ascribed their work-related illness to their current or most recent job (within the last eight years). The occupations with the highest rates for musculoskeletal disorders were: nurses; construction workers; other processors; and coal miners. The occupation groups with the highest rates for disorders affecting the back were similar to those for all musculoskeletal disorders but also included care workers and electrical processors. For disorders affecting the upper limb or neck the occupations with the highest rates were: armed forces; construction; textile processing and other processing.

2.137 Figure 2.2 shows the estimated prevalence rate of musculoskeletal disorders, caused by the current or most recent job by social class. Social class III<sub>m</sub> (skilled manual occupations) had the highest rate (3.9%). (This forms part of some secondary analysis of SWI95. Further details and analysis are given in an information sheet available from the address on page 207).

2.138 SWI95 estimated that 9.9 million working days were lost in 1995 due to a musculoskeletal disorder caused by work. On average each sufferer took an estimated 13 days off work because of their complaint. (These figures incorporate some revisions made since publication of SWI95 report.<sup>5</sup> More details are given in an information sheet available from address on page 207).

2.139 The third source of statistics is the OPRA and MOSS surveillance schemes. Since January 1996, occupational physicians have reported musculoskeletal disorders, along with other occupational diseases to OPRA. Since October 1997 rheumatologists have been reporting to MOSS, the surveillance scheme for musculoskeletal disorders caused by work. Both schemes are described in more detail in *Further information on data sources*.

2.140 In 1999, an estimated 5791 new cases of work-related musculoskeletal disorders were seen by occupational physicians reporting to OPRA and a further 2785 were seen by rheumatologists reporting to MOSS (Tables A2.28 and A2.29). The number of estimated cases reported to OPRA and MOSS between 1998 and 1999 rose from 7666 to 8576.

2.141 In both schemes musculoskeletal conditions affecting the hand/wrist/arm (excluding *Raynauds/HAV/VWF*) were the most commonly reported, with over 40% more cases

reported for females than males in 1998-99. Males were reported to have more conditions affecting the lumbar spine and lower limbs (hip/knee, ankle/foot) than females but fewer conditions affecting the neck/thoracic spine.

2.142 The occupation with the highest average annual incidence rate (per 100 000 workers) in 1998-99 of work-related musculoskeletal disorders affecting the upper limbs reported to MOSS, with sufficiently large actual numbers, was 'computer operators and data processing operators' with an estimated rate of 69 per 100 000. For OPRA, the highest average annual rates were in 'metal dressing operatives', 'road construction and maintenance workers', 'service pipe layers and jointers' and 'assemblers/lineworkers (vehicles and other metal goods)' with estimated rates of 837 per 100 000, 379 per 100 000 and 355 per 100 000 and 355 per 100 000 (Table A2.30).

2.143 The occupations with the highest average annual rates (per 100 000 workers) in 1998-99 of work-related musculoskeletal disorders affecting the spine/back reported to MOSS, with sufficiently large actual numbers reported, were 'craft and related', 'personal and protective service' and 'plant and machine operatives' each with estimated rates of 4 per 100 000. For OPRA, the highest average annual rates were in 'assemblers/lineworkers (vehicles and other metal goods)', 'assistant nurses, nursing auxiliaries', and 'nurses' with estimated rates of 154 per 100 000, 79 per 100 000, and 48 per 100 000 (Table A2.31). It should be noted, however, that some occupations or industries will not feature prominently in OPRA reports because few workers will be under the care of occupational physicians (paragraph 2.166).

2.144 The industry with the highest average annual rates (per 100 000 workers) in 1998-99 of work-related musculoskeletal disorders affecting the upper limbs reported to MOSS, with sufficiently large actual numbers, was 'manufacture of motor vehicles' with estimated rates of 57 per 100 000 and 20 per 100 000. For OPRA, the highest average annual rates were in 'manufacture of motor vehicles' and 'electricity, gas steam and hot water supply' with estimated rates of 137 per 100 000 and 126 per 100 000 (Table A2.32).

2.145 The industries with the highest average annual rates (per 100 000 workers) in 1998-99 of work-related musculoskeletal disorders affecting the spine/back reported to MOSS, with sufficiently large actual numbers reported, were 'public administration and defence', 'construction', 'transport, storage and communication' and 'health and social work' with estimated rates of 6 per 100 000, 4 per 100 000, 4 per 100 000 and 4 per 100 000 respectively. For OPRA, the highest average annual rates were in 'manufacture of motor vehicles' and 'health and social work' with estimated rates of 62 per 100 000 and 25 per 100 000 (Table A2.33).

2.146 The fourth source of statistics is a series of questions in the Office for National Statistics Omnibus Survey. The questions were commissioned in 1996 by the Department of Health to identify adults who had experienced lower back pain in the 12 months before the interview. A total of 40% of sufferers had suffered from lower back pain in the last 12 months. The most common reasons for the onset of pain were work related: around a quarter considered their pain was related to the type of work they did, and 12 % gave an accident or injury at work as the reason. This survey is a repeat of a survey carried out in 1993 which gave very similar results.

2.147 The fifth source of statistics is from RIDDOR. From April 1996, the musculoskeletal disorders which are included in the DSS list of prescribed diseases became reportable diseases under RIDDOR. A total of 610 cases were reported to RIDDOR in 1999/2000, making

musculoskeletal disorders the most commonly reported disease group. The number of cases reported to RIDDOR between 1996/97 and 1997/98 rose from 647 to 745, but fell to 610 in 1999/2000 (Table A2.11). However, comparisons with other data sources (eg OPRA/MOSS) suggest substantial under reporting, as with other diseases reportable under RIDDOR.

2.148 Statistical information sheets are available on work-related back disorders and work-related upper limb disorders from the address on page 207.

### **Stress-related and psychological disorders**

- SWI95 estimated that approximately half a million individuals believed they were experiencing work-related stress at a level that was making them ill. The Stress and Health at Work study (SHAW) indicated that nearly 20% of all working individuals surveyed reported their work to be very or extremely stressful.
- The annual incidence of work-related mental health problems in Britain, as estimated from surveillance schemes OPRA and SOSMI (Surveillance of Occupational Stress and Mental Illness) is around 6500 new cases per year. This almost certainly underestimates the true incidence of these conditions in the British workforce.
- There is little reliable information to assess the trends over time of these work-related conditions in the British workforce.
- ‘Teachers’ and ‘nurses’ provided the highest prevalence rate of work-related stress in both SWI95 and SHAW. SOSMI and OPRA also report high incident rates for these occupational groups.

2.149 Stress and related conditions form the second most commonly reported group of work-related ill-health conditions after musculoskeletal disorders. SWI95 estimated that work-related stress, depression or anxiety affected an estimated 279 000 (95% CI 235 000 to 323 000) people in Great Britain. Just over 40% of these affected individual’s first became aware of this condition within the last 12 months. A further estimated 254 000 (95% CI 213 000 to 296 000) people ascribed a physical condition to the effects of stress at work (stress-ascribed condition). In total this survey estimated a prevalence of half a million individuals who believed they had experienced work-related stress at a level that was making them ill.

2.150 A further recent source of data on the prevalence of work-related stress is the *Stress and health at work study* (SHAW) undertaken in 1998.<sup>16</sup> This large population-based survey reported that 2-3% of those employed thought their work was extremely stressful with a further 15-16% indicating their work was very stressful. The combination of these categories were considered by the authors as representing those suffering high levels of work-related stress, representing 17-19% of the working population. Hence, they estimated that five million British workers believed they were suffering high work-related stress, which is ten times greater than the SWI95 estimate. However, the SWI95 estimate represents more serious cases where individuals reported unprompted that work-related stress was making them ill, ie had some significant physical or psychological impact on their health, whereas the SHAW survey estimates represent an individual’s assessment of the stress levels in their job. In this context SHAW survey data may best be considered as

an estimate of the numbers who believe they are exposed to significant amounts of stress at work and SWI95 estimates as an estimate of the number that believe they have suffered some significant effects as a result of this exposure.

2.151 Sources of data on the incidence of work-related stress and psychological disorders are the two surveillance schemes SOSMI and OPRA, representing reports of new work-related cases of mental ill health seen by psychiatrists and occupational physicians respectively (for more detail see *Further information on data sources*). Incidence data on work-related mental ill health reported by occupational physicians for 1998 and 1999, and by psychiatrists for 1999, are presented in Tables A2.34 and A2.35. This data shows that most cases occur in the age ranges 35 to 54. It is not clear from the surveillance schemes data whether the incidence of work-related mental ill health differs by sex. In the first year of operation of SOSMI, more male than female cases were reported, though this may reflect other factors such as the greater number of males in full-time employment. The prevalence surveys SWI95 and SHAW suggest no significant differences between sexes in self-reported work-related stress.<sup>5,16</sup> In 1999 an estimated 3936 cases of work-related mental ill health were seen for the first time by psychiatrists reporting to SOSMI, and an estimated 2558 cases were seen for the first time by occupational health physicians reporting to OPRA. Together this totals an estimated 6494 new cases of work-related mental ill health in Great Britain in 1999. This figure probably significantly underestimates the true incidence of these work-related conditions in Great Britain given that SWI95 estimates that 92 000 people first became aware of their work-related stress, anxiety and depression in the previous 12 months. However, these two data sources provide different measures, and surveillance scheme data is likely to represent more severe cases with more reliable diagnostic classification.

2.152 There is no useful data on trends over time for work-related psychosocial conditions. Surveillance schemes have not been running long enough to make any assessment of trends over time and the various surveys SWI90, SWI95 and SHAW are insufficiently comparable to allow for any useful assessment.

2.153 Information on the occupational and industry distribution of work-related mental illness is provided by surveillance scheme data (Tables A2.36 and A2.37), whereas SWI95 and SHAW<sup>17</sup> provide some information on the occupational distribution of the prevalence of work-related stress. Teachers and nurses had the highest prevalence of work-related stress in both of these surveys. This may largely explain the high levels of work-related stress in social class group II noted earlier (see Figure 2.3). Both surveys also indicated relatively high prevalence of work-related stress in security occupations, managerial and professional occupations and road transport workers. Incidence rates for work-related mental illness by occupation, from the surveillance schemes SOSMI and OPRA, broadly support the pattern of occupational distribution found in these surveys. Incidence rates by industry also reflect this occupational distribution with high rates in education, and health and social work industry groups. Interestingly, high rates were also found among those employed in finance-related industry groups and public administration and defence. Although, the occupational pattern with regard to psychosocial ill health appears quite clear some caution must be exercised in the interpretation of this data. Factors such as awareness and knowledge of stress, and social stigma attached to stress or mental illness, may vary markedly by occupational group, and these factors may strongly influence self-reporting, or the seeking of medical help. Indeed, changing social attitudes, knowledge and understanding of psychosocial ill health in the future may exert a strong influence on these statistics making changes in underlying trends or in occupational distribution difficult to assess.

## Other hazards

### *Building-related sickness*

- Building-related sickness includes both sick building syndrome (SBS) and other more specific diseases such as humidifier fever, legionnaires' disease and exposure to toxic agents in the environment. There are no definitive estimates of the scale of building-related sickness, although some information is available from SWI95 and RIDDOR 95, for SBS and legionnaires' disease respectively. Virtually no cases of building-related sickness were reported to SWORD in the past ten years.
- The SWI95 survey shows that in 1995 between 2000 and 15 000 office workers (with a central estimate of 9000) suffered from 'sick building type' symptoms which they believed were caused by their indoor working environment or indoor lighting at work. Excluding those cases caused by indoor lighting where VDU use was also cited as the cause of illness this estimate reduced to a maximum of 10 000 cases. However, these estimates are likely to be an under-count of the true prevalence (see discussion in the following paragraphs).
- In the three years 1997/98 to 1999/2000, 25 cases of legionnaires' disease were reported to HSE under RIDDOR, mostly in males. However, because of known under-reporting to RIDDOR this figure probably substantially underestimates the true incidence of legionnaires' disease.

2.154 The prevalence of SBS is difficult to assess since the symptoms are common in the general population, and for the most part, not serious. Typical reported symptoms include headaches, nasal problems, eye irritation, dry skin and tiredness. No single specific causative factor has been identified for SBS, but factors which could be implicated include physical and environmental factors, eg ventilation and poor lighting, and job factors, eg variety and interest of particular jobs.

2.155 The SWI95 survey collected information from respondents on illnesses they attribute to their work and on the way in which they believe their work has caused their illness. This information has been used to derive a prevalence estimate of SBS by linking cases of sick building type symptoms with the appropriate types of cause. However, because of the ill-defined nature of SBS and the common nature of symptoms in the general public, many respondents suffering from SBS may not have associated their symptoms with work, or indeed may not have thought the illness serious enough to warrant reporting to the survey.

2.156 The SWI95 prevalence estimate may, therefore, be much lower than the true figure. However it can be seen as a lower bound estimate of the prevalence of SBS among office workers and suggests that SBS is not a widespread source of concern.

## FURTHER INFORMATION ON DATA SOURCES

### Industrial Injuries Scheme (IIS)

2.157 The Industrial Injuries Scheme administered by the Department of Social Security (DSS) compensates workers who have been disabled by a prescribed occupational disease. The self-employed are not covered by this scheme. Diseases are prescribed in connection with defined occupations or occupational conditions. They are only prescribed if an occupational cause is well established, and if terms of prescription can be framed in such a way that the majority of cases falling within the terms of prescription will be of genuine occupational origin.

2.158 Where there is a long delay between the cause of a disease and its appearance, it may be difficult both to identify and prove occupational causes, and to frame satisfactory terms of prescription. Even when this is done, the numbers of awards probably understate the disease's incidence, because individuals may be unaware of the possible occupational origin of their disease or the availability of compensation, the latter applying to shorter latency diseases as well.

2.159 Respiratory diseases are assessed by *Special Medical Boards*, and there are also separate arrangements for assessing *occupational deafness*. Figures for these diseases are published on a calendar year basis, those for the respiratory diseases being shown in Tables A2.5 - A2.9. Figures for other prescribed diseases (PDs) are published for years starting 1 October (Tables A2.3 - A2.4). For convenience the deafness figures are shown in Tables A2.3 - A2.4, although they are on a calendar year basis like the respiratory diseases.

2.160 For most diseases, benefit is payable if the extent of disability (from a single PD or from a number of PDs together) is assessed at 14% or more. However, figures are available for all newly assessed cases including those assessed at 1-13% disability. This so called '14% rule' was introduced for all claims lodged after 1 October 1986, for all diseases except *pneumoconiosis*, *mesothelioma*, and *byssinosis* (where benefit is still payable for lesser degrees of disability) and *deafness* (where the benefit threshold is 20% disability). This change has substantially reduced the numbers qualifying for disablement benefit, and seems also (with the notable exception of vibration white finger) to have reduced the numbers making claims. For pneumoconiosis, byssinosis, and mesothelioma, benefit continues to be paid and statistics are collected for all cases assessed at 1% or more disability. For deafness the available figures do not identify those assessed at less than 20% disability, who do not qualify for benefit.

2.161 Tables A2.3 and A2.5 show for completeness the totals for the prescribed diseases. Care needs to be taken in interpreting both the annual totals and their trend. Prescribed diseases are a mixture of different types of disease, and they do not represent the full spectrum of work-related illness. Individual components of the total are liable to be strongly affected by changes in prescription and factors affecting the take-up of claims (eg the contraction of traditional industries where the availability of compensation is well known, and the shift in employment to newer industries where it may be less well known). Much of the total is accounted for by lung diseases, vibration white finger, and deafness, and many such cases are a legacy of past working conditions which would be judged inadequate or in some cases illegal by today's standards.

## **Voluntary reporting of occupational diseases by specialist doctors**

2.162 In 1989 the first of several clinically-based reporting schemes for occupational disease was developed at the National Heart and Lung Institute in London. This scheme, the Surveillance of Work-related and Occupational Respiratory Disease (SWORD), relies on systematic, voluntary and confidential reporting of all new cases seen by consultant chest physicians.<sup>18</sup> EPIDERM, a scheme for occupational skin disease by dermatologists, was begun in 1993,<sup>8</sup> followed in 1996 with Surveillance of Infectious Disease at Work (SIDAW), by consultants in communicable disease control.<sup>19</sup> Three other schemes were started more recently, OSSA (Occupational Surveillance Scheme for Audiologists), MOSS (Musculoskeletal Occupational Surveillance Scheme) and SOSMI (Surveillance of Occupational Stress and Mental Illness).<sup>20</sup> In all these schemes a very high proportion of physicians in the relevant specialities participate systematically and voluntarily.

2.163 Occupational physicians reported to SWORD from its inception and to EPIDERM from 1994. In 1996 the Occupational Physicians Reporting Activity (OPRA) was established as a separate scheme for all types of work-related disease.<sup>21</sup> Since 1998 all seven schemes have been brought together and run from the University of Manchester as constituents of the Occupational Disease Intelligence Network (ODIN).

2.164 In most of these schemes (SIDAW and OSSA being the exceptions), there is a sampling process whereby most participating doctors are asked to send in reports for one month in each year, and the numbers of cases that they report are multiplied by twelve in arriving at the estimated annual totals. To avoid any systematic seasonal biases the sampled doctors are randomly allocated their reporting month, and this allocation changes from year to year. Not all reporting doctors are sampled, some are so called 'core' reporters, who report cases every month throughout the year. Cases reported by them are included in the estimated annual totals without any scaling up. All the figures presented in this volume are estimated annual totals (or rates derived from them) rather than actual numbers of reported cases.

2.165 It should be remembered, therefore, that many of the estimated numbers shown in this volume are based on smaller (often considerably smaller) numbers of actual reported cases, and caution should be exercised in examining apparent year-on-year changes, as well as rates derived from estimated cases. The numbers are inevitably subject to more random variation than if there were no sampling. Many cases of work-related disease will fall outside the catchment of the ODIN schemes, since many workers will not have access to an occupational physician at their place of work, and other specialists such as chest physicians, dermatologists, psychiatrists, etc will largely see only the more serious or difficult-to-resolve cases that are referred to them by other doctors. (They do, however, see patients over a wider age range than the occupational physicians, who generally see patients who have not yet retired). Therefore, figures from the ODIN schemes should be regarded very much as minimal estimates of the true incidence of work-related disease. Figures in this volume relate to Great Britain only, although the ODIN schemes do collect reports from doctors throughout the UK.

2.166 The fact that in many industries few, or even no, sufferers will have access to occupational physicians means that incidence rates based on or including OPRA reports cannot be used as a fair basis of comparisons between industries or occupations which have different degrees of coverage by such doctors. For example hairdressers are shown by

reports from dermatologists to have a high risk for dermatitis, but occupational physicians deal with few such workers and, consequently, see very few cases. Comparisons between industries or occupations (bearing in mind the preceding warnings about small sample numbers) are best made by using rates based only on reports by 'disease specialists' (eg dermatologists, chest physicians, etc). Such specialists are accessible via the NHS to patients with all kinds of employer (including small businesses and the self-employed). The accompanying tables (in Annex 2) show rates both including and excluding OPRA reports. Rates including OPRA cases are shown in order to give as complete a picture of occupational disease incidence as is possible with the available information, though inevitably the degree of completeness for different industries or occupations must vary for the reasons just stated.

### **Surveys of self-reported work-related ill health (SWI90 and SWI95)**

2.167 Results from a survey of self-reported work-related illness in 1995 have been published in a separate report.<sup>5</sup> This was the second survey undertaken by HSE to get a view of work-related illness based on the perceptions of individuals. The first was conducted in 1990 and a detailed report published in 1993.<sup>22</sup> The surveys are referred to as SWI90 and SWI95. Both used samples of households from the Labour Force Survey (LFS).

2.168 In the SWI95 nearly 40 000 survey subjects participating in the fifth wave of the Labour Force Survey between August 1995 and February 1996 were asked:

'In the last 12 months have you suffered from any illness, disability or other physical problem that was caused or made worse by your work? Please include any work you have done in the past.'

2.169 Respondents who said 'Yes' to this question were asked if they would agree to a further interview to record details of their work-related illness. Those who agreed (about 70%) were re-interviewed using a detailed questionnaire covering:

- the nature of the illness;
- the job which caused it (or made it worse);
- how the job had led to the illness;
- the number of work days lost;
- the presence and intensity of a selected list of risk factors in the job linked with the illness;
- the level of knowledge of the risk in the workplace and preventive measures taken;
- symptom descriptions (for some disease categories); and
- smoking habit (for subjects reporting lower respiratory disease).

2.170 The SWI90 survey was conducted by using the same main screening question, together with a limited number of follow-up questions in a trailer to the main 1990 LFS. Changes in the design of the LFS meant that the same survey process could not be followed

in 1995. This has the disadvantage that comparisons between the two surveys can only be made at a very broad level. But it also has the advantage of removing the limits on interviewing time imposed by the needs of the main LFS, so that at the follow-up stage the 1995 survey could collect much more detailed information.

2.171 In addition to the interviews with sufferers, the 1995 study included two further elements. Firstly, with the respondent's written consent, the doctor or specialist who treated the illness was contacted, and asked to confirm (or correct) the recorded diagnosis, and offer their own opinion about the link with work. Secondly, to help identify features of the job which may be associated with a work-related illness a control population was asked the same questions on working conditions that appeared in the follow-up questions for sufferers of work-related illness. In addition, to aid interpretation of the main survey the same questions on chest problems, smoking and general health were asked so that background levels of certain health problems could be determined. The control population questions were included in two monthly cycles of the Office for National Statistics (ONS) Omnibus survey (in August and October 1995).

2.172 The main aim of the new survey (as in SWI90) was to measure the numbers and types of illnesses caused by people's work. What the survey actually recorded was the opinion of individuals who believe themselves to be so affected. This is of interest and importance in its own right, but cannot be taken directly as an indicator of the 'true' extent of work-related illness. People's beliefs may be mistaken: they may ascribe the cause of illness to their work when there is no such link; and they may fail to recognise a link with working conditions when there is one.

2.173 Illnesses thought by respondents to be caused by 'stress' have been treated as a separate category, described as 'stress-ascribed' diseases. Regardless of whether the disease reported can in fact be caused by stress, these cases are best considered as indirect reports of stressful work conditions. This is because for most diseases the affected individual has no way of observing the effect of stress on the disease process. Thus, while there is good evidence that working conditions do affect the risk of circulatory disease in people exposed to them, estimates of the extent of work-related circulatory disease can only properly be based on controlled epidemiological study of working populations in which other risk factors are appropriately measured and allowed for. Self-reports of heart disease caused by stress may be correct, but cannot be regarded as a reliable basis for estimating the extent of work-related heart disease.

2.174 All individual responses were reviewed, and excluded if the link between illness and work was implausible. (Also excluded were illnesses caused by accidents other than manual handling accidents, and illnesses caused in war conditions). These exclusions reduced the overall prevalence from 2.6 million to 2 million, a drop of 24%.

### **Deaths from asbestos-related diseases**

2.175 The figures in Tables A2.38 to A2.40 are derived from HSE's registers of deaths from asbestosis and mesothelioma. Table A2.38 shows the numbers of death certificates issued each year, and copied to HSE by the Office for National Statistics (ONS) and the General Register Office for Scotland (GRO(S)), on which either asbestosis or mesothelioma (or both) are mentioned.

2.176 Some death certificates mentioning both asbestosis and mesothelioma do so in ways which suggest that the word 'asbestosis' is being used to indicate the role of asbestos in causing mesothelioma, rather than the presence of asbestos-induced lung fibrosis, which is what the word strictly means. Consequently the trends in deaths from asbestosis are probably better reflected by the figures for asbestosis without mention of mesothelioma, rather than the total of certificates mentioning asbestosis.

2.177 Before 1993, if there was insufficient information on a death certificate to accurately classify the death, the Office for National Statistics (ONS) sent a 'medical enquiry' to the certifying doctor for further information. This procedure was discontinued for deaths registered from 1993 onwards, but ONS hope to reintroduce it sometime in the future. This discontinuation has affected the site coding of mesothelioma deaths, the proportion coded as 'site not specified' rose from 24% in 1992 to 43% in 1993.

### **Deaths from other occupational lung diseases**

2.178 Deaths from pneumoconiosis, byssinosis and occupational allergic alveolitis (farmer's lung, mushroom picker's lung and other pneumonitis), recorded on death certificates as the underlying cause of death and obtained from data supplied by ONS and GRO(S) are displayed in Table A2.41.

### **Statutory reporting of occupational diseases and accidents (RIDDOR)**

2.179 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985 (RIDDOR 85) were introduced in April 1986, and have now been replaced by RIDDOR 95 (effective from 1 April 1996). The Regulations require employers to report all cases of a defined list of diseases occurring among their employees where:

- they receive a doctor's written diagnosis; and
- the affected employee's current job involves the work activity specifically associated with the disease.

2.180 The diseases and their associated occupational conditions are listed in a Schedule to the Regulations.<sup>23</sup> This list (based on the DSS list of prescribed diseases but with some exceptions) was revised and extended in the new Regulations, the most significant changes being the addition of specified musculoskeletal (mainly upper limb) disorders and occupational dermatitis. There have also been revisions to some of the definitions, eg the category shown as 'other reportable infections' corresponds in part to that previously called pathogenic infection, but the broadening of the definition probably explains some of the appreciable increase in the numbers reported. It is not possible to isolate the effects of all such changes on the figures. The wide publicity given to the new Regulations is also likely to have encouraged reporting of diseases. The latest figures for reports of diseases under RIDDOR are shown in Table A2.11.

2.181 Comparison of these figures with those for disablement benefit for the corresponding DSS prescribed diseases in Tables A2.3 and A2.5 suggests that there is still substantial under-reporting under RIDDOR, particularly for diseases with long induction periods (for example, the pneumoconioses and occupational cancers). The criteria which need to be fulfilled in order for a case to be reported together with the reporting mechanism itself are thought largely to be responsible for this under-reporting.

2.182 The reportable diseases include poisoning by some specified chemicals, but in addition, any accidental injury or poisoning by a chemical agent is reportable under RIDDOR if it causes more than three days' unfitness for work, or is a 'major' injury (as defined in RIDDOR, see Part 1 of this volume). Figures of such incidents reported as injuries under RIDDOR are shown in Figure 2.14. As with the disease reports there is substantial under-reporting. Due to changes in the definition of a major injury under RIDDOR 95, figures from 1996/97 cannot be compared with earlier years.

### **Surveillance of workers exposed to lead**

2.183 Under the Control of Lead at Work Regulations (CLAW) 1980 and 1998, all workers with significant exposure to lead are required to be under medical surveillance by an appointed doctor or one of HSE's medical inspectors. The surveillance includes measurement of each worker's 'blood-lead level', the amount of lead in samples of their blood, expressed in micrograms per hundred millilitres ( $\mu\text{g}/100\text{ml}$ ). Annual returns give summary statistics for each workplace based on the maximum blood-lead level recorded for each worker under surveillance.

2.184 The Approved Code of Practice issued with the Regulations lays down levels of blood-lead concentration above which the appointed doctor is required to decide whether to certify that the worker should no longer be exposed to lead. If a worker's blood-lead level exceeds this 'suspension level' a repeat measurement must be made, and if this is still over the level the worker should be suspended from working with lead. The number of such workers suspended is also recorded annually and analysed in the statistics. Under the 1980 Regulations the suspension levels were 70  $\mu\text{g}/100\text{ml}$  for males (80  $\mu\text{g}/100\text{ml}$  up to 1986) and 40  $\mu\text{g}/100\text{ml}$  for females of reproductive capacity (to protect the health of any developing foetus). The suspension levels were lowered in the 1998 Regulations, to 60 and 30  $\mu\text{g}/100\text{ml}$  respectively, with new 'action levels' of 50 and 25  $\mu\text{g}/100\text{ml}$ .

2.185 Because of the time required to collate and validate the returns from all the appointed doctors and medical inspectors, the latest year for which data is available is 1998/99. Thanks to improved administrative procedures it was possible to publish this year's figures more quickly than before, in a press notice on 11 May 2000. The intention is that in future years the first release of these statistics will continue to be by special press notice, to ensure that they are made available to all users as soon as possible after their compilation.



**ANNEX 1: SAFETY AND ENFORCEMENT TABLES**

**Table A1.1a** Injuries in Great Britain by industry and severity of injury 1999/2000p  
As reported to all enforcing authorities

			EMPLOYEES (including trainees)					
			<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>	<i>Total injuries</i>	<i>Fatal and major injuries: rate per 100 000 employees</i>	<i>All reported injuries: rate per 100 000 employees</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section							
<b>Agriculture, hunting, forestry and fishing (a)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>13</b>	<b>653</b>	<b>1 452</b>	<b>2 118</b>	<b>221.8</b>	<b>705.4</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>6</b>	<b>459</b>	<b>2 360</b>	<b>2 825</b>	<b>226.9</b>	<b>1 378.6</b>
Mining and quarrying	C	10-14	4	272	1 377	1 653	405.0	2 425.6
Mining and quarrying of energy producing materials	CA	10-12	3	159	924	1 086	407.5	2 731.9
Mining and quarrying except energy producing materials	CB	13/14	1	113	453	567	401.5	1 996.7
Electricity, gas and water supply	E	40/41	2	187	983	1 172	138.2	856.9
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>37</b>	<b>7 854</b>	<b>38 623</b>	<b>46 514</b>	<b>201.8</b>	<b>1 189.7</b>
– food products; beverages and tobacco	DA	15/16	1	1 512	9 587	11 100	335.5	2 461.4
– textiles and textile products	DB	17/18	1	263	1 336	1 600	101.1	612.7
– leather and leather products	DC	19	1	35	117	153	136.4	579.6
– wood and wood products	DD	20	1	351	1 049	1 401	428.3	1 704.8
– pulp, paper and paper products; publishing and printing	DE	21/22	3	485	2 492	2 980	105.1	641.5
– coke, refined petroleum products and nuclear fuel	DF	23	-	51	121	172	191.2	644.9
– chemicals, chemical products and man-made fibres	DG	24	2	418	1 879	2 299	166.7	912.6
– rubber and plastic products	DH	25	2	640	3 438	4 080	280.4	1 781.7
– other non-metallic mineral products	DI	26	-	411	2 056	2 467	304.7	1 828.9
– basic metals and fabricated metal products	DJ	27/28	16	1 518	6 054	7 588	296.6	1 467.1
– machinery and equipment nec	DK	29	3	622	2 814	3 439	167.0	918.7
– electrical and optical equipment	DL	30-33	-	461	2 205	2 666	93.6	541.2
– transport equipment	DM	34/35	2	702	4 015	4 719	185.0	1 240.3
– manufacturing nec	DN	36/37	5	385	1 460	1 850	179.4	850.8
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>59</b>	<b>4 290</b>	<b>9 957</b>	<b>14 306</b>	<b>392.2</b>	<b>1 290.1</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>46</b>	<b>14 307</b>	<b>76 497</b>	<b>90 850</b>	<b>79.6</b>	<b>503.6</b>
Wholesale and retail trade, and repairs	G	50-52	8	2 882	13 931	16 821	72.2	420.2
Hotels and restaurants	H	55	1	779	3 103	3 883	58.0	288.6
Transport, storage and communication (b)	I	60-64	20	2 813	19 086	21 919	199.5	1 543.2
Financial intermediation	J	65-67	-	145	490	635	14.6	64.0
Real estate, renting and business activities	K	70-74	7	1 079	3 794	4 880	31.4	141.2
Public administration and defence	L	75	2	2 154	14 185	16 341	155.0	1 174.9
Education	M	80	-	1 423	4 553	5 976	77.0	323.3
Health and social work	N	85	-	1 778	13 090	14 868	72.4	605.7
Other community, social and personal service activities	O, P, Q	90-93,95,99	8	1 254	4 265	5 527	111.9	489.9
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>161</b>	<b>27 563</b>	<b>128 889</b>	<b>156 613</b>	<b>117.7</b>	<b>664.6</b>

(a) Excludes sea fishing.

(b) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

p Provisional

SELF-EMPLOYED				MEMBERS OF THE PUBLIC		TOTAL			
<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3day injuries</i>	<i>Total injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3day injuries</i>	<i>Total injuries</i>
23	69	41	133	8	198	44	920	1 493	2 457
1	39	110	150	2	51	9	549	2 470	3 028
1	36	109	146	2	8	7	316	1 486	1 809
-	28	98	126	-	4	3	191	1 022	1 216
1	8	11	20	2	4	4	125	464	593
-	3	1	4	-	43	2	233	984	1 219
3	64	89	156	4	163	44	8 081	38 712	46 837
-	10	18	28	-	67	1	1 589	9 605	11 195
-	2	4	6	-	3	1	268	1 340	1 609
-	-	-	-	-	-	1	35	117	153
-	3	3	6	-	6	1	360	1 052	1 413
-	3	7	10	1	4	4	492	2 499	2 995
-	-	-	-	-	2	-	53	121	174
-	4	5	9	-	3	2	425	1 884	2 311
-	7	4	11	-	1	2	648	3 442	4 092
1	7	8	16	-	5	1	423	2 064	2 488
1	8	13	22	1	7	18	1 533	6 067	7 618
-	7	6	13	-	5	3	634	2 820	3 457
-	1	4	5	-	6	-	468	2 209	2 677
-	6	12	18	2	39	4	747	4 027	4 778
1	6	5	12	-	15	6	406	1 465	1 877
19	349	335	703	7	401	85	5 040	10 292	15 417
9	112	135	256	419	23 291	474	37 710	76 632	114 816
4	24	17	45	2	3 117	14	6 023	13 948	19 985
-	8	6	14	5	1 168	6	1 955	3 109	5 070
-	12	20	32	336	3 223	356	6 048	19 106	25 510
-	-	3	3	-	61	-	206	493	699
3	19	20	42	3	338	13	1 436	3 814	5 263
1	12	30	43	2	1 057	5	3 223	14 215	17 443
-	4	8	12	5	8 260	5	9 687	4 561	14 253
-	7	14	21	49	2 422	49	4 207	13 104	17 360
1	26	17	44	17	3 645	26	4 925	4 282	9 233
55	633	710	1 398	440	24 104	656	52 300	129 599	182 555

nec Not elsewhere classified

**Table A1.1b** Injuries in Great Britain by industry and severity of injury 1998/99  
As reported to all enforcing authorities

			EMPLOYEES (including trainees)					
			<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>	<i>Total injuries</i>	<i>Fatal and major injuries: rate per 100 000 employees</i>	<i>All reported injuries: rate per 100 000 employees</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section							
<b>Agriculture, hunting, forestry and fishing (a)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>16</b>	<b>605</b>	<b>1 258</b>	<b>1 879</b>	<b>211.0</b>	<b>638.5</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>10</b>	<b>521</b>	<b>2 845</b>	<b>3 376</b>	<b>251.6</b>	<b>1 599.4</b>
Mining and quarrying	C	10-14	6	313	1 649	1 968	433.4	2 673.8
Mining and quarrying of energy producing materials	CA	10-12	4	185	1 119	1 308	427.0	2 954.8
Mining and quarrying except energy producing materials	CB	13/14	2	128	530	660	443.2	2 250.0
Electricity, gas and water supply	E	40/41	4	208	1 196	1 408	154.2	1 024.2
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>63</b>	<b>8 137</b>	<b>39 168</b>	<b>47 368</b>	<b>203.0</b>	<b>1 172.8</b>
– food products; beverages and tobacco	DA	15/16	7	1 507	9 573	11 087	329.4	2 412.1
– textiles and textile products	DB	17/18	-	288	1 522	1 810	99.1	622.5
– leather and leather products	DC	19	-	25	140	165	84.5	558.0
– wood and wood products	DD	20	1	337	1 020	1 358	416.2	1 672.0
– pulp, paper and paper products; publishing and printing	DE	21/22	2	498	2 491	2 991	105.8	632.6
– coke, refined petroleum products and nuclear fuel	DF	23	-	37	132	169	123.0	561.7
– chemicals, chemical products and man-made fibres	DG	24	4	419	1 781	2 204	165.1	860.2
– rubber and plastic products	DH	25	5	646	3 429	4 080	276.3	1 732.0
– other non-metallic mineral products	DI	26	6	417	2 064	2 487	304.0	1 787.1
– basic metals and fabricated metal products	DJ	27/28	19	1 640	6 128	7 787	311.2	1 460.8
– machinery and equipment nec	DK	29	5	675	2 902	3 582	174.0	916.5
– electrical and optical equipment	DL	30-33	-	478	2 193	2 671	93.4	521.8
– transport equipment	DM	34/35	5	765	4 333	5 103	194.9	1 291.5
– manufacturing nec	DN	36/37	9	405	1 460	1 874	194.5	880.6
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>47</b>	<b>4 289</b>	<b>9 195</b>	<b>13 531</b>	<b>407.1</b>	<b>1 270.5</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>52</b>	<b>14 816</b>	<b>79 829</b>	<b>94 697</b>	<b>84.0</b>	<b>534.7</b>
Wholesale and retail trade, and repairs	G	50-52	12	3 138	15 675	18 825	79.7	476.5
Hotels and restaurants	H	55	1	923	3 427	4 351	69.5	327.3
Transport, storage and communication (b)	I	60-64	25	2 861	18 601	21 487	211.8	1 577.1
Financial intermediation	J	65-67	-	151	640	791	15.2	79.9
Real estate, renting and business activities	K	70-74	8	1 034	3 969	5 011	31.0	149.1
Public administration and defence	L	75	2	1 981	14 181	16 164	144.2	1 175.0
Education	M	80	-	1 545	4 671	6 216	85.3	343.0
Health and social work	N	85	-	1 921	14 133	16 054	79.0	659.4
Other community, social and personal service activities	O, P, Q	90-93,95,99	4	1 262	4 532	5 798	115.8	530.4
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>188</b>	<b>28 368</b>	<b>132 295</b>	<b>160 851</b>	<b>122.5</b>	<b>689.8</b>

(a) Excludes sea fishing.

(b) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

SELF-EMPLOYED				MEMBERS OF THE PUBLIC		TOTAL			
<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3day injuries</i>	<i>Total injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3day injuries</i>	<i>Total injuries</i>
30	74	40	144	9	196	55	875	1 298	2 228
1	34	129	164	2	32	13	587	2 974	3 574
1	33	124	158	1	5	8	351	1 773	2 132
1	28	119	148	-	2	5	215	1 238	1 458
-	5	5	10	1	3	3	136	535	674
-	1	5	6	1	27	5	236	1 201	1 442
6	96	96	198	-	140	69	8 373	39 264	47 706
-	18	16	34	-	31	7	1 556	9 589	11 152
-	2	2	4	-	6	-	296	1 524	1 820
-	-	-	-	-	1	-	26	140	166
3	9	6	18	-	8	4	354	1 026	1 384
-	5	5	10	-	3	2	506	2 496	3 004
-	1	-	1	-	5	-	43	132	175
-	5	1	6	-	1	4	425	1 782	2 211
-	5	8	13	-	-	5	651	3 437	4 093
-	9	12	21	-	7	6	433	2 076	2 515
3	16	16	35	-	4	22	1 660	6 144	7 826
-	10	11	21	-	4	5	689	2 913	3 607
-	3	5	8	-	6	-	487	2 198	2 685
-	5	9	14	-	43	5	813	4 342	5 160
-	8	5	13	-	21	9	434	1 465	1 908
18	367	381	766	3	378	68	5 034	9 576	14 678
10	114	203	327	355	23 054	417	37 984	80 032	118 433
3	20	20	43	4	2 098	19	5 256	15 695	20 970
-	1	7	8	2	692	3	1 616	3 434	5 053
-	18	25	43	287	3 193	312	6 072	18 626	25 010
-	2	13	15	-	45	-	198	653	851
5	16	12	33	3	265	16	1 315	3 981	5 312
-	20	85	105	7	1 264	9	3 265	14 266	17 540
1	3	9	13	5	9 659	6	11 207	4 680	15 893
-	9	15	24	38	2 467	38	4 397	14 148	18 583
1	25	17	43	9	3 371	14	4 658	4 549	9 221
65	685	849	1 599	369	23 800	622	52 853	133 144	186 619

.. Not available  
nec Not elsewhere classified

**Table A1.2a** Number of injuries and injury rates for employees in England by industry 1999/2000p  
As reported to all enforcing authorities (a)

			— INJURY NUMBERS —			— INCIDENCE RATES — (per 100 000)		
			<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section							
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>10</b>	<b>523</b>	<b>1 195</b>	<b>4.1</b>	<b>215.0</b>	<b>491.3</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>3</b>	<b>305</b>	<b>1 712</b>	<b>2.0</b>	<b>200.6</b>	<b>1 125.7</b>
Mining and quarrying	C	10-14	1	169	983	2.7	453.6	2 638.1
Electricity, gas and water supply	E	40/41	2	136	729	1.7	118.4	634.9
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>31</b>	<b>6 585</b>	<b>32 964</b>	<b>0.9</b>	<b>193.2</b>	<b>967.4</b>
– food products; beverages and tobacco	DA	15/16	-	1 286	8 290	-	335.3	2 161.6
– textiles and textile products	DB	17/18	1	223	1 142	0.4	98.8	506.0
– leather, leather products	DC	19	1	27	98	4.1	110.8	402.2
– wood and wood products	DD	20	-	281	862	-	413.2	1 267.6
– pulp, paper and paper products; publishing and printing	DE	21/22	2	406	2 049	0.5	96.9	488.9
– coke, refined petroleum products and nuclear fuel	DF	23	-	36	93	-	145.2	375.2
– chemicals, chemical products and man-made fibres	DG	24	2	354	1 626	0.9	156.9	720.6
– rubber and plastic products	DH	25	2	557	3 086	1.0	274.0	1 517.9
– other non-metallic mineral products	DI	26	-	358	1 843	-	295.2	1 519.8
– basic metals and fabricated metal products	DJ	27/28	14	1 265	4 993	3.2	285.1	1 125.4
– machinery and equipment nec	DK	29	3	538	2 565	0.9	160.1	763.1
– electrical and optical equipment	DL	30-33	-	324	1 644	-	81.4	413.1
– transport equipment	DM	34/35	2	589	3 376	0.6	173.0	991.8
– manufacturing nec	DN	36/37	4	341	1 297	2.1	175.9	668.9
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>45</b>	<b>3 509</b>	<b>8 162</b>	<b>4.8</b>	<b>376.6</b>	<b>875.9</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>38</b>	<b>11 854</b>	<b>64 347</b>	<b>0.2</b>	<b>75.1</b>	<b>4 07.7</b>
Wholesale and retail trade, and repairs	G	50-52	8	2 486	12 471	0.2	70.5	353.7
Hotels and restaurants	H	55	-	688	2 781	-	59.3	239.5
Transport, storage and communication (c)	I	60-64	17	2 166	15 340	1.3	171.3	1 213.3
Financial intermediation	J	65-67	-	120	440	-	13.5	49.6
Real estate, renting and business activities	K	70-74	5	935	3 402	0.2	29.8	108.5
Public administration and defence	L	75	2	1 654	11 041	0.2	142.3	949.6
Education	M	80	-	1 199	3 903	-	74.5	242.5
Health and social work	N	85	-	1 515	11 219	-	73.5	544.5
Other community, social and personal service activities	O, P, Q	90-93,95,99	6	1 091	3 750	0.6	111.4	383.1
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>127</b>	<b>22 776</b>	<b>108 380</b>	<b>0.6</b>	<b>110.9</b>	<b>527.6</b>

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

p Provisional

nec Not elsewhere classified

**Table A1.2b** Number of injuries and injury rates for employees in England by industry 1998/99  
As reported to all enforcing authorities (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	— INJURY NUMBERS —			— INCIDENCE RATES — (per 100 000)			
		Fatal injuries	Non-fatal major injuries	Over-3-day injuries	Fatal injuries	Non-fatal major injuries	Over-3-day injuries	
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>12</b>	<b>515</b>	<b>1 044</b>	<b>5.0</b>	<b>215.3</b>	<b>436.5</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>6</b>	<b>352</b>	<b>2 025</b>	<b>3.8</b>	<b>225.1</b>	<b>1 294.7</b>
Mining and quarrying	C	10-14	2	187	1 137	4.9	459.6	2 794.7
Electricity, gas and water supply	E	40/41	4	165	888	3.5	142.6	767.4
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>47</b>	<b>6 787</b>	<b>33 363</b>	<b>1.3</b>	<b>193.3</b>	<b>950.1</b>
– food products; beverages and tobacco	DA	15/16	5	1 297	8 184	1.3	332.9	2 100.7
– textiles and textile products	DB	17/18	-	247	1 305	-	98.8	522.1
– leather and leather products	DC	19	-	20	123	-	72.9	448.4
– wood and wood products	DD	20	1	251	789	1.5	374.5	1 177.1
– pulp, paper and paper products; publishing and printing	DE	21/22	1	427	2 091	0.2	100.3	490.9
– coke, refined petroleum products and nuclear fuel	DF	23	-	23	100	-	90.6	393.9
– chemicals, chemical products and man-made fibres	DG	24	4	353	1 549	1.7	154.4	677.5
– rubber and plastic products	DH	25	4	567	3 081	1.9	272.1	1 478.4
– other non-metallic mineral products	DI	26	4	370	1 861	3.2	297.2	1 494.8
– basic metals and fabricated metal products	DJ	27/28	12	1 303	5 135	2.6	284.8	1 122.3
– machinery and equipment nec	DK	29	4	573	2 566	1.1	163.4	731.6
– electrical and optical equipment	DL	30-33	-	357	1 641	-	86.2	396.2
– transport equipment	DM	34/35	4	639	3 658	1.1	181.1	1 036.9
– manufacturing nec	DN	36/37	8	360	1 280	4.2	190.2	676.1
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>37</b>	<b>3 480</b>	<b>7 458</b>	<b>4.1</b>	<b>388.0</b>	<b>831.4</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>45</b>	<b>12 239</b>	<b>66 552</b>	<b>0.3</b>	<b>79.0</b>	<b>429.6</b>
Wholesale and retail trade, and repairs	G	50-52	9	2 694	13 919	0.3	77.5	400.6
Hotels and restaurants	H	55	1	818	3 048	0.1	71.4	265.9
Transport, storage and communication (c)	I	60-64	23	2 197	14 578	1.9	181.0	1 201.3
Financial intermediation	J	65-67	-	136	583	-	15.3	65.7
Real estate, renting and business activities	K	70-74	6	863	3 375	0.2	28.4	110.9
Public administration and defence	L	75	2	1 506	11 163	0.2	129.7	961.7
Education	M	80	-	1 322	3 904	-	83.8	247.5
Health and social work	N	85	-	1 620	12 093	-	79.3	591.9
Other community, social and personal service activities	O, P, Q	90-93,95,99	4	1 083	3 889	0.4	114.5	411.1
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>147</b>	<b>23 373</b>	<b>110 442</b>	<b>0.7</b>	<b>115.2</b>	<b>544.2</b>

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

p Provisional

nec Not elsewhere classified

**Table A1.3a** Number of injuries and injury rates for employees in Scotland by industry 1999/2000p  
As reported to all enforcing authorities (a)

			— INJURY NUMBERS —			— INCIDENCE RATES — (per 100 000)		
			<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section							
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	3	100	205	7.7	258.0	528.8
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	1	63	299	2.3	147.6	700.3
Mining and quarrying	C	10-14	1	31	118	4.0	124.6	474.4
Electricity, gas and water supply	E	40/41	-	32	181	-	179.5	1 015.5
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	3	613	2 764	1.0	205.5	926.4
– food products; beverages and tobacco	DA	15/16	-	148	784	-	313.0	1 658.3
– textiles and textile products	DB	17/18	-	25	147	-	95.7	562.5
– leather, leather products	DC	19	-	3	17	-	206.8	1 171.6
– wood and wood products	DD	20	1	37	125	11.1	410.9	1 388.3
– pulp, paper and paper products; publishing and printing	DE	21/22	1	43	250	3.2	138.8	806.8
– coke, refined petroleum products and nuclear fuel	DF	23	-	6	11	-	243.3	446.1
– chemicals, chemical products and man-made fibres	DG	24	-	25	80	-	161.4	516.4
– rubber and plastic products	DH	25	-	25	161	-	196.5	1 265.4
– other non-metallic mineral products	DI	26	-	21	120	-	264.6	1 511.9
– basic metals and fabricated metal products	DJ	27/28	1	89	291	2.8	253.6	829.3
– machinery and equipment nec	DK	29	-	54	174	-	219.0	705.6
– electrical and optical equipment	DL	30-33	-	67	257	-	119.5	458.3
– transport equipment	DM	34/35	-	58	285	-	288.6	1 418.1
– manufacturing nec	DN	36/37	-	12	62	-	133.9	692.0
<b>Construction</b>	<b>F</b>	<b>45</b>	11	537	1 423	9.6	468.4	1 241.1
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	5	1 293	6 515	0.3	84.4	425.2
Wholesale and retail trade, and repairs	G	50-52	-	254	858	-	80.1	270.4
Hotels and restaurants	H	55	-	58	216	-	45.7	170.3
Transport, storage and communication (c)	I	60-64	2	201	1 176	1.8	177.3	1 037.5
Financial intermediation	J	65-67	-	16	41	-	19.6	50.3
Real estate, renting and business activities	K	70-74	2	75	197	0.9	32.7	85.9
Public administration and defence	L	75	-	314	2 208	-	207.6	1 460.1
Education	M	80	-	129	408	-	84.3	266.6
Health and social work	N	85	-	153	1 068	-	58.7	409.6
Other community, social and personal service activities	O, P, Q	90-93,95,99	1	93	343	1.0	93.9	346.3
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	23	2 606	11 206	1.1	128.6	552.9

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

p Provisional

nec Not elsewhere classified

**Table A1.3b** Number of injuries and injury rates for employees in Scotland by industry 1998/99  
As reported to all enforcing authorities (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	INJURY NUMBERS			INCIDENCE RATES (per 100 000)			
		Fatal injuries	Non-fatal major injuries	Over-3-day injuries	Fatal injuries	Non-fatal major injuries	Over-3-day injuries	
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>3</b>	<b>77</b>	<b>170</b>	<b>8.2</b>	<b>211.1</b>	<b>466.0</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>1</b>	<b>55</b>	<b>388</b>	<b>2.2</b>	<b>123.2</b>	<b>869.2</b>
Mining and quarrying	C	10-14	1	24	152	3.7	88.4	559.7
Electricity, gas and water supply	E	40/41	-	31	236	-	177.3	1 349.9
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>11</b>	<b>707</b>	<b>3 105</b>	<b>3.5</b>	<b>226.2</b>	<b>993.2</b>
– food products; beverages and tobacco	DA	15/16	1	143	901	2.0	291.2	1 835.1
– textiles and textile products	DB	17/18	-	28	161	-	92.0	529.2
– leather, leather products	DC	19	-	2	14	-	178.6	1 250.0
– wood and wood products	DD	20	-	60	155	-	639.0	1 650.7
– pulp, paper and paper products; publishing and printing	DE	21/22	-	32	220	-	102.2	702.8
– coke, refined petroleum products and nuclear fuel	DF	23	-	7	14	-	276.0	552.1
– chemicals, chemical products and man-made fibres	DG	24	-	26	74	-	162.6	462.6
– rubber and plastic products	DH	25	1	32	135	7.2	230.8	973.5
– other non-metallic mineral products	DI	26	2	23	107	23.3	268.3	1 248.3
– basic metals and fabricated metal products	DJ	27/28	4	145	354	11.1	403.9	986.2
– machinery and equipment nec	DK	29	1	72	240	3.9	277.2	924.1
– electrical and optical equipment	DL	30-33	-	52	295	-	88.7	503.1
– transport equipment	DM	34/35	1	73	359	4.7	342.6	1 684.7
– manufacturing nec	DN	36/37	1	12	76	11.4	136.5	864.4
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>7</b>	<b>570</b>	<b>1 332</b>	<b>6.0</b>	<b>490.3</b>	<b>1 145.8</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>4</b>	<b>1 367</b>	<b>7 240</b>	<b>0.3</b>	<b>90.6</b>	<b>480.0</b>
Wholesale and retail trade, and repairs	G	50-52	2	277	1 068	0.6	87.1	335.7
Hotels and restaurants	H	55	-	58	256	-	45.5	200.8
Transport, storage and communication (c)	I	60-64	-	197	1 399	-	183.8	1 305.1
Financial intermediation	J	65-67	-	12	43	-	15.1	54.2
Real estate, renting and business activities	K	70-74	2	68	221	0.9	29.9	97.3
Public administration and defence	L	75	-	312	2 056	-	223.5	1 472.7
Education	M	80	-	150	524	-	99.1	346.4
Health and social work	N	85	-	184	1 210	-	70.9	466.1
Other community, social and personal service activities	O, P, Q	90-93,95,99	-	109	463	-	110.6	469.6
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>26</b>	<b>2 776</b>	<b>12 235</b>	<b>1.3</b>	<b>137.5</b>	<b>606.2</b>

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

nec Not elsewhere classified

**Table A1.4a** Number of injuries and injury rates for employees in Wales by industry 1999/2000p  
As reported to all enforcing authorities (a)

			— INJURY NUMBERS —			— INCIDENCE RATES — (per 100 000)		
			<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>	<i>Fatal injuries</i>	<i>Non-fatal major injuries</i>	<i>Over-3-day injuries</i>
STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section							
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	-	30	52	-	164.3	284.7
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	-	39	157	-	384.6	1 548.2
Mining and quarrying	C	10-14	-	20	84	-	332.4	1 396.3
Electricity, gas and water supply	E	40/41	-	19	73	-	460.6	1.769.7
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>3</b>	<b>653</b>	<b>2 859</b>	<b>1.5</b>	<b>316.3</b>	<b>1 384.8</b>
– food products; beverages and tobacco	DA	15/16	1	78	513	5.0	386.8	2 544.0
– textiles and textile products	DB	17/18	-	15	47	-	161.1	504.7
– leather, leather products	DC	19	-	5	2	-	857.6	343.1
– wood and wood products	DD	20	-	33	62	-	637.4	1 197.6
– pulp, paper and paper products; publishing and printing	DE	21/22	-	36	193	-	248.6	1 333.0
– coke, refined petroleum products and nuclear fuel	DF	23	-	9	17	-	422.9	798.9
– chemicals, chemical products and man-made fibres	DG	24	-	36	137	-	333.7	1 270.0
– rubber and plastic products	DH	25	-	58	191	-	447.7	1 474.2
– other non-metallic mineral products	DI	26	-	32	93	-	562.9	1 635.9
– basic metals and fabricated metal products	DJ	27/28	1	164	770	2.6	426.4	2 001.9
– machinery and equipment nec	DK	29	-	30	75	-	221.5	553.7
– electrical and optical equipment	DL	30-33	-	70	304	-	181.3	787.4
– transport equipment	DM	34/35	-	55	354	-	275.2	1 771.5
– manufacturing nec	DN	36/37	1	32	101	6.9	219.4	692.5
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>3</b>	<b>244</b>	<b>372</b>	<b>4.8</b>	<b>390.7</b>	<b>595.6</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>3</b>	<b>814</b>	<b>3 599</b>	<b>0.4</b>	<b>112.6</b>	<b>497.8</b>
Wholesale and retail trade, and repairs	G	50-52	-	142	602	-	89.1	377.7
Hotels and restaurants	H	55	1	33	106	1.7	57.3	183.9
Transport, storage and communication (c)	I	60-64	1	100	534	2.3	234.2	1 250.6
Financial intermediation	J	65-67	-	9	9	-	36.7	36.7
Real estate, renting and business activities	K	70-74	-	69	195	-	74.8	211.4
Public administration and defence	L	75	-	186	936	-	242.0	1 217.9
Education	M	80	-	95	242	-	110.9	282.5
Health and social work	N	85	-	110	803	-	82.3	600.8
Other community, social and personal service activities	O, P, Q	90-93,95,99	1	70	172	2.0	139.3	342.3
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>9</b>	<b>1 780</b>	<b>7 039</b>	<b>0.9</b>	<b>174.5</b>	<b>689.9</b>

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

p Provisional

nec Not elsewhere classified

**Table A1.4b** Number of injuries and injury rates for employees in Wales by industry 1998/99  
As reported to all enforcing authorities (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	INJURY NUMBERS			INCIDENCE RATES (per 100 000)			
		Fatal injuries	Non-fatal major injuries	Over-3-day injuries	Fatal injuries	Non-fatal major injuries	Over-3-day injuries	
<b>Agriculture, hunting, forestry and fishing (b)</b>	<b>A, B</b>	<b>01,02,05</b>	<b>1</b>	<b>13</b>	<b>44</b>	<b>5.4</b>	<b>69.9</b>	<b>236.5</b>
<b>Extractive and utility supply industries</b>	<b>C, E</b>	<b>10-14,40/41</b>	<b>2</b>	<b>40</b>	<b>187</b>	<b>19.9</b>	<b>398.9</b>	<b>1 864.8</b>
Mining and quarrying	C	10-14	2	28	115	34.7	486.1	1 996.5
Electricity, gas and water supply	E	40/41	-	12	72	-	281.2	1 687.0
<b>Manufacturing</b>	<b>D</b>	<b>15-37</b>	<b>5</b>	<b>640</b>	<b>2 678</b>	<b>2.3</b>	<b>298.0</b>	<b>1 247.1</b>
– food products; beverages and tobacco	DA	15/16	1	67	488	4.8	319.9	2 329.7
– textiles and textile products	DB	17/18	-	13	56	-	125.0	538.3
– leather, leather products	DC	19	-	3	3	-	294.1	294.1
– wood and wood products	DD	20	-	26	76	-	541.4	1 582.7
– pulp, paper and paper products; publishing and printing	DE	21/22	1	39	180	6.4	250.7	1 157.1
– coke, refined petroleum products and nuclear fuel	DF	23	-	7	18	-	323.3	831.4
– chemicals, chemical products and man-made fibres	DG	24	-	37	136	-	319.2	1 173.2
– rubber and plastic products	DH	25	-	47	213	-	353.1	1 600.3
– other non-metallic mineral products	DI	26	-	24	96	-	393.8	1 575.1
– basic metals and fabricated metal products	DJ	27/28	3	192	639	7.6	484.6	1 612.9
– machinery and equipment nec	DK	29	-	30	96	-	212.1	678.8
– electrical and optical equipment	DL	30-33	-	69	257	-	176.4	656.9
– transport equipment	DM	34/35	-	53	316	-	252.2	1 503.8
– manufacturing nec	DN	36/37	-	33	104	-	224.3	706.8
<b>Construction</b>	<b>F</b>	<b>45</b>	<b>3</b>	<b>239</b>	<b>405</b>	<b>5.8</b>	<b>461.9</b>	<b>782.7</b>
<b>Total service industries</b>	<b>G-Q</b>	<b>50-99</b>	<b>3</b>	<b>834</b>	<b>3 964</b>	<b>0.4</b>	<b>117.5</b>	<b>558.4</b>
Wholesale and retail trade, and repairs	G	50-52	1	167	688	0.6	105.2	433.3
Hotels and restaurants	H	55	-	47	123	-	84.1	220.0
Transport, storage and communication (c)	I	60-64	2	91	551	4.8	218.1	1 320.3
Financial intermediation	J	65-67	-	3	14	-	12.4	57.7
Real estate, renting and business activities	K	70-74	-	103	373	-	114.2	413.6
Public administration and defence	L	75	-	163	962	-	216.6	1 278.4
Education	M	80	-	73	243	-	87.6	291.6
Health and social work	N	85	-	117	830	-	88.7	628.9
Other community, social and personal service activities	O, P, Q	90-93,95,99	-	70	180	-	144.2	370.9
<b>All industries</b>	<b>A-Q</b>	<b>01-99</b>	<b>14</b>	<b>1 766</b>	<b>7 278</b>	<b>1.4</b>	<b>175.7</b>	<b>724.2</b>

(a) Fatal, major and over-3-day injury statistics exclude reports made to HSE's Offshore Safety Division occurring in GB waters or the UK Continental Shelf. Major and over-3-day injury statistics also exclude reports made to HSE's Explosives and Railway Inspectorates.

(b) Excludes sea fishing.

(c) Injuries arising from shore-based services only. Excludes incidents reported under merchant shipping legislation.

nec Not elsewhere classified

**Table A1.5** Fatal injuries reported to all enforcing authorities by industry 1995/96 - 1999/2000p (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	<i>Agriculture, hunting, forestry &amp; fishing (b)</i>	<i>Extractive &amp; utility supply industries (c) (d)</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries (e)</i>	<i>Unclassified</i>	<i>All industries</i>
		A,B	C,E	D	F	G-Q		
<b>INJURY NUMBERS:</b>								
<b>EMPLOYEES</b>								
	Year							
	95/96	20	18	42	62	67	-	209
	96/97	20	9	53	66	59	-	207
	97/98	20	17	54	58	63	-	212
	98/99	16	10	63	47	52	-	188
	99/00p	13	6	37	59	46	-	161
<b>SELF-EMPLOYED</b>								
	95/96	20	-	1	17	11	-	49
	96/97	35	-	6	24	15	-	80
	97/98	20	1	7	22	12	-	62
	98/99	30	1	6	18	10	-	65
	99/00p	23	1	3	19	9	-	55
<b>MEMBERS OF THE PUBLIC</b>								
	95/96	5	3	-	3	75	-	86
	96/97	9	3	1	3	351	-	367
	97/98	11	1	1	6	374	-	393
	98/99	9	2	-	3	355	-	369
	99/00p	8	2	4	7	419	-	440
<b>INCIDENCE RATES (PER 100 000):</b>								
<b>EMPLOYEES</b>								
	95/96	7.8	8.0	1.1	7.7	0.4	..	1.0
	96/97	7.6	4.2	1.3	8.2	0.4	..	0.9
	97/98	6.7	7.9	1.3	5.7	0.4	..	0.9
	98/99	5.4	4.7	1.6	4.4	0.3	..	0.8
	99/00p	4.3	2.9	0.9	5.3	0.3	..	0.7
<b>SELF-EMPLOYED</b>								
	95/96	8.3	-	0.4	2.2	0.6	..	1.5
	96/97	14.3	-	2.3	3.0	0.7	..	2.3
	97/98	8.7	10.3	2.7	3.1	0.5	..	1.8
	98/99	15.0	13.0	2.2	2.8	0.4	..	1.9
	99/00p	13.0	13.7	1.2	3.0	0.4	..	1.6

- (a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.  
 (b) Excludes sea fishing.  
 (c) Includes the number of injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.  
 (d) Employment data for the self-employed in extractive and utility supply industries are not available before 1995/96 and hence rates cannot be calculated.

- (e) From 1996/97, includes fatalities to members of the public (including suicides and trespassers) which were previously reported under railway legislation.  
 p Provisional  
 .. Not available

**Table A1.6** Non-fatal major injuries reported to all enforcing authorities by industry  
1995/96 - 1999/2000p (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	<i>Agriculture, hunting, forestry &amp; fishing (b)</i>	<i>Extractive &amp; utility supply industries (c) (d)</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>	<i>Unclassified</i>	<i>All industries</i>
		A,B	C,E	D	F	G-Q		
<b>INJURY NUMBERS:</b>								
<b>EMPLOYEES</b>								
	Year							
	95/96	408	508	5 146	1 806	8 110	590	16 568
	96/97	678	679	8 235	3 227	15 145	-	27 964
	97/98	671	608	8 770	3 860	15 278	-	29 187
	98/99	605	521	8 137	4 289	14 816	-	28 368
	99/00p	653	459	7 854	4 290	14 307	-	27 563
<b>SELF-EMPLOYED</b>								
	95/96	68	17	135	671	165	110	1 166
	96/97	100	15	111	827	303	-	1 356
	97/98	74	76	94	466	105	-	815
	98/99	74	34	96	367	114	-	685
	99/00p	69	39	64	349	112	-	633
<b>INCIDENCE RATES (PER 100 000):</b>								
<b>EMPLOYEES</b>								
	95/96	158.6	225.9	130.5	224.0	50.1	..	77.1
	96/97	256.9	315.1	206.4	403.0	90.8	..	127.5
	97/98	223.3	282.7	216.1	382.3	88.4	..	127.6
	98/99	205.6	246.8	201.5	402.7	83.7	..	121.7
	99/00p	217.5	224.0	200.9	386.9	79.3	..	117.0
<b>SELF-EMPLOYED</b>								
	95/96	28.3	220.8	55.6	85.3	8.4	..	36.0
	96/97	40.9	211.7	41.7	104.9	13.7	..	38.4
	97/98	32.3	780.8	35.7	65.4	4.6	..	23.3
	98/99	36.9	441.5	35.2	56.5	5.1	..	20.3
	99/00p	39.0	532.7	25.5	55.5	4.9	..	18.8

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Excludes sea fishing.

(c) Includes the number of injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.

(d) Employment data for the self-employed in extractive and utility supply industries are not available before 1995/96 and hence rates cannot be calculated.

p Provisional

.. Not available

**Table A1.7** Over-3-day injuries reported to all enforcing authorities by industry 1995/96 - 1999/2000p (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	<i>Agriculture, hunting, forestry &amp; fishing (b)</i>	<i>Extractive &amp; utility supply industries (c) (d)</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>	<i>Unclassified</i>	<i>All industries</i>
		A,B	C,E	D	F	G-Q		
<b>INJURY NUMBERS:</b>								
Year								
EMPLOYEES	95/96	1 279	3 173	42 097	8 305	72 465	3 263	130 582
	96/97	1 457	3 023	40 005	8 637	74 164	-	127 286
	97/98	1 334	3 188	41 648	9 756	78 863	-	134 789
	98/99	1 258	2 845	39 168	9 195	79 829	-	132 295
	99/00p	1 452	2 360	38 623	9 957	76 497	-	128 889
SELF-EMPLOYED	95/96	94	14	204	1 390	498	194	2 394
	96/97	57	16	154	1 029	1 026	-	2 282
	97/98	48	151	94	509	182	-	984
	98/99	40	129	96	381	203	-	849
	99/00p	41	110	89	335	135	-	710
<b>INCIDENCE RATES (PER 100 000):</b>								
EMPLOYEES	95/96	497.3	1 411.5	1 067.4	1 030.3	447.5	..	607.4
	96/97	552.0	1 402.8	1 002.8	1 078.6	444.9	..	580.1
	97/98	443.9	1 482.6	1 026.1	966.3	456.1	..	589.2
	98/99	427.5	1 347.9	969.8	863.4	450.8	..	567.3
	99/00p	483.6	1 151.7	987.9	897.9	424.1	..	547.0
SELF-EMPLOYED	95/96	39.2	181.8	84.0	176.6	25.4	..	73.8
	96/97	23.3	225.8	57.9	129.4	46.4	..	64.6
	97/98	20.9	1 551.3	35.7	71.4	8.0	..	28.1
	98/99	20.0	1 675.1	35.2	58.7	9.1	..	25.2
	99/00p	23.2	1 502.5	35.5	53.3	5.9	..	21.1

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Excludes sea fishing.

(c) Includes the number of injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.

(d) Employment data for the self-employed in extractive and utility supply industries are not available before 1995/96 and hence rates cannot be calculated.

p Provisional

.. Not available

**Table A1.8** Non-fatal injuries to members of the public reported to all enforcing authorities by industry 1995/96 - 1999/2000p (a)

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)		<i>Agriculture, hunting, forestry &amp; fishing (b)</i>	<i>Extractive &amp; utility supply industries (c)</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>	<i>Unclassified</i>	<i>All industries</i>
	Section	A,B	C,E	D	F	G-Q		
	Year							
<b>NUMBER OF MAJOR INJURIES</b>	95/96	59	7	91	117	12 771	189	13 234
<b>NUMBER OF NON-FATAL INJURIES</b>	96/97	192	40	153	405	34 904	-	35 694
	97/98	178	29	142	339	27 925	-	28 613
	98/99	196	32	140	378	23 054	-	23 800
	99/00p	198	51	163	401	23 291	-	24 104

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Excludes sea fishing.

(c) Includes the number of injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.

p Provisional

**Table A1.9** Injuries to employees by kind of accident and severity of injury  
1995/96 - 1999/2000p (a) *As reported to all enforcing authorities* (b)

	<b>Fatal</b>				
	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
<b>Kind of accident</b>					
Contact with moving machinery	17	15	19	18	13
Struck by moving, including flying/falling, object	25	43	34	35	29
Struck by moving vehicle	39	35	43	38	29
Strike against something fixed or stationary	1	3	3	-	-
Injured while handling, lifting or carrying	-	-	3	1	-
Slips, trips or falls on same level	1	2	-	3	3
Falls from a height of which:	51	56	64	48	39
- up to and inc 2 metres	3	5	9	6	2
- over 2 metres	43	48	52	41	33
- height not stated	5	3	3	1	4
Trapped by something collapsing/overturning	28	10	16	11	9
Drowning or asphyxiation	9	7	7	5	5
Exposure to, or contact with, a harmful substance	6	3	4	2	6
Exposure to fire	5	3	2	3	6
Exposure to an explosion	7	6	4	5	2
Contact with electricity or electrical discharge	11	15	12	16	12
Injured by an animal	2	1	-	2	2
Acts of violence	NR	2	-	1	-
Other kind of accident	7	4	1	-	4
Injuries not classified by kind	-	2	-	-	2
<b>Total</b>	<b>209</b>	<b>207</b>	<b>212</b>	<b>188</b>	<b>161</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Includes injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.

p Provisional

NR Not reportable

**Non-fatal major****Over-3-day**

<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
1 279	1 703	1 915	1 696	1 732	6 321	5 686	6 015	5 677	5 471
1 978	4 606	4 739	4 287	4 208	18 663	18 283	18 772	18 029	17 500
572	903	915	928	935	3 327	2 810	3 071	2 934	3 028
617	1 497	1 547	1 357	1 214	7 721	7 324	7 458	7 023	6 587
1 134	2 745	3 002	2 894	2 788	45 015	46 366	50 640	49 044	46 289
5 800	8 562	8 671	9 007	8 680	26 790	24 537	25 883	26 687	26 236
3 530	5 023	5 382	5 454	5 248	9 714	8 492	8 452	8 452	8 609
1 678	2 387	2 593	3 140	3 073	5 431	4 944	4 854	5 829	6 086
966	1 220	1 392	1 640	1 553	1 208	864	923	1 171	1 180
886	1 416	1 397	674	622	3 075	2 684	2 675	1 452	1 343
175	165	157	218	205	459	305	268	526	469
21	53	50	59	48	37	126	95	109	107
532	906	997	844	701	3 509	3 819	4 066	4 121	3 743
62	97	94	59	76	482	376	359	272	314
45	71	51	56	48	202	167	142	133	152
263	210	258	221	230	558	515	493	461	479
72	152	162	166	197	797	771	850	863	862
NR	665	680	633	686	NR	3 866	4 400	4 621	5 034
486	557	509	450	494	6 963	3 554	3 552	3 106	3 714
2	49	58	39	73	24	289	273	237	295
<b>16 568</b>	<b>27 964</b>	<b>29 187</b>	<b>28 368</b>	<b>27 563</b>	<b>130 582</b>	<b>127 286</b>	<b>134 789</b>	<b>132 295</b>	<b>128 889</b>

**Table A1.10**

Injuries to the self-employed by kind of accident and severity of injury 1995/96 - 1999/2000p (a)  
 As reported to all enforcing authorities (b)

Kind of accident	<b>Fatal</b>				
	95/96	96/97	97/98	98/99	99/00p
Contact with moving machinery	3	5	2	3	1
Struck by moving, including flying/falling, object	7	14	7	6	6
Struck by moving vehicle	3	8	2	10	7
Strike against something fixed or stationary	-	1	-	-	1
Injured while handling, lifting or carrying	-	-	-	-	-
Slips, trips or falls on same level	2	-	-	-	-
Falls from a height of which:	13	32	28	32	23
- up to and inc 2 metres	-	5	3	3	3
- over 2 metres	13	22	19	29	20
- height not stated	-	5	6	-	-
Trapped by something collapsing/overturning	13	6	9	4	6
Drowning or asphyxiation	1	2	-	4	1
Exposure to, or contact with, a harmful substance	-	4	-	-	-
Exposure to fire	-	2	-	1	1
Exposure to an explosion	1	1	2	1	-
Contact with electricity or electrical discharge	6	1	5	1	5
Injured by an animal	-	3	6	2	4
Acts of violence	NR	-	-	-	-
Other kind of accident	-	1	-	1	-
Injuries not classified by kind	-	-	1	-	-
<b>Total</b>	<b>49</b>	<b>80</b>	<b>62</b>	<b>65</b>	<b>55</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Includes injuries in the offshore oil and gas industry collected under offshore installations safety legislation, before 1996/97.

p Provisional

NR Not reportable

**Non-fatal major****Over-3-day**

<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
62	54	45	41	39	109	86	49	45	33
144	241	167	98	87	470	380	191	145	147
38	38	20	30	18	49	73	21	16	14
23	38	16	18	18	121	97	45	42	31
54	92	58	35	32	439	436	235	181	158
162	215	120	106	110	381	346	158	146	133
536	496	325	275	267	505	324	163	137	109
202	193	146	99	117	243	169	88	68	61
263	228	151	155	128	196	102	57	55	43
71	75	28	21	22	66	53	18	14	5
37	27	13	13	11	36	12	2	5	6
-	4	2	2	-	1	-	-	2	2
18	18	8	8	8	44	63	23	15	16
6	13	4	1	4	12	24	2	3	2
3	4	1	3	1	11	5	5	6	2
42	31	13	12	6	50	26	15	8	9
12	7	8	9	20	25	25	7	13	4
NR	47	2	11	4	NR	265	22	41	12
28	31	13	23	8	141	111	41	42	29
1	-	-	-	-	-	9	5	2	3
<b>1 166</b>	<b>1 356</b>	<b>815</b>	<b>685</b>	<b>633</b>	<b>2 394</b>	<b>2 282</b>	<b>984</b>	<b>849</b>	<b>710</b>

**Table A1.11** Injuries to employees by kind of accident, severity of injury, and industry 1998/99  
As reported to all enforcing authorities

Kind of accident	<b>Fatal</b>				
	<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
Contact with moving machinery	1	-	13	2	2
Struck by moving, including flying/falling, object	2	3	16	7	7
Struck by moving vehicle	2	-	5	8	23
Strike against something fixed or stationary	-	-	-	-	-
Injured while handling, lifting or carrying	1	-	-	-	-
Slips, trips or falls on same level	1	-	2	-	-
Falls from a height of which:	2	3	13	22	8
- up to and inc 2 metres	1	-	3	-	2
- over 2 metres	1	3	10	21	6
- height not stated	-	-	-	1	-
Trapped by something collapsing/overturning	1	-	2	3	5
Drowning or asphyxiation	-	-	2	1	2
Exposure to, or contact with, a harmful substance	-	-	1	1	-
Exposure to fire	1	-	2	-	-
Exposure to an explosion	-	-	4	1	-
Contact with electricity or electrical discharge	4	4	2	2	4
Injured by an animal	1	-	1	-	-
Acts of violence	-	-	-	-	1
Other kind of accident	-	-	-	-	-
Injuries not classified by kind	-	-	-	-	-
<b>Total</b>	<b>16</b>	<b>10</b>	<b>63</b>	<b>47</b>	<b>52</b>

(a) Excludes sea fishing.

*Agriculture, hunting, forestry & fishing (a)*   *Extractive & utility supply industries*   *Manufacturing industries*   *Construction*   *Service industries*

*Agriculture, hunting, forestry & fishing (a)*   *Extractive & utility supply industries*   *Manufacturing industries*   *Construction*   *Service industries*

**Table A1.12** Injuries to employees by kind of accident, severity of injury, and industry 1999/2000p  
As reported to all enforcing authorities

Kind of accident	<b>Fatal</b>				
	<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
Contact with moving machinery	-	1	11	-	1
Struck by moving, including flying/falling, object	3	1	2	16	7
Struck by moving vehicle	2	1	2	5	19
Strike against something fixed or stationary	-	-	-	-	-
Injured while handling, lifting or carrying	-	-	-	-	-
Slips, trips or falls on same level	1	-	-	-	2
Falls from a height of which:	1	1	4	26	7
- up to and inc 2 metres	-	-	-	2	-
- over 2 metres	1	1	4	21	6
- height not stated	-	-	-	3	1
Trapped by something collapsing/overturning	2	-	3	2	2
Drowning or asphyxiation	1	-	3	-	1
Exposure to, or contact with, a harmful substance	-	-	4	-	2
Exposure to fire	-	-	5	1	-
Exposure to an explosion	-	1	1	-	-
Contact with electricity or electrical discharge	1	1	1	7	2
Injured by an animal	2	-	-	-	-
Acts of violence	-	-	-	-	-
Other kind of accident	-	-	1	1	2
Injuries not classified by kind	-	-	-	1	1
<b>Total</b>	<b>13</b>	<b>6</b>	<b>37</b>	<b>59</b>	<b>46</b>

(a) Excludes sea fishing.

p Provisional

**Non-fatal major****Over-3-day**

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
83	21	1 241	135	252
122	107	1 498	773	1 708
33	15	284	99	504
16	20	342	124	712
52	38	822	423	1 453
110	123	1 875	893	5 679
119	84	1 210	1 540	2 295
69	56	811	746	1 391
34	23	300	718	478
16	5	99	76	426
10	3	31	56	105
1	1	19	7	20
14	15	315	54	303
3	1	32	10	30
2	3	19	5	19
5	13	61	95	56
63	1	8	1	124
1	2	13	11	659
18	12	68	52	344
1	3	13	12	44
<b>653</b>	<b>462</b>	<b>7 851</b>	<b>4 290</b>	<b>14 307</b>

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
103	35	4 008	273	1 052
272	363	6 405	1 866	8 594
36	19	803	148	2 022
84	105	2 248	498	3 652
414	836	13 685	3 377	27 977
231	571	6 717	1 785	16 932
119	203	2 194	1 375	4 718
76	165	1 766	845	3 234
24	17	210	400	529
19	21	218	130	955
10	8	82	45	324
1	3	14	5	84
35	50	1 381	193	2 084
8	7	108	36	155
-	7	47	21	77
2	20	107	87	263
94	6	37	12	713
6	8	88	27	4 905
30	149	612	180	2 743
7	6	51	29	202
<b>1 452</b>	<b>2 396</b>	<b>38 587</b>	<b>9 957</b>	<b>76 497</b>

**Table A1.13** Injuries to the self-employed by kind of accident, severity of injury, and industry 1998/99  
As reported to all enforcing authorities

Kind of accident	<i>Fatal</i>				
	<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
Contact with moving machinery	2	-	1	-	-
Struck by moving, including flying/falling, object	3	1	-	1	1
Struck by moving vehicle	7	-	1	-	2
Strike against something fixed or stationary	-	-	-	-	-
Injured while handling, lifting or carrying	-	-	-	-	-
Slips, trips or falls on same level	-	-	-	-	-
Falls from a height of which:	8	-	1	17	6
- up to and inc 2 metres	-	-	-	3	-
- over 2 metres	8	-	1	14	6
- height not stated	-	-	-	-	-
Trapped by something collapsing/overturning	3	-	1	-	-
Drowning or asphyxiation	3	-	-	-	1
Exposure to, or contact with, a harmful substance	-	-	-	-	-
Exposure to fire	-	-	1	-	-
Exposure to an explosion	-	-	1	-	-
Contact with electricity or electrical discharge	1	-	-	-	-
Injured by an animal	2	-	-	-	-
Acts of violence	-	-	-	-	-
Other kind of accident	1	-	-	-	-
Injuries not classified by kind	-	-	-	-	-
<b>Total</b>	<b>30</b>	<b>1</b>	<b>6</b>	<b>18</b>	<b>10</b>

(a) Excludes sea fishing.

**Non-fatal major**

**Over-3-day**

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
13	2	11	13	2
13	13	14	49	9
9	1	5	8	7
-	3	3	9	3
3	4	6	18	4
4	6	14	55	27
13	2	33	191	36
5	2	16	64	12
7	-	16	111	21
1	-	1	16	3
2	-	3	6	2
-	-	1	1	1
3	-	1	1	3
-	-	-	-	1
1	1	1	1	-
2	2	3	6	1
8	-	-	-	1
-	-	-	-	11
3	3	1	9	7
-	-	-	-	-
74	34	96	367	114

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
10	2	14	16	3
12	22	18	65	28
2	2	1	9	2
1	8	7	21	5
2	39	25	68	47
3	31	15	67	30
-	3	5	105	21
2	2	2	47	15
1	1	2	47	4
-	-	1	11	2
1	-	-	4	-
-	-	-	1	1
-	2	2	5	6
-	-	2	1	-
-	1	1	3	1
-	1	4	2	1
6	1	-	1	5
-	-	-	1	40
-	17	2	12	11
-	-	-	-	2
40	129	96	381	203

**Table A1.14** Injuries to the self-employed by kind of accident, severity of injury, and industry 1999/2000p  
As reported to all enforcing authorities

Kind of accident	<i>Fatal</i>				
	<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
Contact with moving machinery	-	-	-	1	-
Struck by moving, including flying/falling, object	4	-	1	1	-
Struck by moving vehicle	3	1	1	-	2
Strike against something fixed or stationary	-	-	-	1	-
Injured while handling, lifting or carrying	-	-	-	-	-
Slips, trips or falls on same level	-	-	-	-	-
Falls from a height of which:	6	-	-	12	5
- up to and inc 2 metres	2	-	-	-	1
- over 2 metres	4	-	-	12	4
- height not stated	-	-	-	-	-
Trapped by something collapsing/overturning	4	-	-	-	2
Drowning or asphyxiation	1	-	-	-	-
Exposure to, or contact with, a harmful substance	-	-	-	-	-
Exposure to fire	-	-	1	-	-
Exposure to an explosion	-	-	-	-	-
Contact with electricity or electrical discharge	1	-	-	4	-
Injured by an animal	4	-	-	-	-
Acts of violence	-	-	-	-	-
Other kind of accident	-	-	-	-	-
Injuries not classified by kind	-	-	-	-	-
<b>Total</b>	<b>23</b>	<b>1</b>	<b>3</b>	<b>19</b>	<b>9</b>

(a) Excludes sea fishing.

p Provisional

**Non-fatal major**

**Over-3-day**

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
12	1	12	13	1
13	10	9	43	12
4	-	3	6	5
2	1	1	7	7
1	4	2	22	3
-	11	9	61	29
17	8	21	178	43
4	4	15	79	15
12	3	6	89	18
1	1	-	10	10
2	1	-	7	1
-	-	-	-	-
-	-	5	3	-
1	-	-	1	2
-	-	-	-	1
-	1	-	4	1
16	-	-	-	4
-	2	1	1	2
1	-	1	3	1
-	-	-	-	-
<b>69</b>	<b>39</b>	<b>64</b>	<b>349</b>	<b>112</b>

<i>Agriculture, hunting, forestry &amp; fishing (a)</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>
4	2	6	11	10
16	23	17	78	13
2	-	4	5	3
2	4	7	14	4
4	37	22	60	35
1	30	15	55	32
6	4	7	81	11
2	3	4	43	9
4	-	2	35	2
-	1	1	3	-
1	-	-	4	1
-	-	-	-	2
1	1	5	6	3
-	-	-	2	-
-	-	-	1	1
-	-	1	7	1
3	-	-	-	1
-	-	-	-	12
1	9	4	9	6
-	-	1	2	-
<b>41</b>	<b>110</b>	<b>89</b>	<b>335</b>	<b>135</b>

**Table A1.15** Injuries to employees by nature and severity of injury 1995/96 - 1999/2000p (a)  
As reported to all enforcing authorities (b)

Nature of injury	<i>Fatal</i>				
	95/96	96/97	97/98	98/99	99/00p
Amputation	2	-	-	-	-
Loss of sight of eye	-	-	-	-	-
Fracture	22	26	32	33	25
Dislocation	-	-	-	-	-
Concussion and internal injuries	14	28	40	27	11
Lacerations and open wounds	3	4	4	5	3
Contusions	30	11	17	8	8
Burns	8	8	7	11	6
Poisonings and gassings	12	8	13	5	16
Sprains and strains	-	-	-	-	-
Superficial injuries	-	1	-	-	-
Natural causes	1	1	-	2	-
Other injuries caused by contact with electricity	8	14	11	10	12
Injuries of more than one type	28	56	52	48	44
Injuries not elsewhere classified	14	26	20	23	19
Injuries not known	51	24	16	16	17
<b>Total</b>	<b>193</b>	<b>207</b>	<b>212</b>	<b>188</b>	<b>161</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

p Provisional

**Non-fatal major****Over-3-day**

<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
937	1 137	1 315	1 139	1 143
14	92	160	142	118
12 284	20 266	21 106	21 039	20 231
36	1 102	1 152	1 298	1 163
129	402	517	570	594
545	1 376	1 451	1 272	1 332
401	457	534	481	551
583	849	917	744	651
178	225	231	207	189
154	650	361	294	313
254	290	461	314	298
4	21	9	8	-
82	243	172	116	128
232	386	406	431	503
77	314	250	205	194
226	154	145	108	155
<b>16 136</b>	<b>27 964</b>	<b>29 187</b>	<b>28 368</b>	<b>27 563</b>

<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
49	7	6	-	2
9	29	31	36	26
10 488	5 704	6 120	6 317	5 951
1 001	442	344	312	441
975	712	858	774	738
8 478	13 874	14 639	14 224	14 200
24 683	25 832	27 328	26 694	26 304
4 026	4 058	4 383	4 158	3 901
531	398	440	435	392
52 616	57 757	62 260	61 124	58 882
14 448	11 462	12 000	11 172	10 529
17	22	18	8	15
265	306	274	261	327
2 396	2 444	2 732	3 346	3 598
805	1 814	1 339	1 439	1 314
5 513	2 425	2 017	1 995	2 269
<b>126 300</b>	<b>127 286</b>	<b>134 789</b>	<b>132 295</b>	<b>128 889</b>

**Table A1.16** Injuries to the self-employed by nature and severity of injury 1995/96 - 1999/2000p (a)  
As reported to all enforcing authorities (b)

	<b>Fatal</b>				
	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
<b>Nature of injury</b>					
Amputation	-	1	-	-	-
Loss of sight of eye	-	-	-	-	-
Fracture	9	10	13	12	5
Dislocation	-	-	1	-	-
Concussion and internal injuries	2	15	10	14	9
Lacerations and open wounds	1	2	-	-	1
Contusions	10	3	1	2	4
Burns	1	4	3	1	-
Poisonings and gassings	1	7	1	3	3
Sprains and strains	-	-	-	-	-
Superficial injuries	-	-	-	-	-
Natural causes	-	-	1	1	-
Other injuries caused by contact with electricity	5	1	4	1	6
Injuries of more than one type	4	20	20	19	17
Injuries not elsewhere classified	8	6	4	10	7
Injuries not known	8	11	4	2	3
<b>Total</b>	<b>49</b>	<b>80</b>	<b>62</b>	<b>65</b>	<b>55</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

p Provisional

**Non-fatal major****Over-3-day**

*95/96      96/97      97/98      98/99      99/00p*

*95/96      96/97      97/98      98/99      99/00p*

58	56	45	34	19
1	3	9	4	10
847	990	575	480	441
4	45	19	23	27
7	8	15	7	13
57	84	59	45	47
31	22	22	18	15
58	44	18	12	14
6	15	3	1	2
7	9	4	5	4
18	10	9	3	5
-	-	-	-	-
4	15	5	6	3
36	37	19	35	24
6	10	8	9	4
26	8	5	3	5
<b>1 166</b>	<b>1 356</b>	<b>815</b>	<b>685</b>	<b>633</b>

1	-	1	-	-
-	1	1	-	-
430	123	58	54	56
48	12	1	3	4
24	21	11	4	3
285	384	226	193	152
418	475	191	184	159
82	67	36	25	22
16	34	4	5	3
545	691	288	256	206
294	214	101	53	55
-	1	-	-	-
9	8	5	2	5
94	100	23	39	26
24	80	21	21	9
124	71	17	10	10
<b>2 394</b>	<b>2 282</b>	<b>984</b>	<b>849</b>	<b>710</b>

**Table A1.17** Injuries to employees by site and severity of injury 1995/96 - 1999/2000p (a)  
As reported to all enforcing authorities (b)

Site of injury	<i>Fatal</i>				
	<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
Eye	-	-	-	-	1
Ear	-	-	-	-	-
Other parts of face	1	1	-	-	-
Head (excluding face)	37	49	46	33	34
Several locations of head	4	2	4	7	5
<b>Total: Head locations</b>	<b>42</b>	<b>52</b>	<b>50</b>	<b>40</b>	<b>40</b>
Neck	3	1	3	1	1
Back	1	1	1	-	-
Trunk	18	31	27	22	13
Several locations of torso	2	8	9	4	5
<b>Total: Torso locations</b>	<b>24</b>	<b>41</b>	<b>40</b>	<b>27</b>	<b>19</b>
One or more finger/thumb(s)	-	-	-	-	-
Hand	-	-	-	-	-
Wrist	-	-	-	-	-
Rest of upper limb	1	1	-	3	-
Several locations of upper limb	1	1	1	2	-
<b>Total: Upper limb locations</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>-</b>
One or more toes	-	-	-	-	-
Foot	-	-	-	1	-
Ankle	-	1	1	1	1
Rest of lower limb	2	2	1	7	3
Several locations of lower limb	2	-	-	2	-
<b>Total: Lower limb locations</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>11</b>	<b>4</b>
Several locations	59	51	61	50	38
General locations	25	39	42	34	43
Unspecified locations	37	19	16	21	17
<b>Total: All locations</b>	<b>193</b>	<b>207</b>	<b>212</b>	<b>188</b>	<b>161</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

p Provisional

*Non-fatal major*

*Over-3-day*

*95/96 96/97 97/98 98/99 99/00p*

*95/96 96/97 97/98 98/99 99/00p*

465 735 996 818 644

2 378 2 650 2 623 2 576 2 608

4 17 10 7 12

141 120 105 129 142

143 653 620 532 479

1 445 1 847 2 188 2 108 2 141

414 728 771 767 730

3 727 3 732 3 943 3 901 3 905

51 166 82 54 47

366 560 545 618 384

**1 077 2 299 2 479 2 178 1 912**

**8 057 8 909 9 404 9 332 9 180**

57 155 126 122 98

2 243 2 547 2 896 2 791 2 513

449 876 708 721 664

30 337 31 593 33 096 32 401 30 624

554 1 928 2 022 1 990 1 924

5 368 4 374 4 933 4 774 4 434

16 90 101 91 72

474 671 654 608 633

**1 076 3 049 2 957 2 924 2 758**

**38 422 39 185 41 579 40 574 38 204**

1 343 2 058 2 191 1 844 1 904

17 213 17 234 18 358 17 750 16 980

306 2 265 2 444 2 450 2 325

8 312 7 762 8 163 7 976 7 381

3 843 4 161 4 341 4 087 4 073

3 294 3 484 3 488 3 176 3 243

2 971 4 176 4 355 4 598 4 401

10 320 10 352 11 153 11 049 10 640

119 159 162 187 238

787 893 955 917 1 135

**8 582 12 819 13 493 13 166 12 941**

**39 926 39 725 42 117 40 868 39 379**

65 163 137 104 96

2 289 2 064 2 133 2 149 1 997

221 2 826 2 891 2 886 2 802

7 006 4 756 5 271 4 788 4 390

2 278 2 619 2 750 2 780 2 468

8 156 8 835 9 551 8 789 8 815

1 735 2 336 2 480 2 394 2 310

12 002 12 403 12 969 13 376 12 867

101 124 141 152 140

713 636 747 752 871

**4 400 8 068 8 399 8 316 7 816**

**30 166 28 694 30 671 29 854 28 940**

708 1 216 1 267 1 257 1 325

8 563 9 208 9 542 10 171 10 624

222 456 528 464 507

700 1 169 1 120 1 057 899

71 57 64 63 304

466 396 356 439 1 663

**16 136 27 964 29 187 28 368 27 563**

**126 300 127 286 134 789 132 295 128 889**

**Table A1.18** Injuries to the self-employed by site and severity of injury 1995/96 - 1999/2000p (a)  
As reported to all enforcing authorities (b)

		<b>Fatal</b>				
		<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
<b>Site of injury</b>						
	Eye	-	-	-	-	-
	Ear	-	-	-	-	-
	Other parts of face	-	-	-	-	-
	Head (excluding face)	9	21	20	23	22
	Several locations of head	3	2	4	-	1
	<b>Total: Head locations</b>	<b>12</b>	<b>23</b>	<b>24</b>	<b>23</b>	<b>23</b>
	Neck	4	1	-	1	-
	Back	1	1	1	1	-
	Trunk	8	10	13	8	4
	Several locations of torso	1	4	1	5	3
	<b>Total: Torso locations</b>	<b>14</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>7</b>
	One or more finger/thumb(s)	-	-	-	-	-
	Hand	-	-	-	-	-
	Wrist	-	-	-	-	-
	Rest of upper limb	-	-	1	-	-
	Several locations of upper limb	-	-	1	-	-
	<b>Total: Upper limb locations</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>
	One or more toes	-	-	-	-	-
	Foot	-	-	-	-	-
	Ankle	-	-	-	-	-
	Rest of lower limb	-	1	2	-	-
	Several locations of lower limb	-	1	-	1	-
	<b>Total: Lower limb locations</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>-</b>
	Several locations	10	21	7	10	10
	General locations	8	13	8	12	13
	Unspecified locations	5	5	4	4	2
	<b>Total: All locations</b>	<b>49</b>	<b>80</b>	<b>62</b>	<b>65</b>	<b>55</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

p Provisional

*Non-fatal major*

*Over-3-day*

*95/96 96/97 97/98 98/99 99/00p*

*95/96 96/97 97/98 98/99 99/00p*

26 20 20 14 14

- - 1 1 -

13 32 19 10 10

39 37 28 23 23

3 5 3 3 1

**81 94 71 51 48**

4 5 3 4 3

58 42 31 24 30

42 90 60 63 52

4 13 7 3 4

**108 150 101 94 89**

78 99 60 45 36

20 66 49 44 28

189 158 78 61 56

176 208 117 98 105

16 13 8 10 7

**479 544 312 258 232**

4 2 4 1 3

30 125 68 53 48

152 141 71 57 59

164 143 95 78 66

17 11 9 7 10

**367 422 247 196 186**

114 115 69 73 68

15 28 14 9 8

2 3 1 4 2

**1 166 1 356 815 685 633**

57 55 21 18 14

5 4 - 3 -

43 55 25 35 11

82 93 44 22 23

13 12 8 3 1

**200 219 98 81 49**

19 77 18 17 18

271 343 173 135 116

157 80 41 31 27

13 11 6 11 3

**460 511 238 194 164**

360 294 152 138 128

165 141 54 53 52

36 52 26 19 21

166 144 64 60 48

11 14 8 7 11

**738 645 304 277 260**

55 38 15 14 12

225 74 40 26 16

166 156 65 58 38

275 281 122 101 88

15 13 7 2 5

**736 562 249 201 159**

216 243 71 77 66

23 80 18 8 12

21 22 6 11 -

**2 394 2 282 984 849 710**

**Table A1.19** Injuries to male employees by age of injured person and severity of injury 1995/96 - 1999/2000p (a) *As reported to all enforcing authorities* (b)

		95/96	96/97	97/98	98/99 (c)	99/00p (d)
<b>Severity of injury and age of injured person</b>						
<b>Fatal</b>	Under 16	-	1	1	-	-
	16-19	6	5	10	6	6
	20-24	15	13	12	14	12
	25-34	34	44	47	40	28
	35-44	32	45	43	39	32
	45-54	41	52	45	43	42
	55-59	17	24	25	19	21
	60-64	16	8	16	18	9
	65+	12	2	6	2	6
	Unknown	11	10	3	3	5
	<b>Total</b>	<b>184</b>	<b>204</b>	<b>208</b>	<b>184</b>	<b>161</b>
<b>Non-fatal major</b>	Under 16	11	11	17	7	17
	16-19	642	1 135	1 220	1 107	1 175
	20-24	1 074	1 972	2 013	1 845	1 753
	25-34	2 782	5 285	5 664	5 451	5 284
	35-44	2 308	4 539	4 931	4 858	4 932
	45-54	2 256	3 945	4 176	4 236	3 973
	55-59	822	1 459	1 536	1 520	1 518
	60-64	492	823	878	896	872
	65+	61	135	119	109	121
	Unknown	1 233	1 522	1 396	1 350	1 251
	<b>Total</b>	<b>11 681</b>	<b>20 826</b>	<b>21 950</b>	<b>21 379</b>	<b>20 896</b>
<b>Over-3-day</b>	Under 16	20	19	19	17	16
	16-19	3 421	3 511	4 072	4 166	3 922
	20-24	8 458	8 397	8 965	8 384	8 125
	25-34	25 548	26 502	27 795	26 700	26 083
	35-44	21 478	22 447	24 692	25 159	25 609
	45-54	17 502	17 864	18 976	18 637	18 268
	55-59	5 727	5 692	5 752	5 765	5 849
	60-64	3 257	3 257	3 389	3 364	3 404
	65+	172	181	192	221	223
	Unknown	7 572	5 562	5 535	4 983	4 656
	<b>Total</b>	<b>93 155</b>	<b>93 432</b>	<b>99 387</b>	<b>97 396</b>	<b>96 155</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

(c) The sex of 14 people who suffered a major injury and 50 people who suffered an over-3-day injury is unknown and not included in the table above.

(d) The sex of 5 people who suffered a major injury and 29 people who suffered an over-3-day injury is unknown and not included in the table above.

p Provisional

**Table A1.20** Injuries to female employees by age of injured person and severity of injury  
1995/96 - 1999/2000p (a) *As reported to all enforcing authorities (b)*

		95/96	96/97	97/98	98/99 (c)	99/00p (d)
<b>Severity of injury and age of injured person</b>						
<b>Fatal</b>	Under 16	-	-	-	-	-
	16-19	1	-	1	-	-
	20-24	2	-	2	-	-
	25-34	-	-	-	1	-
	35-44	-	1	-	-	-
	45-54	2	1	-	3	-
	55-59	1	-	1	-	-
	60-64	1	-	-	-	-
	65+	1	1	-	-	-
	Unknown	1	-	-	-	-
	<b>Total</b>	<b>9</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>-</b>
<b>Non-fatal major</b>	Under 16	1	3	6	5	4
	16-19	237	349	419	414	355
	20-24	342	609	628	582	550
	25-34	664	1 255	1 264	1 283	1 212
	35-44	731	1 247	1 337	1 264	1 298
	45-54	1 065	1 746	1 687	1 659	1 598
	55-59	531	819	764	798	700
	60-64	264	384	352	368	344
	65+	87	126	120	97	135
	Unknown	530	593	653	505	466
	<b>Total</b>	<b>4 452</b>	<b>7 131</b>	<b>7 230</b>	<b>6 975</b>	<b>6 662</b>
<b>Over-3-day</b>	Under 16	5	5	3	5	8
	16-19	1 241	1 310	1 550	1 599	1 364
	20-24	2 988	3 032	3 102	2 976	2 600
	25-34	6 898	7 468	7 931	7 894	7 399
	35-44	6 920	7 703	8 205	8 259	8 033
	45-54	7 931	8 023	8 385	8 080	7 531
	55-59	2 614	2 506	2 596	2 634	2 579
	60-64	904	880	865	950	902
	65+	94	102	116	177	141
	Unknown	3 531	2 737	2 592	2 275	2 148
	<b>Total</b>	<b>33 126</b>	<b>33 766</b>	<b>35 345</b>	<b>34 849</b>	<b>32 705</b>

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

(c) The sex of 14 people who suffered a major injury and 50 people who suffered an over-3-day injury is unknown and not included in the table above.

(d) The sex of 5 people who suffered a major injury and 29 people who suffered an over-3-day injury is unknown and not included in the table above.

p Provisional

**Table A1.21** Injuries to members of the public by age of injured person and severity of injury  
1995/96 - 1999/2000p (a)  
As reported to all enforcing authorities (b)

		95/96	96/97 (c)	97/98	98/99	99/00p
<b>Severity of injury and age of injured person</b>						
<b>Fatal</b>	Under 16	11	34	29	19	23
	16-19	3	22	34	26	12
	20-24	3	39	40	39	32
	25-34	4	67	74	77	70
	35-44	5	39	33	46	46
	45-54	8	40	33	38	39
	55-59	1	13	17	19	23
	60-64	3	11	19	6	14
	65+	43	47	56	53	56
	Unknown	5	55	58	46	125
<b>Total</b>	<b>86</b>	<b>367</b>	<b>393</b>	<b>369</b>	<b>440</b>	
<b>Non-fatal</b>	Under 16	6 218	17 162	13 896	11 176	10 253
	16-19	500	2 343	1 858	1 496	1 625
	20-24	195	925	841	734	774
	25-34	337	1 402	1 176	1 112	1 195
	35-44	295	978	784	817	974
	45-54	248	826	790	770	861
	55-59	145	331	285	258	345
	60-64	222	648	499	436	544
	65+	3 417	6 518	4 579	3 438	3 605
	Unknown	1 657	4 561	3 902	3 563	3 928
<b>Total</b>	<b>13 234</b>	<b>35 694</b>	<b>28 610</b>	<b>23 800</b>	<b>24 104</b>	

(a) Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.

(b) Data before 1996/97 exclude reports made to the Railway, Mines and Explosives Inspectorates and injuries in the oil and gas industry reported under offshore installations safety legislation.

(c) From 1996/97, includes injuries to members of the public (including suicides and trespassers) which were previously reported under railway legislation.

p Provisional



**Table A1.22** Dangerous occurrences 1996/97 - 1999/2000p  
As reported to HSE

**Reported to HSE**

	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
<b>Part 1 (Notifiable in relation to any place of work)</b>				
1 Failure, collapse or overturning of lifting machinery, excavator, pile driving frame or mobile powered access platform	1 056	1 139	1 072	1 089
2 The failure of any closed vessel including boiler or of any associated pipework, in which the internal pressure was above or below atmospheric pressure	209	208	183	158
3 The failure of any freight container in any of its load-bearing parts while it is being raised, lowered or suspended	28	42	32	23
4 Plant or equipment either comes into contact with overhead electric line in which the voltage exceeds 200 volts or causes an electrical discharge	361	291	321	289
5 Electrical short circuit which results in the stoppage of the plant for more than 24 hours	279	381	364	347
6 Unintentional ignition or explosion of explosives	53	81	67	46
7 The release or escape of a biological agent likely to cause human infection or illness	139	233	152	127
8 The malfunction of radiation generators	10	12	11	15
9 Failure of breathing apparatus in service	106	123	112	122
10 Failure of any lifting or life-support equipment during a diving operation which puts a diver at risk	9	10	26	16
11 Complete or partial collapse of scaffold over 5 m high	79	78	90	65
12 Any unintended collision of a train with any other train or vehicle (other than one recorded in part 4 of this table) which caused, or might have caused, the death of or major injury to any person	10	6	16	15
13 Incidents in relation to a well (other than a well sunk for the purpose of the abstraction of water)	93	75	94	64

	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00<sup>p</sup></i>
14 Incidents in respect of a pipeline or pipeline works	245	350	466	589
15 Failure of fairground equipment in use or under test	18	19	18	15
16 Overturning or serious damage to a tank while conveying by road prescribed dangerous substances, or the uncontrolled release or fire involving the substance being conveyed	35	49	28	19
17 Uncontrolled release or escape of a dangerous substance, or a fire involving the dangerous substance, when being conveyed by road in a vehicle	25	40	24	45
18 Collapse or partial collapse of any building or structure under construction involving over 5 tonnes of materials or any floor or wall of a building used as a place of work	129	138	146	173
19 An explosion or fire occurring in any plant or premises which results in the stoppage of that plant for more than 24 hours	287	261	258	263
20 The sudden, uncontrolled release of flammable substances	137	195	242	281
21 The accidental release or escape of any substance in a quantity sufficient to cause the death, major injury or any other damage to the health of any person	521	542	611	597
	<b>3 829</b>	<b>4 273</b>	<b>4 333</b>	<b>4 358</b>
<b>Part 1 (Notifiable in relation to any place of work)</b> Total	<b>70</b>	<b>96</b>	<b>114</b>	<b>79</b>
<b>Part 2 (Notifiable in relation to mines)</b> Total	<b>114</b>	<b>105</b>	<b>122</b>	<b>92</b>
<b>Part 3 (Notifiable in relation to quarries)</b> Total	<b>5 197</b>	<b>5 218</b>	<b>5 625</b>	<b>5 025</b>
<b>Part 4 (Notifiable in relation to railways)</b> Total	<b>347</b>	<b>403</b>	<b>446</b>	<b>448</b>
<b>Part 5 (Notifiable in relation to offshore workplaces)</b> Total				
	<b>9 557</b>	<b>10 095</b>	<b>10 640</b>	<b>10 002</b>
<b>Grand Total</b>				

**Notes:**  
1 Injury figures from 1996/97 cannot be directly compared to previous years' figures due to the introduction of RIDDOR 95.  
2 Full definitions of dangerous occurrences can be found in A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995.<sup>23</sup>  
p Provisional

**Table A1.23** Incidents relating to the supply and use of flammable gas (a) 1995/96 - 1999/2000p

		<i>95/96</i>	<i>96/97</i>	<i>97/98</i>	<i>98/99</i>	<i>99/00p</i>
<b>Number of incidents (b)</b>	Explosion/fire	42	40	45	37	54
	Carbon monoxide poisoning	104	103	119	114	119
	<b>Total</b>	<b>148 (c)</b>	<b>143</b>	<b>164</b>	<b>151</b>	<b>173</b>
<b>Number of fatalities</b>	Explosion/fire	6	9	8	11	9
	Carbon monoxide poisoning	29	31	28	37	26
	<b>Total</b>	<b>36 (c)</b>	<b>40</b>	<b>36</b>	<b>48</b>	<b>35</b>
<b>Number of non-fatalities</b>	Explosion/fire	51	35	43	30	59
	Carbon monoxide poisoning	141	156	189	194	225
	<b>Total</b>	<b>193 (c)</b>	<b>191</b>	<b>232</b>	<b>224</b>	<b>284</b>

(a) Mainly piped gas but also includes bottled LPG.

(b) An incident can cause more than one fatality or injury.

(c) Includes one incident causing a fatality and one causing a non-fatal injury where the kind of incident is not known.

p Provisional

**Table 1.24a** Enforcement notices issued in Great Britain by all enforcing authorities by type of notice 1995/96 - 1999/2000p

	<i>Notices issued by type</i>	<i>Improvement</i>	<i>Deferred prohibition</i>	<i>Immediate prohibition</i>	<i>Total notices</i>
<b>HSE</b>	<b>95/96</b>	5 219	82	3 385	8 686
	<b>96/97 (a)</b>	3 770	165	3 509	7 444
	<b>97/98 (b)</b>	4 411	181	4 319	8 911
	<b>98/99</b>	6 353	199	4 348	10 900
	<b>99/00p</b>	6 954	195	4 155	11 304
<b>Local authorities (c)</b>	<b>95/96</b>	6 750	170	1 220	8 140
	<b>96/97 (a)</b>	3 880	80	1 210	5 170
	<b>97/98 (b)</b>	3 320	110	1 070	4 500
	<b>98/99</b>	5 140	130	1 200	6 470
	<b>99/00p</b>	..	..	..	..
<b>All enforcing authorities (c)</b>	<b>95/96</b>	11 969	252	4 605	16 826
	<b>96/97 (a)</b>	7 650	245	4 719	12 614
	<b>97/98 (b)</b>	7 731	291	5 389	13 411
	<b>98/99</b>	11 493	329	5 548	17 370
	<b>99/00p</b>	..	..	..	..

(a) In 1996/97, approximately 540 Notices of Intent led to work being completed within two weeks. Therefore, Improvement Notices were not issued. In the absence of the Notice of Intent procedure 1996/97 enforcement notice numbers would have been about 540 higher.

(b) In 1997/98, approximately 630 Notices of Intent led to work being completed within two weeks. Therefore, Improvement Notices were not issued. In the absence of the Notice of Intent procedure, 1997/98 enforcement notice numbers would have been about 630 higher.

(c) The estimation method for producing figures for local authorities has been revised to provide separate estimates for England, Scotland and Wales which have been aggregated to produce estimates for Great Britain. This has led to a slight revision to the existing method of producing figures for Great Britain, but has resulted in only minor changes to published figures and has not affected the overall trends.

.. not available

p Provisional

**Table 1.24b** Enforcement notices issued in England by all enforcing authorities by type of notice  
1996/97 - 1999/2000p

		<i>Notices issued by type</i>			
		<i>Improvement</i>	<i>Deferred prohibition</i>	<i>Immediate prohibition</i>	<i>Total notices</i>
<b>HSE (a)</b>	<b>96/97</b>	3 224	139	2 892	6 255
	<b>97/98</b>	3 582	138	3 409	7 129
	<b>98/99</b>	5 199	168	3 515	8 882
	<b>99/00p</b>	5 576	164	3 259	8 999
<b>Local authorities</b>	<b>96/97</b>	3 500	80	1 110	4 690
	<b>97/98</b>	2 950	90	860	3 900
	<b>98/99</b>	4 330	100	1 010	5 440
	<b>99/00p</b>	..	..	..	..
<b>All enforcing authorities (a)</b>	<b>96/97</b>	6 724	219	4 002	10 945
	<b>97/98</b>	6 532	228	4 269	11 029
	<b>98/99</b>	9 529	268	4 525	14 322
	<b>99/00p</b>	..	..	..	..

(a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.  
 .. not available  
 p Provisional

**Table 1.24c** Enforcement notices issued in Scotland by all enforcing authorities by type of notice  
1996/97 - 1999/2000p

	<i>Notices issued by type</i>	<i>Improvement</i>	<i>Deferred prohibition</i>	<i>Immediate prohibition</i>	<i>Total notices</i>
<b>HSE (a)</b>	<b>96/97</b>	299	10	432	741
	<b>97/98</b>	381	12	602	995
	<b>98/99</b>	571	8	488	1 067
	<b>99/00p</b>	804	14	583	1 401
<b>Local authorities</b>	<b>96/97</b>	190	-	70	260
	<b>97/98</b>	160	20	160	340
	<b>98/99</b>	490	30	130	650
	<b>99/00p</b>	..	..	..	..
<b>All enforcing authorities (a)</b>	<b>96/97</b>	489	10	502	1 001
	<b>97/98</b>	541	32	762	1 335
	<b>98/99</b>	1 061	38	618	1 717
	<b>99/00p</b>	..	..	..	..

(a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.  
 .. not available  
 p Provisional

**Table 1.24d** Enforcement notices issued in Wales by all enforcing authorities by type of notice  
1996/97 - 1999/2000p

		<i>Notices issued by type</i>			<i>Total notices</i>
		<i>Improvement</i>	<i>Deferred prohibition</i>	<i>Immediate prohibition</i>	
<b>HSE (a)</b>	<b>96/97</b>	247	16	185	448
	<b>97/98</b>	448	31	308	787
	<b>98/99</b>	583	23	345	951
	<b>99/00p</b>	574	17	313	904
<b>Local authorities</b>	<b>96/97</b>	190	-	30	220
	<b>97/98</b>	210	-	50	260
	<b>98/99</b>	320	-	60	380
	<b>99/00p</b>	..	..	..	..
<b>All enforcing authorities (a)</b>	<b>96/97</b>	437	16	215	668
	<b>97/98</b>	658	31	358	1 047
	<b>98/99</b>	903	23	405	1 331
	<b>99/00p</b>	..	..	..	..

(a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.  
 .. not available  
 p Provisional

**Table A1.25** Enforcement notices issued by HSE by industrial sector and type of notice  
1995/96 - 1999/2000p

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	<i>Agriculture, hunting, forestry &amp; fishing</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>	<i>Unclassified</i>	<i>All industries</i>
		A,B	C,E	D	F	G-Q		
<b>TYPE OF NOTICE</b>	Year							
<b>Improvement</b>	95/96	1 236	79	2 741	215	868	80	5 219
	96/97 (a)	600	41	2 111	179	839	-	3 770
	97/98 (b)	810	49	2 435	153	964	-	4 411
	98/99	933	156	3 087	582	1 595	-	6 353
	99/00p	979	150	3 490	678	1 657	-	6 954
<b>Deferred prohibition</b>	95/96	16	1	43	10	10	2	82
	96/97	19	3	55	50	38	-	165
	97/98	35	-	61	47	38	-	181
	98/99	33	-	67	55	44	-	199
	99/00p	21	5	30	111	28	-	195
<b>Immediate prohibition</b>	95/96	456	123	783	1 639	277	107	3 385
	96/97	419	139	861	1 747	343	-	3 509
	97/98	974	120	1 030	1 828	367	-	4 319
	98/99	799	117	1 055	2 017	360	-	4 348
	99/00p	644	84	1 090	1 959	378	-	4 155
<b>Total notices</b>	95/96	1 708	203	3 567	1 864	1 155	189	8 686
	96/97 (a)	1 038	183	3 027	1 976	1 220	-	7 444
	97/98 (b)	1 819	169	3 526	2 028	1 369	-	8 911
	98/99	1 765	273	4 209	2 654	1 999	-	10 900
	99/00p	1 644	239	4 610	2 748	2 063	-	11 304

(a) In 1996/97, approximately 540 Notices of Intent led to work being completed within two weeks. Therefore, Improvement Notices were not issued. In the absence of the Notice of Intent procedure 1996/97 enforcement notice numbers would have been about 540 higher.

(b) In 1997/98, approximately 630 Notices of Intent led to work being completed within two weeks. Therefore, Improvement Notices were not issued. In the absence of the Notice of Intent procedure, 1997/98 enforcement notice numbers would have been about 630 higher.

p Provisional

**Table A1.26** Enforcement notices issued by HSE under specific (a) regulations by type of notice 1999/2000p

Regulations	<i>Number of requirements made (b)</i>			
	<i>I</i>	<i>DP</i>	<i>IP</i>	<i>Total</i>
Agriculture (Tractor cabs) Regs 1974	5	-	3	8
Carriage of Dangerous Goods by Road (Driver Training) Regs 1996	3	1	6	10
Carriage of Dangerous Goods by Road Regs 1996	12	6	12	30
Confined Spaces Regs 1997	8	-	7	15
Construction (Design and Management) Regs 1994	90	7	64	161
Construction (Health, Safety and Welfare) Regs 1996	486	106	2 273	2 865
Control of Asbestos at Work Regs 1987	26	8	225	259
Control of Lead at Work Regs 1998	31	2	7	40
Control of Major Accident Hazards Regs 1999	39	4	4	47
Control of Pesticides Regs 1986	122	-	6	128
Control of Substances Hazardous to Health Regs 1988	16	-	-	16
Control of Substances Hazardous to Health Regs 1994	10	1	3	14
Control of Substances Hazardous to Health Regs 1999	1 055	54	224	1 333
Diving at Work Regs 1997	16	-	9	25
Docks Regs 1988	7	-	2	9
Electricity at Work Regs 1989	218	6	179	403
Gas Safety (Installations and Use) Regs 1994	30	-	1	31
Gas Safety (Installations and Use) Regs 1998	298	-	57	355
Health and Safety (Display Screen Equipment) Regs 1992	14	-	-	14
Health and Safety (First Aid) Regs 1981	28	-	-	28
Highly Flammable Liquids and LPG Regs 1972	126	1	29	156
Ionising Radiations Regs 1985	45	-	9	54
Ionising Radiations Regs 1999	6	-	7	13
Lifting Operations and Lifting Equipment Regs 1998	175	3	92	270
Management and Administration of Safety and Health at Mines Regs 1993	3	-	3	6
Management of Health and Safety at Work Regs 1992	1 147	2	84	1 233
Management of Health and Safety at Work Regs 1999	220	-	9	229
Manual Handling Operations Regs 1992	126	-	4	130
Mines (Control of Ground Movement) Regs 1999	-	-	7	7
Noise at Work Regs 1989	164	-	4	168
Personal Protective Equipment at Work Regs 1992	94	1	33	128
Pipeline Safety Regs 1996	9	-	-	9
Pressure Systems and Transportable Gas Containers Regs 1989	130	4	11	145
Prevention of Accidents to Children in Agriculture Regs 1998	-	-	6	6
Provision and Use of Work Equipment Regs 1992	8	-	8	16
Provision and Use of Work Equipment Regs 1998	1 551	32	1 417	3 000
Quarries Regs 1999	11	-	4	15
Railway Safety (Misc Provisions) Regs 1997	5	-	-	5
RIDDOR Regs 1995	7	-	-	7
Supply of Machinery (Safety) Regs 1992	9	-	6	15
Working Time Regs 1998	10	-	-	10
Workplace (Health, Safety and Welfare) Regs 1992	1 439	4	59	1 502

(a) Regulations quoted in five or more requirements.

(b) I = improvement; DP = deferred prohibition; IP = immediate prohibition; p Provisional

**Table A1.27a** Proceedings instituted in Great Britain by enforcing authorities by result 1995/96 - 1999/2000p

		<i>Informations laid</i>	<i>Convictions</i>	<i>Average penalty per conviction (£)</i>
<b>HSE</b>	<b>95/96</b>	1 767	1 451	2 572
	<b>96/97</b>	1 490	1 195	5 274 (a)
	<b>97/98</b>	1 627	1 284	4 694 (b)
	<b>98/99</b>	1 759	1 512	4 861 (c)
	<b>99/00p</b>	2 253 (d)	1 602	6 744 (e)
<b>Local authorities</b>	<b>95/96</b>	475	384	1 762
	<b>96/97</b>	364	323	1 463
	<b>97/98</b>	506	440	2 224
	<b>98/99</b>	424	337	4 098 (f)
	<b>99/00p</b>	..	..	..

- (a) Includes fines of £500 000 against Lloyds Register of Shipping, the fine of £200 000 against Port Ramsgate Ltd and the fines of £750 000 against Fartygsentreprenader AB (part of the Mattson Group), and £250 000 against Fartygskonstruktioner (part of the Mattson Group). Also included are the four fines of £100 000 against Pembroke Cracking Co Ltd and the £100 000 fines against Firth Vickers Centrispinning Ltd and Cheetham Hill Construction Ltd. The average fine without these convictions would be £3266.
- (b) Includes the two fines of £100 000 against Coflexit Stena Offshore, the fine of £175 000 against Mobil North Sea Ltd, the two fines of £150 000 against BJ Process and Pipeline Services Ltd, the fine of £100 000 against BL Pegson, the fine of £150 000 against Neath and Port Talbot County Borough Council and Trentham Leisure Ltd, and the fine of £100 000 against Associated British Ports Ltd. The average fine without these convictions would be £3805.
- (c) Includes the £1 200 000 fine against Balfour Beatty Civil Eng Ltd, the fines of £500 000 against Rivenhall and Geoconsult ZT GES MBH, and the fines of £100 000 against Dunlop Tyres UK Ltd. The average fine without these convictions would be £3349.
- (d) Figures include 81 informations which relate to connected cases under pesticides legislation which are awaiting trial. Figures also include 77 informations adjourned sine die during prosecutions following a single incident involving multiple breaches of asbestos regulations.
- (e) Includes the £1 500 000 fine against Great Western Trains Ltd, the fines of £300 000 against London Underground Ltd and BOC Gases Ltd, the £250 000 fine against Friskies Petcare (UK) Ltd, the £200 000 fines against Keltbray Ltd and British Steel plc, the £175 000 fine against British Steel plc, the £150 000 fine against Railtrack plc, the two fines of £110 000 against Nippon Electric Glass (UK) Ltd and Tarmac Construction Ltd, and the two fines of £100 000 against Tarmac Heavy Building Materials UK Ltd and Brintons Ltd. The average fine without these convictions would be £4597.
- (f) Includes the fine of £425 000 against J Sainsbury plc. The average fine without this conviction would be £2889.
- .. Not available
- p Provisional

**Table A1.27b** Proceedings instituted in England by enforcing authorities by result 1996/97 - 1999/2000p

		<i>Informations laid</i>	<i>Convictions</i>	<i>Average penalty per conviction (£)</i>
<b>HSE (a)</b>	<b>96/97</b>	1 230	997	5 211
	<b>97/98</b>	1 319	1 044	4 362
	<b>98/99</b>	1 440	1 256	5 158
	<b>99/00p</b>	1 846	1 270	6 699
<b>Local authorities</b>	<b>96/97</b>	325	285	1 501
	<b>97/98</b>	440	383	2 390
	<b>98/99</b>	378	310	4 301
	<b>99/00p</b>	..	..	..

- (a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.
- .. not available
- p Provisional

**Table A1.27c** Proceedings instituted in Scotland by enforcing authorities by result 1996/97 - 1999/2000p

		<i>Informations laid</i>	<i>Convictions</i>	<i>Average penalty per conviction (£)</i>
<b>HSE (a)</b>	<b>96/97</b>	174	122	4 083
	<b>97/98</b>	159	106	8 096
	<b>98/99</b>	149	103	3 183
	<b>99/00p</b>	186	135	5 139
<b>Local authorities</b>	<b>96/97</b>	25	25	1 080
	<b>97/98</b>	27	21	850
	<b>98/99</b>	18	10	1 750
	<b>99/00p</b>	..	..	..

(a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.

.. not available

p Provisional

**Table A1.27d** Proceedings instituted in Wales by enforcing authorities by result 1996/97 - 1999/2000p

		<i>Informations laid</i>	<i>Convictions</i>	<i>Average penalty per conviction (£)</i>
<b>HSE (a)</b>	<b>96/97</b>	86	76	8 011
	<b>97/98</b>	149	134	4 591
	<b>98/99</b>	170	153	3 559
	<b>99/00p</b>	221	197	8 136
<b>Local authorities</b>	<b>96/97</b>	14	13	1 356
	<b>97/98</b>	39	36	1 267
	<b>98/99</b>	28	17	1 788
	<b>99/00p</b>	..	..	..

(a) Enforcement action taken by HSE's Offshore Division is allocated according to the legal jurisdiction where the offence occurred.

.. not available

p Provisional

**Table A1.28** Proceedings instituted by HSE by result and by industrial sector 1995/96 - 1999/2000p

STANDARD INDUSTRIAL CLASSIFICATION (SIC92)	Section	<i>Agriculture, hunting, forestry &amp; fishing</i>	<i>Extractive &amp; utility supply industries</i>	<i>Manufacturing industries</i>	<i>Construction</i>	<i>Service industries</i>	<i>Unclassified</i>	<i>All industries</i>
		A,B	C,E	D	F	G-Q		
	Year							
<b>Informations laid</b>	95/96	162	24	645	598	287	51	1 767
	96/97	103	48	563	508	268	-	1 490
	97/98	80	32	518	719	278	-	1 627
	98/99	117	49	601	681	311	-	1 759
	99/00p	262 (a)	90	716	796	389	-	2 253 (a)
<b>Convictions</b>	95/96	114	21	558	476	241	41	1 451
	96/97	87	37	477	385	209	-	1 195
	97/98	69	26	438	544	207	-	1 284
	98/99	102	34	551	565	260	-	1 512
	99/00p	103	62	603	537	297	-	1 602
<b>Average penalty per conviction (£)</b>	95/96	1 095	5 595	2 678	2 232	3 389	2 820	2 572
	96/97	1 101	1 780	7 372 (b)	3 934 (c)	5 305 (d)	-	5 274 (e)
	97/98	1 316	19 192 (f)	5 760 (g)	3 123	5 872 (h)	-	4 694 (i)
	98/99	1 391	8 916	4 077 (j)	5 516 (k)	5 932 (l)	-	4 861 (m)
	99/00p	3 780	6 409	7 397 (n)	4 123 (o)	11 255 (p)	-	6 744 (q)

- (a) Figures include 81 informations which relate to connected cases under pesticides legislation which are awaiting trial. Figures also include 77 informations adjourned sine die during prosecutions following a single incident involving multiple breaches of asbestos regulations.
- (b) Includes the fine of £500 000 against Lloyds Register of Shipping, the fine of £750 000 against Fartygsentreprenader AB (part of the Mattson Group), the fine of £250 000 against Fartygskonstruktioner (part of the Mattson Group), the four fines of £100 000 against Pembroke Cracking Co Ltd and the £100 000 fine against Firth Vickers Centrispinning Ltd. The average fine without these convictions would be £3234.
- (c) Includes the fine of £100 000 against Cheetham Hill Construction Ltd and the fine of £125 000 against TE Scudder Ltd. The average fine without these convictions would be £3367.
- (d) Includes the two fines of £100 000 against Port Ramsgate Ltd and the two fines of £100 000 against the British Railways Board. The average fine without these convictions would be £3457.
- (e) Includes the fines of £500 000 against Lloyds Register of Shipping, the fine of £750 000 against Fartygsentreprenader AB (part of the Mattson Group), the fine of £250 000 against Fartygskonstruktioner (part of the Mattson Group), the four fines of £100 000 against Pembroke Cracking Co Ltd, the £100 000 fine against Firth Vickers Centrispinning Ltd, the fine of £100 000 against Cheetham Hill Construction Ltd, the fine of £200 000 against Port Ramsgate Ltd, the fine of £125 000 against TE Scudder Ltd and the two fines of £100 000 against the British Railways Board. The average fine without these convictions would be £3113.
- (f) Includes the two fines of £100 000 against Coflexit Stena Offshore and the fine of £175 000 against Mobil North Sea Ltd. The average fine without these convictions would be £5391.
- (g) Includes the two fines of £150 000 against BJ Process and Pipeline Services Ltd and the fine of £100 000 against BL Pegson . The average fine without these convictions would be £4880.
- (h) Includes fines of £150 000 against Neath and Port Talbot County Borough Council and Trentham Leisure Ltd, and the fine of £100 000 against Associated British Ports Ltd. The average fine without these convictions would be £3610.
- (i) Includes the two fines of £100 000 against Coflexit Stena Offshore, the fine of £170 000 against Mobil North Sea Ltd, the two fines of £150 000 against BJ Process and Pipeline Services Ltd, the fine of £100 000 against BL Pegson, the fine of £150 000 against Neath and Port Talbot County Borough Council and Trentham Leisure Ltd, and the fine of £100 000 against Associated British Ports Ltd. The average fine without these convictions would be £3805.
- (j) Includes the fine of £100 000 against Dunlop Tyres UK Limited. The average fine without this conviction would be £3903.
- (k) Includes the £1 200 000 fine against Balfour Beatty Civil Eng Ltd, the fines of £500 000 against Rivenhall and Geoconsult ZT GES MBH. The average fine without these convictions would be £2516.
- (l) Includes the fines of £500 000 against Rivenhall and Geoconsult 2T GES MBH. The average fine without these convictions would be £4024.
- (m) Includes the £1 200 000 fine against Balfour Beatty Civil Eng Ltd, the fines of £500 000 against Rivenhall and Geoconsult ZT GES MBH and the fines of £100 000 against Dunlop Tyres UK Limited. The average fine without these convictions would be £3349.
- (n) Includes the fine of £300 000 against BOC Gases Ltd, the fine of £250 000 against Friskies Petcare (UK) Ltd, the fines of £200 000 and £175 000 against British Steel plc, the fine of £110 000 against Nippon Electric Glass (UK) Ltd and the fine of £100 000 against Brintons Ltd. The average fine without these convictions would be £5570.
- (o) Includes the fine of £200 000 against Keltbray Ltd, the fine of £110 000 against Tarmac Construction Ltd and the fine of £100 000 against Tarmac Heavy Building Materials (UK) Ltd. The average fine without these convictions would be £3378.
- (p) Includes the fine of £1 500 000 against Great Western Trains Ltd, the fine of £300 000 against London Underground Ltd and the £150 000 fine against Railtrack plc. The average fine without these convictions would be £4738.
- (q) Includes the £1 500 000 fine against Great Western Trains Ltd, the fines of £300 000 against London Underground Ltd and BOC Gases Ltd, the £250 000 fine against Friskies Petcare (UK) Ltd, the £200 000 fines against Keltbray Ltd and British Steel plc, the £175 000 fine against British Steel plc, the £150 000 fine against Railtrack plc, the two fines of £110 000 against Nippon Electric Glass (UK) Ltd and Tarmac Construction Ltd and the two fines of £100 000 against Tarmac Heavy Building Materials (UK) Ltd and Brintons Ltd. The average fine without these convictions would be £4597.
- p Provisional

**Table A1.29** Proceedings instituted by HSE under specific regulations by result 1999/2000p

<b>REGULATIONS</b>	<i>Informations laid</i>	<i>Convictions</i>	<i>Withdrawn/ Not taken (a)</i>	<i>Dismissed/ not guilty</i>	<i>Not proven (Scotland)</i>	<i>Adjournment (b)</i>	<i>Total fines</i>	<i>Average fines per conviction</i>
Agriculture (Avoidance of Accidents to Children) Regs 1958	2	2	-	-	-	-	1 000	500
Agriculture (Tractor cabs) Regs 1974	1	1	-	-	-	-	500	500
Asbestos (Licencing) Regs 1983	32	6	-	-	-	26	5 100	850
Carriage of Dangerous Goods (Driver Training) Regs 1996	5	5	-	-	-	-	6 750	1 350
Carriages of Dangerous Goods by Road Regs 1996	13	13	-	-	-	-	47 800	3 677
Carriages of Dangerous Goods and use of Transportable Pressure Receptacles Reg 1996	3	3	-	-	-	-	1 300	433
Confined Spaces Regs 1997	7	4	3	-	-	-	6 750	1 688
Construction (Design and Management) Regs 1994	50	28	5	12	-	4	104 650	3 738
Construction (Head Protection) Regs 1989	1	1	-	-	-	-	2 500	2 500
Construction (Health Safety and Welfare) Regs 1996	227	178	31	8	-	10	604 403	3 396
Construction (Lifting Operations) Regs 1961	5	5	-	-	-	-	16 500	3 300
Control of Asbestos at Work Regs 1987	119	41	24	3	-	50	201 503	4 915
Control of Lead at Work Regs 1980	3	2	1	-	-	-	2 000	1 000
Control of Lead at Work Regs 1998	4	3	-	1	-	-	2 000	667
Control of Pesticides Regs 1986	116	27	8	-	-	81	140 750	5 213
Control of Substances Hazardous to Health Regs 1994	29	19	6	1	-	3	92 850	4 887
Control of Substances Hazardous to Health Regs 1999	3	3	-	-	-	-	7 100	2 367
Docks Regs 1988	16	8	8	-	-	-	20 500	2 563
Electrical Equipment (Safety) Regs 1994	4	4	-	-	-	-	3 500	875
Electricity at Work Regs 1989	28	25	2	1	-	-	93 750	3 750
Gas Safety (Installation and Use) Regs 1984	2	1	1	-	-	-	1 000	1 000
Gas Safety (Installation and Use) Regs 1994	139	100	33	6	-	-	65 385	654
Gas Safety (Installation and Use) Regs 1998	67	50	17	-	-	-	43 770	875
Health and Safety (First Aid) Regs 1981	5	5	-	-	-	-	6 800	1 360
Ionising Radiations Regs 1985	26	21	5	-	-	-	157 000	7 476
Lifting Operations and Lifting Equipment Regs 1998	9	9	-	-	-	-	21 400	2 378
Management and Administration of Safety and Health at Mines Regs 1993	44	24	-	-	-	-	15 250	635
Management of Health and Safety at Work Regs 1992	124	80	35	8	-	1	260 652	3 258
Manual Handling Operations Regs 1992	7	5	1	-	-	1	3 500	700

**Table A1.29 (cont)** Proceedings instituted by HSE under specific regulations by result 1999/2000p

<b>REGULATIONS</b>	<i>Informations laid</i>	<i>Convictions</i>	<i>Withdrawn/ Not taken (a)</i>	<i>Dismissed/ not guilty</i>	<i>Not proven (Scotland)</i>	<i>Adjournment (b)</i>	<i>Total fines</i>	<i>Average fines per conviction</i>
Notification of Cooling Towers and Evaporative Condensers Regs 1992	5	5	-	-	-	-	5 550	1 110
Personal Protective Equipment at Work Regs 1992	11	9	2	-	-	-	15 900	1 767
Power Presses Regs 1965	11	11	-	-	-	-	2 6625	2 420
Pressure Systems and Transportable Gas Containers Regs 1989	8	6	2	-	-	-	13 500	2 250
Prevention of Accidents to Children in Agriculture Regs 1998	3	3	-	-	-	-	400	133
Provision and Use of Work Equipment Regs 1992	87	72	8	5	2	-	220 825	3 067
Provision and Use of Work Equipment Regs 1998	134	120	11	1	-	2	197 407	1 645
Railways (Safety Critical Work) Regs 1994	1	1	-	-	-	-	3 000	3 000
Reporting of Injuries, Diseases and Dangerous Occurrences Regs 1985	1	1	-	-	-	-	500	500
Reporting of Injuries, Diseases and Dangerous Occurrences Regs 1995	38	34	4	-	-	-	42 951	1 263
Supply of Machinery (Safety) Regs 1992	8	6	1	-	-	1	11 000	1 833
Woodworking Machines Regs 1974	2	2	-	-	-	-	1 000	500
Workplace (Health, Safety and Welfare) Regs 1992	44	35	8	-	-	1	389 801	11 137
<b>All Proceedings (c)</b>	<b>2 253</b>	<b>1 602</b>	<b>313</b>	<b>69</b>	<b>3</b>	<b>163</b>	<b>10 803 842</b>	<b>6 744</b>

(a) Includes withdrawn or alternative informations.

(b) Figures include 81 informations which relate to connected cases under pesticides legislation which are awaiting trial. Figures also include 77 informations adjourned sine die during prosecutions following a single incident involving multiple breaches of asbestos regulations.

(c) Includes other regulations and acts.



**ANNEX 2: OCCUPATIONAL HEALTH TABLES**

**Table A2.1** Prescribed industrial diseases; lung diseases in England, Wales and Scotland by disease, 1997 - 1999

Disease	Disease No	ENGLAND			WALES		
		1997	1998	1999	1997	1998	1999
Pneumoconiosis	D1						
<i>coal</i>		145	441	308	52	35	46
<i>asbestos</i>		269 (2)	225 (2)	314 (6)	16	34	16
<i>other</i>		30 (1)	47 (2)	75 (3)	7 (1)	15	5
Diffuse mesothelioma	D3	475 (12)	500 (26)	522 (21)	17	19	21
Occupational asthma	D7	223 (62)	175 (52)	142 (33)	31 (8)	23 (3)	24 (6)
Lung cancer with asbestosis/pleural thickening	D8	21	36 (1)	29 (1)	1	4	6
Pleural thickening	D9	130	187 (3)	212 (4)	12	19 (1)	21
Chronic bronchitis and/or emphysema	D12	1 938	2 312	1 095	765	743	206
Others		5 (1)	7 (1)	16 (2)	1	2	2
<b>Total</b>		<b>3 236</b>	<b>3 930</b>	<b>2 713</b>	<b>902</b>	<b>894</b>	<b>347</b>

**Notes:**

Figures for Great Britain include a small number of cases not included in England, Wales and Scotland breakdowns. These individuals developed industrial diseases from employment in Great Britain, but are currently residing overseas.

Figures are for calendar years.

Bracketed figures are for females. Where not shown, all cases are male.

**Table A2.2** Prescribed industrial diseases; non-lung diseases in England, Wales and Scotland by disease, 1996/97 - 1998/99 (a)

Disease	Disease No	ENGLAND			WALES		
		1996/97	1997/98	1998/99	1996/97	1997/98	1998/99
Musculoskeletal (b)	A4-A8	648 (426)	509 (344)	406 (261)	37 (27)	27 (15)	26 (16)
Occupational deafness	A10	297 (n/a)	176 (6)	250 (5)	23 (n/a)	26	20
Vibration white finger	A11	2 309 (15)	2 135 (11)	2 618 (5)	194 (2)	190	129 (1)
Carpal tunnel syndrome	A12	244 (43)	312 (38)	371 (35)	20 (3)	25 (3)	19
Allergic rhinitis	D4	309 (18)	163 (7)	121 (10)	41 (5)	30 (2)	11 (1)
Dermatitis	D5	276 (69)	199 (49)	172 (45)	21 (8)	34 (7)	24 (4)
Others		71 (10)	65 (14)	68 (8)	5	7	4
<b>Total</b>		<b>4 154</b>	<b>3 559</b>	<b>4 006</b>	<b>341</b>	<b>339</b>	<b>233</b>

**Notes:**

Figures for Great Britain include a small number of cases not included in England, Wales and Scotland breakdowns. These individuals developed industrial diseases from employment in Great Britain, but are currently residing overseas.

Bracketed figures are for females. Where not shown, all cases are male.

(a) Figures are for years ending 30 September, except for occupational deafness where calendar years 1997-1999 are shown.

(b) Mainly upper-limb disorders

n/a Not available

SCOTLAND			GREAT BRITAIN		
1997	1998	1999	1997	1998	1999
6	9	19	204	485	373
54	56	69 (2)	344 (3)	316 (2)	407 (8)
8	7	8	45 (2)	69 (2)	88 (3)
53 (5)	64 (3)	70 (1)	553 (17)	590 (29)	620 (22)
43 (10)	24 (11)	30 (7)	298 (80)	222 (66)	196 (46)
3	1	3	26	42 (1)	38 (1)
13 (1)	20	7	156 (1)	227 (4)	242 (4)
324	356	145	3 030	3 423	1 451
-	-	4	6 (1)	9 (1)	22 (2)
<b>504</b>	<b>537</b>	<b>355</b>	<b>4 662</b>	<b>5 383</b>	<b>3 437</b>

Source: DSS

SCOTLAND			GREAT BRITAIN		
1996/97	1997/98	1998/99	1996/97	1997/98	1998/99
79 (28)	64 (18)	33 (13)	764 (481)	600 (377)	465 (290)
93 (n/a)	55 (2)	46 (1)	413 (n/a)	258 (8)	316 (6)
785 (7)	707 (2)	408 (2)	3 288 (24)	3 033 (13)	3 155 (8)
33 (6)	63 (13)	88 (37)	297 (52)	400 (54)	478 (72)
2 (2)	5	3 (1)	352 (25)	199 (9)	135 (12)
39 (14)	37 (16)	24 (8)	336 (91)	271 (72)	220 (57)
9 (1)	11 (1)	5	85 (11)	83 (15)	77 (8)
<b>1 040</b>	<b>942</b>	<b>607</b>	<b>5 535</b>	<b>4 844</b>	<b>4 846</b>

Source: DSS

**Table A2.3** Prescribed industrial diseases other than lung diseases (a):  
new cases of assessed disablement by disease 1993/94 to 1998/99 (b)

Conditions due to physical agents (physical cause)	Disease No	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
Radiation effects	A1	-	4	2 (1)	6 (1)	1	3 (1)
Heat cataract	A2	5	8	2	3	3	4
Decompression sickness	A3	1	2	10	2	-	2
Cramp of arm or forearm	A4	135 (103)	116 (94)	124 (98)	98 (76)	81 (62)	59 (44)
Beat hand	A5	18 (1)	11 (1)	9 (2)	11 (1)	6 (1)	2
Beat knee	A6	197 (3)	161 (7)	164 (2)	129 (2)	86 (1)	50
Beat elbow	A7	42 (2)	33 (4)	26 (1)	13	12 (1)	10
Inflammation of tendons of the hand, forearm or associated tendon sheaths (Tenosynovitis)	A8	800 (621)	787 (630)	548 (416)	513 (402)	415 (312)	344 (246)
Miner's nystagmus	A9	1	-	-	1	-	-
Occupational deafness (c)	A10	882 (n/a)	763 (n/a)	531 (n/a)	413 (n/a)	258 (8)	316 (6)
Vibration white finger	A11	1 425 (14)	1 747 (11)	3 016 (11)	3 288 (24)	3 033 (13)	3 155 (8)
Carpal tunnel syndrome (d)	A12	267 (51)	277 (44)	265 (62)	297 (52)	400 (54)	478 (72)
<b>Conditions due to biological agents (caused by animal, plant or other living agent)</b>							
Anthrax	B1	-	1 (1)	-	-	-	-
Infection by leptospira	B3	1	-	-	-	-	-
Tuberculosis	B5	10 (5)	9 (7)	10 (9)	6 (4)	11 (6)	4 (3)
Brucellosis	B7	1	2	1	3	1	-
Viral hepatitis	B8	3 (2)	3 (1)	4 (3)	4 (1)	2	3 (2)
Infection by streptococcus suis	B9	-	-	-	-	-	1
Avian chlamydiosis	B10a	-	-	-	-	5 (2)	1 (1)
Ovine chlamydiosis	B10b	-	-	-	-	-	-
Q fever	B11	1	2	1	-	-	-
Orf	B12	-	-	-	-	-	-
<b>Conditions due to chemical agents</b>							
Poisoning by lead or compounds of lead	C1	3	3 (1)	1	-	4	1
Poisoning by manganese	C2	1	-	-	-	-	-
Poisoning by phosphorus or compound of phosphorus	C3	5 (2)	3	3	3	5	4
Poisoning by arsenic	C4	-	-	-	-	-	-
Poisoning by mercury or compound of mercury	C5	1 (1)	-	1	1	-	-
Poisoning by carbon disulphide	C6	-	-	1	-	-	-
Poisoning by benzene or a homologue of benzene	C7	3	2 (1)	3	1	1	4 (1)
Poisoning by nitro-, amino-, or chloro-benzene or homologues	C8	1	1 (1)	-	1	-	-
Poisoning by dinitrophenol	C9	-	-	-	-	-	-
Poisoning by tetrachlorethane	C10	..	..	-	1	-	-
Poisoning by diethylene dioxide (dioxan)	C11	-	-	1	-	-	-
Poisoning by chlorinated naphthalene	C13	-	-	-	-	-	-
Poisoning by nickel carbonyl	C14	1	-	-	-	-	-
Poisoning by acrylamide monomer	C19	-	-	-	-	-	-
Dystrophy of the cornea (including ulceration of the corneal surface) of the eye	C20	1	-	-	-	1 (1)	-
Localised new growth of skin	C21a	1	2 (1)	2	4	3	2
Squamous celled carcinoma of skin	C21b	7	2	-	1	3	1
Carcinoma of the mucous membrane of the nose or associated air passages	C22a	-	-	-	-	1 (1)	-
Papilloma of the bladder	C23	32 (3)	19 (1)	26 (3)	40 (5)	30 (1)	39
Angiosarcoma of the liver	C24a	1	-	-	-	-	-
Occupational vitiligo	C25	-	-	3	1	3 (2)	-
Liver/kidney damage due to carbon tetrachloride	C26	-	-	2 (1)	-	-	-
Liver/kidney damage due to trichloromethane	C27	-	-	1	-	-	-
Central nervous system dysfunction and associated gastro-intestinal disorders due to exposure to chloromethane	C28	-	-	-	-	2 (1)	-
Peripheral neuropathy due to exposure to n-hexane or methyl n-butyl keytone	C29	-	1	1	1	-	-
Chrome dermatitis or ulceration (c)	C30	..	..	-	3	4	5
<b>Miscellaneous conditions</b>							
Allergic rhinitis (e)	D4	528 (31)	589 (35)	720 (39)	352 (25)	199 (9)	135 (12)
Dermatitis	D5	392 (117)	368 (106)	328 (79)	336 (91)	271 (72)	220 (57)
Adeno-carcinoma of nasal cavity/nasal carcinoma	D6	4	5	4	3	3 (1)	3
<b>Total</b>		<b>4770</b>	<b>4921</b>	<b>5810</b>	<b>5535</b>	<b>4844</b>	<b>4846</b>

Source: DSS

**Notes:**

Bracketed figures show the number of females. Where not shown, all cases are male.

(a) See Table A2.5. (b) Years starting October 1.

(c) Figures for occupational deafness are based on calendar years, that is, Jan-Dec 1994 to Jan-Dec 1999. For this disease, only cases assessed at 20% or more disablement are included.

(d) The following disease was prescribed after 1 October 1993:

<u>Disease No</u>	<u>Date prescribed</u>
C30	24 March 1996

n/a Not available

(e) Before 24 March 1996, disease D4 was defined as inflammation or ulceration of the upper respiratory tract or mouth.

.. Not applicable

**Table A2.4** Prescribed industrial diseases other than lung diseases (a):  
new cases of assessed disablement by award status 1997/98 to 1998/99 (b)

Conditions due to physical agents (physical cause)	Disease No	Claims assessed in 1997/98		Claims assessed in 1998/99	
		1-13% (No benefit)	14%+ (Benefit paid)	1-13% (No benefit)	14%+ (Benefit paid)
Radiation effects	A1	-	1	1	2 (1)
Heat cataract	A2	1	2	2	2
Decompression sickness	A3	-	-	-	2
Cramp of hand or forearm	A4	48 (39)	33 (23)	38 (28)	21 (16)
Beat hand	A5	2	4 (1)	2	-
Beat knee	A6	76 (1)	10	43	7
Beat elbow	A7	9	3 (1)	8	2
Inflammation of tendons of the hand, forearm or associated tendon sheaths (Tenosynovitis)	A8	228 (164)	187 (148)	186 (122)	158 (124)
Miner's mystagmus	A9	-	-	-	-
Occupational deafness (c)	A10	-	258 (8)	-	316 (6)
Vibration white finger	A11	2 628 (12)	405 (1)	2 910 (6)	245 (2)
Carpal tunnel syndrome	A12	307 (32)	93 (22)	366 (39)	112 (33)
<b>Conditions due to biological agents (caused by animal, plant or other living agent)</b>					
Anthrax	B1	-	-	-	-
Infection by leptospira	B3	-	-	-	-
Tuberculosis	B5	-	11 (6)	-	4 (3)
Brucellosis	B7	-	1	-	-
Viral hepatitis	B8	-	2	1	2 (2)
Infection by streptococcus suis	B9	-	-	-	1
Avian chlamydiosis	B10a	2 (1)	3 (1)	-	1 (1)
Ovine chlamydiosis	B10b	-	-	-	-
Q fever	B11	-	-	-	-
Orf	B12	-	-	-	-
<b>Conditions due to chemical agents</b>					
Poisoning by lead or compounds of lead	C1	1	3	-	1
Poisoning by manganese	C2	-	-	-	-
Poisoning by phosphorus or compound of phosphorus	C3	1	4	1	3
Poisoning by arsenic	C4	-	-	-	-
Poisoning by mercury or compound of mercury	C5	-	-	-	-
Poisoning by carbon disulphide	C6	-	-	-	-
Poisoning by benzene or a homologue of benzene	C7	-	1	2 (1)	2
Poisoning by nitro-, amino-, or chloro-benzene or homologues	C8	-	-	-	-
Poisoning by dinitrophenol	C9	-	-	-	-
Poisoning by tetrachlorethane	C10	-	-	-	-
Poisoning by diethylene dioxide (dioxan)	C11	-	-	-	-
Poisoning by chlorinated naphthalene	C13	-	-	-	-
Poisoning by nickel carbonyl	C14	-	-	-	-
Poisoning by acrylamide monomer	C19	-	-	-	-
Dystrophy of the cornea (including ulceration of the corneal surface) of the eye	C20	1 (1)	-	-	-
Localised new growth of skin	C21a	1	2	2	-
Squamous celled carcinoma of skin	C21b	2 (1)	1	-	1
Carcinoma of the mucous membrane of the nose or associated air passages	C22a	-	1 (1)	-	-
Papilloma of the bladder	C23	5	25 (1)	7	32
Angiosarcoma of the liver	C24a	-	-	-	-
Occupational vitiligo	C25	-	3 (2)	-	-
Liver/kidney damage due to carbon tetrachloride	C26	-	-	-	-
Liver/kidney damage due to trichloromethane	C27	-	-	-	-
Central nervous system dysfunction and associated gastro-intestinal disorders due to exposure to chloromethane	C28	-	2 (1)	-	-
Peripheral neuropathy due to exposure to n-hexane or methyl n-butyl keytone	C29	-	-	-	-
Chrome dematitis or ulceration (d)	C30	2	2	5	-
<b>Miscellaneous conditions</b>					
Allergic rhinitis (e)	D4	187 (8)	12 (1)	124 (9)	11 (3)
Dermatitis	D5	204 (55)	67 (17)	162 (42)	58 (15)
Adeno-carcinoma of nasal cavity/nasal carcinoma	D6	1 (1)	2	-	3
<b>Total</b>		<b>3 706</b>	<b>1 138</b>	<b>3 860</b>	<b>986</b>

Source: DSS

**Note:**  
See footnotes to Table A2.3

**Table A2.5** Prescribed industrial diseases of the lungs and new cases of assessed disablement by disease 1989-99

Disease	Disease No	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farmer's lung	B6	13	7	5 (1)	5	3	9 (1)	6	6	4 (1)	4 (1)	13 (1)
Poisoning by nitrous fumes	C15	-	-	-	1	-	-	-	1	-	-	-
Beryllium poisoning	C17	-	2	1	-	1	-	-	-	-	-	-
Cadmium poisoning	C18	-	2	5	4	1	-	-	-	-	-	-
Primary carcinoma of bronchus or lung in nickel workers	C22b	-	1	2	1	-	-	-	-	-	-	-
Pneumoconiosis (a)	D1	661	709 (7)	751 (8)	765 (10)	853 (17)	1006 (11)	860 (14)	841 (8)	593 (5)	870 (4)	868 (11)
Byssinosis (a)	D2	15	18 (11)	7 (2)	4 (1)	5 (3)	2 (1)	6 (1)	4 (2)	1	2	2 (1)
Diffuse mesothelioma	D3	441	462 (14)	519 (21)	551 (13)	608 (19)	583 (14)	685 (26)	642 (16)	553 (17)	590 (29)	620 (22)
Occupational asthma (b)	D7	220	216 (49)	293 (57)	553 (115)	510 (120)	506 (96)	514 (126)	410 (97)	298 (80)	222 (66)	196 (46)
Primary carcinoma of the lung with accompanying evidence of one or both of (1) Asbestosis (2) Diffuse pleural thickening (d,f)	D8	54	58	55 (1)	54	72 (2)	77 (2)	55 (2)	51 (1)	26	42 (1)	38 (1)
Pleural thickening (f)	D9	125	146 (1)	149	160 (3)	172 (2)	196 (3)	188 (4)	168 (1)	156 (1)	227 (4)	242 (4)
Primary carcinoma of the lung (c,e)	D10	4	5	4	5 (1)	2	-	-	2	1	1	-
Primary carcinoma of the lung with accompanying silicosis (c)	D11	..	..	..	..	1	-	4	-	-	2	7
Chronic bronchitis and/or emphysema (c,g)	D12	..	..	..	..	1 560	2 594	268	269	3 030	3 423	1 451
<b>Total</b>		<b>1 533</b>	<b>1 626</b>	<b>1 791</b>	<b>2 103</b>	<b>3 788</b>	<b>4 973</b>	<b>2 586</b>	<b>2 394</b>	<b>4 662</b>	<b>5 383</b>	<b>3 437</b>

**Notes:**

(a) See also Tables A2.6 and A2.7

(b) See also Table A2.8

(c) The following diseases were prescribed after 1 January 1989:

**Disease No** **Date prescribed**

D11 19 April 1993

D12 13 September 1993

(d) Previously classified as 'Lung cancer in asbestos workers'. New classification used from 19 April 1993.

(e) Previously classified as 'Lung cancer'.

(f) From 9 April 1997, the definitions of these diseases were changed to admit unilateral diffuse pleural thickening. Previously this was required to be bilateral.

(g) From 9 April 1997, changes to the definitions of this disease allowed more claimants to qualify. The large number of assessed cases in 1997 results from this change.

.. Not applicable.

Figures in brackets show the number of females (data available from 1990 only). Where no figure is given, all cases were male.

Source: DSS

**Table A2.6** Pneumoconiosis under Industrial Injuries and PBMDB schemes: new cases assessed under the industrial injuries scheme (a) by industry to which the disease was attributed (b) 1989-99

Industrial Injuries Scheme Cases	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Pneumoconiosis</b>											
Coal mining	339	344	379	383	395	583	384 (1)	323	204	485	373
Other mining and quarrying:											
Slate	8	5	3	2	7	-	4	6	1	3	3
Other - except refractories	3	9	2	2	5	6	5	3	4	4	11
Asbestos (c)	268	306 (7)	330 (7)	354 (9)	418 (16)	376 (7)	427 (11)	479 (6)	344 (3)	316 (2)	407 (8)
Foundry workers:											
Iron foundry workers	10	9	11	5	6	9	6	3	2	2	8
Steel foundry workers	6	4	1	2	2	5	1	5	2	5	6 (1)
Non-ferrous foundry workers	-	3	-	-	-	-	-	1	1	1	-
Steel dressers	2	-	2	2	2	2	2	3	1	-	1
Pottery manufacture	9	6	8 (1)	4 (1)	6 (1)	8 (3)	7 (2)	8 (2)	3 (2)	11 (2)	6 (1)
Refractories (d)	4	7	-	2	-	2	4	2	12	18	21
Other attributable industries	12	16	15	9	12	15 (1)	20	8	19	25	32 (1)
<b>Total</b>	<b>661</b>	<b>709</b>	<b>751</b>	<b>765</b>	<b>853</b>	<b>1 006</b>	<b>860</b>	<b>841</b>	<b>593</b>	<b>870</b>	<b>868</b>
PBMDB scheme cases (e)											
Pneumoconiosis - asbestosis	**	**	7	10	8	18	13	16	8	9	6
Pneumoconiosis - other	**	**	13	10	10	13	13	11	12	13	6
<b>Total</b>	<b>26</b>	<b>24</b>	<b>20</b>	<b>20</b>	<b>18</b>	<b>31</b>	<b>26</b>	<b>27</b>	<b>20</b>	<b>22</b>	<b>12</b>
<b>Overall total: Pneumoconiosis</b>	<b>687</b>	<b>733</b>	<b>771</b>	<b>785</b>	<b>871</b>	<b>1 037</b>	<b>886</b>	<b>868</b>	<b>613</b>	<b>892</b>	<b>880</b>

**Notes:**

(a) Previously known as Pneumoconiosis Medical Panels.

(b) The industry to which the disease is attributable is in some cases defined occupationally.

(c) Cases where mesothelioma was also diagnosed are excluded, and shown in Table A2.5.

(d) Including the mining, quarrying and processing of refractory material.

(e) The figures of Pneumoconiosis, Byssinosis and Miscellaneous Diseases Benefits scheme cases refer to years ending 30 September. Byssinosis cases are not shown since there are very few.

\*\* Not presently available.

n/a Not available.

Figures in brackets show the number of females (data available from 1990 only). Where no figure is given, all cases were male.

Source: DSS

**Table A2.7** Pneumoconiosis: new Industrial Injuries Scheme cases by age and percentage disablement (a) 1996-99

**COAL AGENT**

*Percentage disablement assessed*

Age	10 or less	20-40	50-70	80-100	Total
<b>1996</b>					
Under 45	1	1	-	-	2
45-64	15	14	-	-	29
65+	124	140	23	5	292
<b>Total</b>	<b>140</b>	<b>155</b>	<b>23</b>	<b>5</b>	<b>323</b>
<b>1997</b>					
Under 45	2	-	-	-	2
45-64	12	18	1	-	31
65+	66	92	8	5	171
<b>Total</b>	<b>80</b>	<b>110</b>	<b>9</b>	<b>5</b>	<b>204</b>
<b>1998</b>					
Under 45	1	-	-	-	1
45-64	46	49	2	1	98
65+	125	254	4	3	386
<b>Total</b>	<b>172</b>	<b>303</b>	<b>6</b>	<b>4</b>	<b>485</b>
<b>1999</b>					
Under 45	4	-	-	-	4
45-64	39	33	1	-	73
65+	104	176	12	4	296
<b>Total</b>	<b>147</b>	<b>209</b>	<b>13</b>	<b>4</b>	<b>373</b>

**OTHER AGENTS**

*Percentage disablement assessed*

Age	10 or less	20-40	50-70	80-100	Total
<b>1996</b>					
Under 45	-	-	-	-	-
45-64	3	11	2	1	17
65+	6	10	6	-	22
<b>Total</b>	<b>9</b>	<b>21</b>	<b>8</b>	<b>1</b>	<b>39</b>
<b>1997</b>					
Under 45	2	1	-	-	3
45-64	3	5	1	-	9
65+	5	21	5	2	33
<b>Total</b>	<b>10</b>	<b>27</b>	<b>6</b>	<b>2</b>	<b>45</b>
<b>1998</b>					
Under 45	-	-	-	-	-
45-64	9	12	-	-	21
65+	11	31	5	1	48
<b>Total</b>	<b>20</b>	<b>43</b>	<b>5</b>	<b>1</b>	<b>69</b>
<b>1999</b>					
Under 45	1	-	-	-	1
45-64	9	19	1	1	30
65+	12	35	6	4	57
<b>Total</b>	<b>22</b>	<b>54</b>	<b>7</b>	<b>5</b>	<b>88</b>

**Notes:**

- (a) Under a special provision a person found to be suffering from pneumoconiosis qualifies for a pension at the 10% rate even if he or she has no discernable respiratory disablement arising from the disease.
- (b) Cases where mesothelioma was also diagnosed are excluded, and shown in Table A2.5.

**ASBESTOS AGENT (b)**

*Percentage disablement assessed*

Age	10 or less	20-40	50-70	80-100	Total
<b>1996</b>					
Under 45	-	-	-	-	-
45-64	53	105	5	8	171
65+	53	216	21	18	308
<b>Total</b>	<b>106</b>	<b>321</b>	<b>26</b>	<b>26</b>	<b>479</b>
<b>1997</b>					
Under 45	-	1	-	-	1
45-64	26	80	5	6	117
65+	38	163	7	18	226
<b>Total</b>	<b>64</b>	<b>244</b>	<b>12</b>	<b>24</b>	<b>344</b>
<b>1998</b>					
Under 45	1	-	-	-	1
45-64	19	70	3	3	95
65+	35	159	13	13	220
<b>Total</b>	<b>55</b>	<b>229</b>	<b>16</b>	<b>16</b>	<b>316</b>
<b>1999</b>					
Under 45	-	1	-	-	1
45-64	26	93	5	9	133
65+	35	210	15	13	273
<b>Total</b>	<b>61</b>	<b>304</b>	<b>20</b>	<b>22</b>	<b>407</b>

**TOTAL**

*Percentage disablement assessed*

Age	10 or less	20-40	50-70	80-100	Total
<b>1996</b>					
Under 45	-	1	-	-	1
45-64	72	130	7	9	218
65+	183	366	50	23	622
<b>Total</b>	<b>255</b>	<b>497</b>	<b>57</b>	<b>32</b>	<b>841</b>
<b>1997</b>					
Under 45	4	2	-	-	6
45-64	41	103	7	6	157
65+	109	276	20	25	430
<b>Total</b>	<b>154</b>	<b>381</b>	<b>27</b>	<b>31</b>	<b>593</b>
<b>1998</b>					
Under 45	2	-	-	-	2
45-64	74	131	5	4	214
65+	171	444	22	17	654
<b>Total</b>	<b>247</b>	<b>575</b>	<b>27</b>	<b>21</b>	<b>870</b>
<b>1999</b>					
Under 45	5	1	-	-	6
45-64	74	145	7	10	236
65+	151	421	33	21	626
<b>Total</b>	<b>230</b>	<b>567</b>	<b>40</b>	<b>31</b>	<b>868</b>

Source: DSS

**Table A2.8** Occupational asthma: new cases of assessed disablement, by causative agent 1993-99

Agent (a)	1993	1994	1995	1996	1997	1998	1999
1 Isocyanates	108 (15)	121 (6)	98 (11)	83 (7)	49 (7)	26 (3)	28
2 Platinum salts	1	3	3	2	3	7 (1)	9 (2)
3 Hardening agents	47 (4)	49 (9)	44 (5)	25 (6)	16 (1)	17	9 (1)
4 Soldering flux	34 (16)	28 (12)	42 (23)	35 (17)	25 (13)	30 (16)	14 (6)
5 Proteolytic enzymes	6	2	1	2	2 (1)	7 (3)	14 (1)
6 Animals/insects	13 (8)	4 (2)	12 (6)	10 (4)	9 (4)	3	1
7 Flour/grain	66 (14)	59 (9)	78 (19)	57 (15)	47 (11)	24 (2)	23 (3)
<b>Total 1-7</b>	<b>275 (57)</b>	<b>266 (38)</b>	<b>278 (64)</b>	<b>214 (49)</b>	<b>151 (37)</b>	<b>114 (25)</b>	<b>98 (13)</b>
<b>Agent (b)</b>							
8 Antibiotics	1	4	1 (1)	2 (1)	3 (1)	1 (1)	4 (1)
9 Cimetidine	-	1 (1)	-	-	-	-	-
10 Wood dusts	43 (1)	31 (1)	39 (2)	37 (2)	25 (1)	9 (2)	12 (1)
11 Ispaghula	-	-	1	-	1	-	1
12 Castor bean dust	1	-	-	-	-	-	-
13 Ipecacuanha	1	-	-	-	-	-	-
14 Azodicarbonamide	4	4	3	-	-	1	-
<b>Total 8-14</b>	<b>50 (1)</b>	<b>40 (2)</b>	<b>44 (3)</b>	<b>39 (3)</b>	<b>29 (2)</b>	<b>11 (3)</b>	<b>17 (2)</b>
<b>Agent (c)</b>							
15 Animals/insects (larval forms)	1	-	1 (1)	1	3 (2)	5 (2)	2 (1)
16 Glutaraldehyde	13 (8)	15 (12)	28 (24)	14 (10)	13 (8)	15 (12)	11 (11)
17 Persulphate salts and henna	1	-	1 (1)	-	-	1 (1)	1 (1)
18 Crustaceans	6 (6)	6 (4)	2	7 (7)	7 (7)	3 (1)	6 (3)
19 Reactive dyes	4	2	8 (2)	6	4 (1)	4	4 (1)
20 Soya bean dust	-	1	2	1	2	1	-
21 Tea dust	1	2 (1)	2 (2)	2	3	1	2 (2)
22 Green coffee bean dust	-	1	-	-	-	-	-
23 Fumes from stainless steel welding	19 (1)	24	31	26	25	14 (1)	11
24 Open category	140 (46)	149 (39)	117 (29)	100 (28)	61 (24)	53 (19)	44 (12)
<b>Total 15-24</b>	<b>185 (61)</b>	<b>200 (56)</b>	<b>192 (59)</b>	<b>157 (45)</b>	<b>118 (42)</b>	<b>97 (36)</b>	<b>81 (31)</b>
<b>Total Agents</b>	<b>510 (119)</b>	<b>506 (96)</b>	<b>514 (126)</b>	<b>410 (97)</b>	<b>298 (81)</b>	<b>222 (64)</b>	<b>196 (46)</b>

**Notes:**

(a) Agents prescribed from the start of the prescription.

(b) Agents added to prescribed list with effect from 1 September 1986.

(c) Agents added to prescribed list with effect from 26 September 1991.

Figures in brackets show the number of females. Where no figure is given, all cases were male.

Source: DSS

**Table A2.9 Occupational asthma: new cases of assessed disablement, by percentage disability 1996-99**

	1996		1997		1998		1999	
	14% or more	of which 50%+	14% or more	of which 50%+	14% or more	of which 50%+	14% or more	of which 50%+
<b>Agent (a)</b>								
1 Isocyanates	74	3	37	3	22	-	25	1
2 Platinum salts	1	-	2	-	5	-	5	-
3 Hardening agents	22	-	13	1	16	1	5	-
4 Soldering flux	31	4	23	2	23	-	12	-
5 Proteolytic enzymes	2	-	2	-	7	-	10	-
6 Animals/insects	8	-	9	-	3	1	1	-
7 Flour/grain	55	1	39	2	24	1	19	2
<b>Total 1-7</b>	<b>193</b>	<b>8</b>	<b>125</b>	<b>8</b>	<b>100</b>	<b>3</b>	<b>77</b>	<b>3</b>
<b>Agent (b)</b>								
8 Antibiotics	2	-	2	-	1	-	2	-
9 Cimetidine	-	-	-	-	-	-	-	-
10 Wood dusts	32	-	23	2	8	1	9	-
11 Ispaghula	-	-	1	-	-	-	1	-
12 Castor bean dust	-	-	-	-	-	-	-	-
13 Ipecacuanha	-	-	-	-	-	-	-	-
14 Azodicarbonamide	-	-	-	-	1	-	-	-
<b>Total 8-14</b>	<b>34</b>	<b>-</b>	<b>26</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>12</b>	<b>-</b>
<b>Total 1-14</b>	<b>227</b>	<b>8</b>	<b>151</b>	<b>10</b>	<b>110</b>	<b>4</b>	<b>89</b>	<b>3</b>
<b>Agent (c)</b>								
15 Animals/insects (larval forms)	1	-	2	-	4	-	1	-
16 Glutaraldehyde	12	-	11	2	14	-	9	-
17 Persulphate salts and henna	-	-	-	-	1	-	1	-
18 Crustaceans	7	-	7	-	3	-	5	-
19 Reactive dyes	6	1	4	-	4	1	4	-
20 Soya bean dust	1	-	2	-	1	-	-	-
21 Tea dust	2	-	2	-	1	-	2	-
22 Green coffee bean dust	-	-	-	-	-	-	-	-
23 Fumes from stainless steel welding	23	2	23	3	12	-	8	1
24 Open category	86	2	57	3	44	4	41	2
<b>Total 15-24</b>	<b>138</b>	<b>5</b>	<b>108</b>	<b>8</b>	<b>84</b>	<b>5</b>	<b>71</b>	<b>3</b>
<b>TOTAL AGENTS</b>	<b>365</b>	<b>13</b>	<b>259</b>	<b>18</b>	<b>194</b>	<b>9</b>	<b>160</b>	<b>6</b>
<b>Percentage of all cases</b>								
<b>Agents 1 to 14</b>	90%	3%	84%	6%	88%	3%	77%	3%
<b>Agents 15 to 24</b>	88%	3%	92%	7%	87%	5%	88%	4%
<b>ALL AGENTS 1 TO 24</b>	<b>89%</b>	<b>3%</b>	<b>87%</b>	<b>6%</b>	<b>87%</b>	<b>4%</b>	<b>82%</b>	<b>3%</b>

**Notes:**

See footnotes to Table A2.8

Source: DSS

**Table A2.10 Prescribed diseases: average rates of new assessments in 1998-1999 per 100 000 employees in each industry**

Industry	SIC92 section	Asthma	Dermatitis	Musculoskeletal	Occupational deafness	Vibration white finger	Asbestosis	Mesothelioma
Agriculture, forestry and fishing	<b>A, B</b>	2.6	0.3	1.2	0.8	2.8	-	0.1
Extraction, energy and water supply	<b>C, E</b>	5.0	9.3	11.2	8.1	608.9	4.3	4.6
Manufacturing	<b>D</b>	3.3	2.7	4.6	4.1	7.2	2.0	3.4
Construction	<b>F</b>	0.6	2.1	3.0	2.6	12.8	8.9	14.1
Distribution, hotels and restaurants	<b>G, H</b>	0.3	0.4	0.8	0.1	0.2	0.1	0.6
Transport and communication	<b>I</b>	0.2	0.7	1.6	0.5	1.0	1.0	1.9
Banking finance and insurance	<b>J, K</b>	0.1	0.4	2.4	0.3	0.6	0.6	3.2
Public administration, education and health	<b>L, M, N</b>	0.4	0.4	1.4	0.1	0.2	0.3	0.4
Other services	<b>O, P, Q</b>	0.3	1.3	1.1	0.1	0.4	0.1	0.5

**Notes:**

Rates shown in light type are based on 10 or fewer assessed cases.

The rates shown in this table are approximations to the true incidence rates of assessed cases in the industries shown, because of the uncertainties about the correct denominators (populations at risk). Information collected by DSS for statistical purposes does not include whether claimants are still employed in the industry which caused the disease, or how long ago they were so employed (which might be many years previously). 1998 and 1999 Short Term Employment Survey figures have been used as denominators for asthma, dermatitis and musculoskeletal disorders, on the assumption that in most cases the interval between the start of the causative working conditions and the assessment of the diseases will have been relatively short. 1988 and 1989 Short Term Employment Survey figures were used for occupational deafness and vibration white finger, and 1961 census figures were used for asbestosis and mesothelioma, because of the longer intervals likely with these diseases. The rates for extraction, energy and water supply are particularly subject to uncertainty of the denominators because of the marked contraction of the coal mining industry in recent years. These rates should therefore be treated with reserve.

For vibration white finger, where most cases are in coal miners, claims have almost certainly been inflated by civil litigation over this disease, leading to an artificially high rate.

**Table A2.11** Cases of occupational disease reported under RIDDOR, 1990/91-1999/2000p (a)

Disease	RIDDOR 95 disease number	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00p	RIDDOR 1985 disease number	Corresponding DSS PD number
Skin disease (radiation)	1	2	1	2	5	7	5	1	1	2	1	6	part A1
Bone cancer	2	-	-	-	-	-	-	2	-	-	-	20	part A1
Blood dyscrasia	3	-	3	3	-	1	1	4	-	1	5	21	part A1
Cataract	4	2	-	-	-	1	-	-	-	2	-	22	A1/A2
Decompression sickness	5	2	42	18	15	32	56	48	19	13	6	23	part A3
Barotrauma	6	-	-	1	-	1	-	1	2	1	-	24	part A3
Cramp of hand/forearm	8	..	..	..	..	..	..	199	228	192	180	-	A4
Beat hand	9	..	..	..	..	..	..	-	3	3	3	-	A5
Beat knee	10	..	..	..	..	..	..	12	10	13	8	-	A6
Beat elbow	11	..	..	..	..	..	..	29	29	36	25	-	A7
Tenosynovitis hand/forearm	12	..	..	..	..	..	..	408	475	395	394	-	A8
Carpal tunnel syndrome	13	..	..	..	..	..	..	84	99	115	207	-	A12
Hand-arm vibration syndrome (b)	14	120	131	137	113	331	147	236	258	621	845	28	A11
Anthrax	15	-	1	-	-	-	-	-	-	-	-	19	B1
Brucellosis	16	..	..	..	..	..	..	1	-	-	-	-	B7
Chlamydiosis	17	..	..	..	..	..	..	7	2	2	3	-	B10
Hepatitis	18	22	42	17	17	13	13	23	17	23	12	16	B8
Legionellosis	19	..	..	..	..	..	..	11	8	14	3	-	-
Leptospirosis	20	2	14	8	10	11	5	6	9	6	8	15	B3
Lyme disease	21	..	..	..	..	..	..	6	4	2	4	-	-
Q fever	22	..	..	..	..	..	..	-	2	-	1	-	B11
Streptococcus suis	24	..	..	..	..	..	..	3	1	-	-	-	B9
Tetanus	25	..	..	..	..	..	..	2	1	1	-	-	-
Tuberculosis	26	9	9	12	13	10	16	17	17	12	11	17	B5
Other reportable infections (c)	27	20	28	19	23	22	47	84	70	45	51	18	-
<b>Poisonings by</b>													
Arsenic	28b	-	-	-	1	-	1	-	-	1	-	1b	C4
Benzene	28c	1	1	1	-	-	1	-	19	-	2	1c	C7
Cadmium	28e	3	1	-	-	-	-	1	-	-	-	1e	C18
Diethylene dioxide	28g	-	-	1	-	-	1	-	-	-	-	1g	C11
Lead	28i	1	5	1	7	2	2	-	5	10	6	1i	C1
Manganese	28j	-	1	-	-	-	1	-	-	-	-	1j	C2
Mercury	28k	-	-	1	1	1	-	-	1	-	2	1k	C5
Methyl bromide	28l	1	-	-	1	3	-	-	-	-	-	1l	C12
Nitrochlorobenzene	28m	2	1	2	-	4	1	-	-	1	-	1m	C8
Oxides of nitrogen	28n	-	-	1	-	-	-	-	-	-	-	1n	C15
Phosphorus	28o	1	3	2	11	2	5	3	3	2	2	1o	C3
Lung cancer (silica)	30	..	..	..	..	..	..	3	2	-	2	-	D11
Urinary tract cancer (dyes)	31	-	4	-	1	2	1	1	1	-	3	27	part C23
Bladder cancer (aluminium smelting)	32	..	..	..	..	..	..	1	-	-	-	-	part C23
Angiosarcoma of liver	33	-	-	2	-	-	-	-	-	-	-	26	C24a
Peripheral neuropathy	34	..	..	..	..	..	..	1	-	-	-	-	C29
Chrome ulcer	35	13	11	2	17	7	5	6	-	-	8	2	C30
Folliculitis	36	1	1	-	2	1	1	1	1	-	1	3	part D5
Acne	37	-	-	-	3	-	-	-	-	-	-	4	part D5
Skin cancer	38	4	2	-	1	-	-	2	-	1	1	5	C21b
Pneumoconiosis	39	4	3	3	1	3	-	6	2	3	7	9	part D1
Byssinosis	40	-	1	1	-	-	-	-	-	-	-	10	D2
Mesothelioma	41	12	9	8	8	11	6	11	10	14	10	11	D3
Lung cancer (asbestos)	42	-	-	-	-	-	1	2	1	3	1	12	D8
Asbestosis	43	4	5	8	4	7	1	7	9	11	10	13	part D1
Nasal/sinus cancer	44	2	-	2	-	1	-	-	1	1	-	25	C22a/D6
Occupational dermatitis	45	..	..	..	..	..	..	312	461	505	571	-	D5
Extrinsic alveolitis	46	7	2	7	4	7	5	5	1	3	1	8	B6
Occupational asthma	47	71	74	72	105	79	82	103	112	145	109	7	D7
<b>Total of all diseases</b>		<b>306</b>	<b>395</b>	<b>331</b>	<b>363</b>	<b>559</b>	<b>404</b>	<b>1 649</b>	<b>1 887</b>	<b>2 199</b>	<b>2 515</b>		

**Notes:**  
 .. Disease not reportable before 1 April 1996  
 p Provisional  
 (a) Years starting 1 April.  
 (b) Before 1 April 1996 only vibration white finger was reportable in this category.  
 (c) Before 1 April 1996 pathogenic infections were reportable. Subsequently the definition was revised to include infections reliably attributable to work with humans and animals.  
 (d) Lung cancer associated with work with bischloromethyl ether or chromium compounds.  
 (e) In RIDDOR 95 (effective from 1 April 1996) the schedule of reportable diseases was revised and extended, resulting in an increase in the total number of reports. Where disease definitions were revised due to the introduction of RIDDOR 95 figures from 1996/97 cannot be compared with those for earlier years.

The data in this table records the extent of the employers reporting of diseases scheduled under RIDDOR. Comparison with other information sources - themselves incomplete - show that the number of cases reported under RIDDOR clearly understates the real incidence of work-related disease.

**Table A2.12** Estimated number of cases of work-related and occupational respiratory disease reported by chest physicians to SWORD by age, sex and diagnostic category: 1998-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases		Percentage age distribution of 1998 and 1999 cases					
		1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Allergic alveolitis	17	27	-	2	32	30	-	36
	Asthma	294	435	4	21	34	25	13	4
	Bronchitis/emphysema	44	115	-	-	1	9	36	54
	Infectious diseases	50	1	-	-	31	31	8	31
	Inhalation accidents	101	63	10	26	35	28	1	-
	Lung cancer	100	81	-	-	1	25	27	47
	Malignant mesothelioma	640	935	-	-	2	11	31	56
	Benign pleural disease	574	1141	-	-	1	19	37	43
	Pneumoconiosis	197	308	-	2	-	11	24	63
	Other	18	34	6	33	50	6	4	2
<b>Total males (a)</b>	<b>1 997</b>	<b>3 083</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>16</b>	<b>28</b>	<b>42</b>	
Female	Allergic alveolitis	12	3	-	-	13	7	80	-
	Asthma	114	217	7	20	31	32	10	-
	Bronchitis/emphysema	1	1	-	-	50	-	50	-
	Infectious diseases	25	26	-	47	53	-	-	-
	Inhalation accidents	1	3	-	25	50	25	-	-
	Lung cancer	-	-	-	-	-	-	-	-
	Malignant mesothelioma	31	56	-	1	-	8	3	87
	Benign pleural disease	2	38	-	-	-	-	8	93
	Pneumoconiosis	3	1	-	-	-	-	50	50
	Other	9	23	-	28	16	16	41	-
<b>Total females (a)</b>	<b>197</b>	<b>354</b>	<b>4</b>	<b>18</b>	<b>25</b>	<b>21</b>	<b>10</b>	<b>21</b>	
<b>Total cases (a)</b>	<b>2 245</b>	<b>3 461</b>	<b>1</b>	<b>6</b>	<b>10</b>	<b>17</b>	<b>27</b>	<b>40</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.13** Estimated number of cases of work-related and occupational respiratory disease reported by occupational physicians to OPRA by age, sex and diagnostic category: 1998-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases		Percentage age distribution of 1998 and 1999 cases					
		1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Allergic alveolitis	-	-	-	-	-	-	-	-
	Asthma	262	357	12	19	31	31	6	-
	Bronchitis/emphysema	13	13	-	-	50	46	-	4
	Infectious diseases	-	24	-	-	50	-	50	-
	Inhalation accidents	76	64	11	13	34	32	10	-
	Lung cancer	-	-	-	-	-	-	-	-
	Malignant mesothelioma	16	15	-	-	-	52	45	3
	Benign pleural disease	25	38	-	-	19	-	59	22
	Pneumoconiosis	25	10	-	-	34	-	6	60
	Other	49	85	20	50	10	20	1	-
<b>Total males (a)</b>	<b>442</b>	<b>582</b>	<b>11</b>	<b>16</b>	<b>30</b>	<b>27</b>	<b>12</b>	<b>4</b>	
Female	Allergic alveolitis	-	12	-	-	100	-	-	-
	Asthma	136	109	-	16	42	21	21	-
	Infectious diseases	12	12	-	50	50	-	-	-
	Inhalation accidents	-	24	-	-	100	-	-	-
	Malignant mesothelioma	-	12	-	-	-	-	100	-
	Other	111	97	13	14	33	20	13	7
	<b>Total females (a)</b>	<b>246</b>	<b>242</b>	<b>5</b>	<b>16</b>	<b>39</b>	<b>18</b>	<b>18</b>	<b>3</b>
<b>Total cases (a)</b>	<b>688</b>	<b>824</b>	<b>9</b>	<b>16</b>	<b>33</b>	<b>24</b>	<b>14</b>	<b>3</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.14** Occupational asthma: estimated number of cases reported by chest and occupational physicians to SWORD/OPRA and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Chest physicians		Occupational physicians (b)		Total (b)	
	major group	minor group	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	1		17	-	-	-	17	-
<b>Professional</b>	2		45	2	30	1	75	3
– Medical practitioners		220	10	7	12	8	22	15
<b>Associate professional and technical</b>	3		47	2	85	3	132	5
– Laboratory technicians		300	8	8	-	-	8	8
– Nurses		340	24	5	42	8	66	13
<b>Clerical and secretarial</b>	4		15	-	24	1	39	1
<b>Craft and related</b>	5		176	6	127	4	302	10
– Welding trades		537	41	42	8	8	49	50
– Bakers, flour confectioners		580	12	34	13	36	24	70
– Coach painters, other spray painters		596	29	81	13	37	42	118
<b>Personal and protective service</b>	6		18	1	18	1	36	1
<b>Sales</b>	7		1	-	6	-	7	-
<b>Plant and machine operatives</b>	8		159	6	83	3	242	10
– Other food, drink process operatives nec		809	29	24	18	15	47	40
– Chemical, gas and petroleum process		820	22	33	19	29	41	62
– Assemblers (vehicles and metal goods)		851	6	8	12	15	18	23
– Packers, bottlers, canners, fillers		862	15	7	1	-	15	8
<b>Other occupations</b>	9		53	3	54	3	107	5
<b>Missing occupation</b>			2	..	6	..	8	..
<b>All occupations</b>			530	2	432	2	962	4

**Notes:**

(a) SOC90 minor groups with 10 or more actual cases reported across both schemes from 1998-1999 are shown.

(b) Some rates based on or including OPRA reports are liable to be artificially low where they refer to occupations or industries where few workers are under the care of occupational physicians (see paragraph 2.166 of commentary).

Figures shown in light, italic type where estimated cases and rates are based on less than 10 actual cases.

.. Not applicable.

**Table A2.15** Occupational asthma: estimated number of cases reported by chest and occupational physicians to SWORD/OPRA and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92		Chest physicians		Occupational physicians (b)		Total (b)	
	Section	Division	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Agriculture, hunting, forestry and fishing</b>	A,B		26	5	1	-	27	6
<b>Mining and quarrying</b>	C		15	14	6	6	21	20
<b>Manufacturing</b>	D		288	6	218	4	506	10
– Manufacturing of food products and beverages		15	57	11	73	14	130	25
– Manufacturing of chemicals		24	38	12	38	12	76	23
– Manufacturing of basic metals		27	19	10	12	6	31	16
– Manufacturing of fabricated metal products		28	30	7	1	-	31	7
– Manufacturing of motor vehicles		34	31	10	37	12	67	22
<b>Gas, electricity and water supply</b>	E		3	2	7	4	10	5
<b>Construction</b>	F		17	1	1	-	18	1
<b>Wholesale and retail trade</b>	G		18	-	37	1	54	1
<b>Hotels and restaurants</b>	H		8	1	-	-	8	1
<b>Transport, storage and communication</b>	I		9	1	24	2	33	2
<b>Financial intermediation</b>	J		-	-	-	-	-	-
<b>Real estate, renting and business activities</b>	K		18	1	-	-	18	1
– Research and development		73	10	10	-	-	10	10
<b>Public administration and defence</b>	L		21	1	19	1	40	3
<b>Education</b>	M		17	1	25	1	41	2
<b>Health and social work</b>	N		55	2	91	3	145	5
<b>Other community, social &amp; personal service</b>	O		15	1	-	-	15	1
<b>Private households with employed workers</b>	P		-	-	-	-	-	-
<b>Extra-territorial organisations and bodies</b>	Q		-	-	-	-	-	-
<b>Missing industry</b>			23	..	6	..	29	..
<b>All industries</b>			530	2	432	2	962	4

**Notes:**

(a) SIC92 divisions with 10 or more actual cases reported each year to either SWORD or OPRA are shown.

(b) See footnote (b) of Table A2.14

Figures shown in light, italic type where estimated cases and rates are based on less than 10 actual cases.

.. Not applicable.

**Table A2.16** Estimated number of cases of work-related skin disease reported by dermatologists to EPIDERM by age, sex and diagnostic category: 1996-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases				Percentage age distribution of 1998 and 1999 cases					
		1996	1997	1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Contact dermatitis	789	970	1 097	1 178	12	24	25	21	14	3
	Contact urticaria	10	20	16	49	35	31	7	6	2	-
	Folliculitis/acne	5	14	12	25	3	-	-	32	32	-
	Infective skin disease	57	53	57	3	3	62	30	3	2	-
	Mechanical skin disease	8	29	45	3	27	-	8	33	29	-
	Nail conditions	-	1	12	12	-	-	100	-	-	-
	Skin neoplasia	181	300	306	317	-	3	5	14	28	50
	Other dermatoses	19	38	27	35	2	24	13	32	27	2
	<b>Total males (a)</b>	<b>1 059</b>	<b>1 414</b>	<b>1 534</b>	<b>1 578</b>	<b>10</b>	<b>20</b>	<b>21</b>	<b>20</b>	<b>17</b>	<b>12</b>
Female	Contact dermatitis	695	855	892	1 114	24	24	19	21	8	2
	Contact urticaria	56	63	52	80	16	48	30	6	1	-
	Folliculitis/acne	-	-	12	-	-	100	-	-	-	-
	Infective skin disease	18	12	26	18	-	57	9	34	-	-
	Mechanical skin disease	3	7	17	1	-	-	-	17	83	-
	Nail conditions	3	1	1	37	-	-	32	66	-	-
	Skin neoplasia	13	41	41	10	24	-	2	49	4	22
	Other dermatoses	17	16	27	24	35	8	18	14	25	-
	<b>Total females (a)</b>	<b>793</b>	<b>966</b>	<b>1 031</b>	<b>1 241</b>	<b>23</b>	<b>24</b>	<b>19</b>	<b>22</b>	<b>9</b>	<b>2</b>
<b>Total cases (a)</b>	<b>1 852</b>	<b>2 380</b>	<b>2 567</b>	<b>2 819</b>	<b>15</b>	<b>22</b>	<b>20</b>	<b>21</b>	<b>13</b>	<b>8</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.17** Estimated number of cases of work-related skin disease reported by occupational physicians to OPRA by age, sex and diagnostic category: 1996-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases				Percentage age distribution of 1998 and 1999 cases					
		1996	1997	1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Contact dermatitis	1 359	889	969	944	11	23	31	22	8	-
	Contact urticaria	37	73	-	48	25	50	-	-	-	-
	Folliculitis/acne	36	7	-	12	-	-	100	-	-	-
	Infective skin disease	24	72	73	48	-	60	20	-	10	-
	Mechanical skin disease	-	-	12	12	-	50	-	50	-	-
	Nail conditions	1	-	-	12	-	100	-	-	-	-
	Skin neoplasia	12	-	-	-	-	-	-	-	-	-
	Other dermatoses	152	139	124	76	2	48	19	19	7	-
	<b>Total males (a)</b>	<b>1 621</b>	<b>1 180</b>	<b>1 130</b>	<b>1 140</b>	<b>10</b>	<b>28</b>	<b>29</b>	<b>20</b>	<b>8</b>	<b>-</b>
Female	Contact dermatitis	800	410	627	698	16	35	18	25	4	-
	Contact urticaria	108	85	24	49	16	34	33	16	-	-
	Infective skin disease	48	13	48	72	10	30	50	-	-	-
	Nail conditions	12	-	12	12	-	100	-	-	-	-
	Other dermatoses	28	63	48	49	10	21	20	30	-	-
	<b>Total females (a)</b>	<b>984</b>	<b>559</b>	<b>759</b>	<b>880</b>	<b>15</b>	<b>23</b>	<b>21</b>	<b>11</b>	<b>3</b>	<b>-</b>
<b>Total cases (a)</b>	<b>2 605</b>	<b>1 739</b>	<b>1 889</b>	<b>2 020</b>	<b>12</b>	<b>31</b>	<b>26</b>	<b>23</b>	<b>6</b>	<b>-</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.18** Contact dermatitis: estimated number of cases reported by dermatologists and occupational physicians to EPIDERM/OPRA and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Dermatologists		Occupational physicians (b)		Total (b)	
	major group	minor group	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	<b>1</b>		<b>53</b>	<b>1</b>	<b>18</b>	<b>-</b>	<b>71</b>	<b>2</b>
<b>Professional</b>	<b>2</b>		<b>82</b>	<b>3</b>	<b>97</b>	<b>4</b>	<b>179</b>	<b>7</b>
- Chemists		200	6	16	42	121	48	137
- Biological scientists and biochemists		201	9	17	6	11	15	28
- Medical practitioners		220	30	21	31	22	60	42
- Dental practitioners		223	14	54	12	48	26	102
<b>Associate professional and technical</b>	<b>3</b>		<b>292</b>	<b>12</b>	<b>355</b>	<b>14</b>	<b>647</b>	<b>26</b>
- Laboratory technicians		300	33	35	6	6	39	41
- Other scientific technicians nec		309	11	18	18	30	29	48
- Nurses		340	203	40	289	57	492	98
<b>Clerical and secretarial</b>	<b>4</b>		<b>66</b>	<b>2</b>	<b>43</b>	<b>1</b>	<b>108</b>	<b>3</b>
- Counter clerks and cashiers		411	6	2	-	-	6	2
- Clerks nos		430	19	3	24	4	43	7
- Storekeepers and warehouse personnel		441	11	3	6	2	17	5
<b>Craft and related</b>	<b>5</b>		<b>478</b>	<b>15</b>	<b>340</b>	<b>11</b>	<b>818</b>	<b>26</b>
- Bricklayers, masons		500	12	13	6	7	18	20
- Builders, building contractors		504	24	18	-	-	24	18
- Floorers, carpet fitters and wall tilers		506	19	51	-	-	19	51
- Painters and decorators		507	12	8	13	9	24	16
- Metal working and maintenance fitters		516	58	16	37	10	95	26
- Other machine tool setters		519	13	30	12	29	25	60
- Electricians, electrical maintenance fitters		521	16	6	38	15	54	21
- Plumbers, heating and ventilation engineers		532	5	3	-	-	5	3
- Welding trades		537	7	7	18	19	25	26
- Motor mechanics, auto engineers		540	35	18	-	-	35	18
- Printers		561	16	91	1	6	17	96
- Other printing and related trades nec		569	12	19	-	-	12	19
- Carpenters and joiners		570	56	24	13	6	69	30
- Bakers, flour confectioners		580	20	57	-	-	20	57
- Glass products and ceramics makers		590	11	32	54	155	65	186
- Gardeners, groundsman/women		594	23	20	24	21	47	42
- Coach painters, other spray painters		596	18	51	7	20	25	71
<b>Personal and protective service</b>	<b>6</b>		<b>423</b>	<b>16</b>	<b>135</b>	<b>5</b>	<b>558</b>	<b>20</b>
- Chefs, cooks		620	103	41	19	8	122	49
- Waiters, waitresses		621	17	10	6	4	23	14
- Bar staff		622	21	11	-	-	21	11
- Assistant nurses, nursing auxiliaries		640	16	10	37	23	53	33
- Dental nurses		643	8	24	6	19	14	44
- Care assistants and attendants		644	39	9	13	3	52	12
- Hairdressers, barbers		660	155	134	6	5	161	139
- Beauticians and related occupations		661	20	92	-	-	20	92
<b>Sales</b>	<b>7</b>		<b>62</b>	<b>3</b>	<b>24</b>	<b>1</b>	<b>86</b>	<b>4</b>
- Sales assistants		720	23	2	24	2	47	4
- Retail cash desk and check-out operators		721	12	5	-	-	12	5
- Window dressers, floral arrangers		791	19	126	-	-	19	126
<b>Plant and machine operatives</b>	<b>8</b>		<b>370</b>	<b>15</b>	<b>340</b>	<b>14</b>	<b>710</b>	<b>29</b>
- Bakery and confectionery		800	11	28	-	-	11	28
- Other food, drink and tobacco operatives		809	22	18	6	5	28	23
- Chemical, gas and petroleum process		820	27	41	111	170	138	211
- Rubber process operatives, tyre builders		824	29	207	-	-	29	207
- Plastics process operatives		825	14	18	30	39	44	56
- Other chemicals paper, plastics		829	5	26	6	35	11	60
- Electroplaters, galvanisers, colour coaters		834	15	174	19	221	34	395
- Machine tool operatives		840	67	77	19	21	85	98
- Press stamping and automatic machine operatives		841	10	39	12	47	22	86
- Assemblers/lineworkers (electrical/electronic goods)		850	22	19	7	6	29	25
- Assemblers/lineworkers (vehicles and metal goods)		851	25	31	72	92	97	124
- Other assemblers/lineworkers nec		859	7	11	-	-	7	11
- Packers, bottlers, canners, fillers		862	11	5	24	12	35	18
- Other plant and machine operatives nec		899	6	6	-	-	6	6
<b>Other occupations</b>	<b>9</b>		<b>287</b>	<b>14</b>	<b>269</b>	<b>13</b>	<b>556</b>	<b>27</b>
- Other labourers in making/processing (c)		919	36	..	103	..	139	..
- Other building and civil engineering labourers nec		929	5	4	1	1	6	5
- Hotel porters		952	40	27	7	4	46	31
- Kitchen porters, hands		953	39	18	25	12	63	30
- Cleaners, domestics		958	85	12	79	11	163	22
- All other labourers and related workers		990	19	19	7	7	25	26
<b>Missing occupation</b>			<b>30</b>	<b>..</b>	<b>1</b>	<b>..</b>	<b>30</b>	<b>..</b>
<b>All occupations</b>			<b>2 142</b>	<b>8</b>	<b>1 619</b>	<b>6</b>	<b>3 761</b>	<b>15</b>

(a) SOC90 minor groups with 10 or more actual cases reported across both schemes from 1998-1999 are shown.

(c) This group comprises a miscellany of jobs, for which it would not be meaningful to compute a rate.

(b) See footnote (b) of Table A2.14

nec Not elsewhere classified.

.. Not applicable.

nos Not otherwise specified.

**Table A2.19** Contact dermatitis: estimated number of cases reported by dermatologists and occupational physicians to EPIDERM/OPRA and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92 Section Division	Dermatologists		Occupational physicians (b)		Total (b)	
		Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Agriculture, hunting, forestry and fishing</b>	<b>A,B</b>	<b>66</b>	<b>14</b>	-	-	<b>66</b>	<b>14</b>
	01	53	12	-	-	53	12
<b>Mining and quarrying</b>	<b>C</b>	<b>26</b>	<b>25</b>	<b>7</b>	<b>6</b>	<b>33</b>	<b>31</b>
	11	24	49	6	12	30	61
<b>Manufacturing</b>	<b>D</b>	<b>661</b>	<b>13</b>	<b>874</b>	<b>18</b>	<b>1 535</b>	<b>31</b>
– Manufacture of food products and beverages	15	63	12	32	6	95	18
– Manufacture of textiles	17	26	14	2	1	28	14
– Manufacture of pulp, paper and paper products	21	21	18	1	-	21	18
– Publishing, printing and recorded media	22	29	7	14	3	42	10
– Manufacture of chemicals and chemical products	24	52	16	183	56	234	72
– Manufacture of rubber and plastic products	25	48	18	30	12	78	30
– Manufacture of other non-metallic mineral products	26	34	20	92	54	125	74
– Manufacture of basic metals	27	47	25	31	16	78	41
– Manufacture of fabricated metal products	28	81	19	80	19	161	38
– Manufacture of machinery and equipment	29	25	5	42	8	67	13
– Manufacture of electrical machinery	31	29	12	30	12	59	25
– Manufacture of motor vehicles	34	89	30	169	56	258	86
– Manufacture of other transport equipment	35	45	21	91	41	136	62
– Manufacture of furniture; manufacturing nec	36	35	15	6	3	41	17
<b>Gas, electricity and water supply</b>	<b>E</b>	<b>13</b>	<b>7</b>	<b>16</b>	<b>8</b>	<b>29</b>	<b>16</b>
<b>Construction</b>	<b>F</b>	<b>143</b>	<b>8</b>	<b>8</b>	-	<b>151</b>	<b>9</b>
<b>Wholesale and retail trade</b>	<b>G</b>	<b>132</b>	<b>3</b>	<b>42</b>	<b>1</b>	<b>174</b>	<b>4</b>
– Sale maintenance and repair of motor vehicles	50	41	8	-	-	41	8
– Retail trade	52	91	3	42	2	133	5
<b>Hotels and restaurants</b>	<b>H</b>	<b>207</b>	<b>18</b>	<b>25</b>	<b>2</b>	<b>232</b>	<b>20</b>
<b>Transport, storage and communication</b>	<b>I</b>	<b>33</b>	<b>2</b>	<b>26</b>	<b>2</b>	<b>59</b>	<b>4</b>
<b>Financial intermediation</b>	<b>J</b>	<b>8</b>	<b>1</b>	-	-	<b>8</b>	<b>1</b>
<b>Real estate, renting and business activities</b>	<b>K</b>	<b>19</b>	<b>1</b>	<b>1</b>	-	<b>19</b>	<b>1</b>
– Other business activities	74	15	1	1	-	15	1
<b>Public administration and defence</b>	<b>L</b>	<b>20</b>	<b>1</b>	<b>73</b>	<b>5</b>	<b>92</b>	<b>6</b>
<b>Education</b>	<b>M</b>	<b>47</b>	<b>2</b>	<b>30</b>	<b>2</b>	<b>77</b>	<b>4</b>
<b>Health and social work</b>	<b>N</b>	<b>419</b>	<b>15</b>	<b>514</b>	<b>18</b>	<b>932</b>	<b>34</b>
<b>Other community, social &amp; personal service</b>	<b>O</b>	<b>236</b>	<b>18</b>	<b>6</b>	-	<b>242</b>	<b>18</b>
– Recreational, cultural and sporting activities	92	30	4	-	-	30	4
– Other service, (c)	93	203	71	6	2	209	73
<b>Private households with employed people</b>	<b>P</b>	<b>7</b>	<b>4</b>	-	-	<b>7</b>	<b>4</b>
<b>Extra-territorial organisations and bodies</b>	<b>Q</b>	-	-	-	-	-	-
<b>Missing industry</b>		<b>108</b>	<b>..</b>	<b>1</b>	<b>..</b>	<b>109</b>	<b>..</b>
<b>All industries</b>		<b>2 142</b>	<b>8</b>	<b>1 619</b>	<b>6</b>	<b>3 761</b>	<b>15</b>

**Notes:**

(a) SIC92 divisions with 10 or more actual cases reported each year to either EPIDERM or OPRA are shown.

(b) See footnote (b) of Table A2.14.

(c) EPIDERM 72.9% hairdressers, OPRA 100% hairdressers

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

.. Not applicable.

nos Not elsewhere classified.

**Table A2.20** Contact dermatitis analysed by causative substance. Average estimated cases reported by dermatologists and occupational physicians to EPIDERM and OPRA 1998-1999, Great Britain

Substance (a)	DERMATOLOGISTS		OCCUPATIONAL PHYSICIANS	
	Average estimated cases 1998-1999	Total %	Average estimated cases 1998-1999	Total %
Rubber chemicals and materials	342	16	273	17
Wet work	276	13	151	9
Soaps and cleaners	241	11	231	14
Nickel	195	9	37	2
Resins and acrylics	156	7	128	8
Preservatives	131	6	12	1
Chromium and chromates	127	6	6	-
Personal protective equipment (PPE)	127	6	202	12
Foods and flour	127	6	7	-
Petroleum and products	127	6	104	6
Aromatic amines	100	5	18	1
Other biological substances	95	4	24	1
Solvents and alcohols	89	4	40	2
Fragrances and cosmetics	86	4	6	-
Hairdressing chemicals	81	4	6	-
Colophony and flux	79	4	19	1
Cutting oils and coolants	77	4	110	7
Aldehydes	71	3	18	1
Irritants (unspecified)	69	3	1	-
Cobalt and compounds	66	3	-	-
Friction	65	3	60	4
Glues and paints	53	2	48	3
Bleaches and sterilisers	48	2	42	3
Cements, plaster and masonry	37	2	26	2
Temperature and humidity	18	1	26	2
Metals and compounds	17	1	12	1
Other substance	57	3	96	6
Other unspecified chemicals	183	9	208	13
<b>Total cases (b)</b>	<b>2 142</b>		<b>1 619</b>	

**Notes:**

(a) Substances with 10 or more actual cases reported each year to either EPIDERM or OPRA are shown.

Figures shown in light type where estimated cases are based on less than 10 actual cases.

(b) Total number of cases. Since some cases have more than one substance reported, percentages do not sum to 100.

**Table A2.21** Work-related audiological disease: number of cases reported by audiological physicians to OSSA by age, sex and diagnostic category: 1998-1999, Great Britain

Sex	Diagnostic category	Number of cases		Percentage age distribution of 1998 and 1999 cases					
		1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Sensory hearing loss	553	419	-	2	10	24	29	34
	Tinnitus	320	229	1	3	11	27	30	28
	Balance problem	5	13	-	6	17	28	44	6
	Tympanic disorder	12	2	-	-	-	14	21	64
	Other problems	13	2	13	7	27	20	13	20
	<b>Total male (a)</b>	<b>601</b>	<b>434</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>25</b>	<b>29</b>	<b>34</b>
Female	Sensory hearing loss	29	17	-	4	2	15	30	48
	Tinnitus	16	16	3	3	3	16	38	38
	Balance problem	-	1	-	-	-	-	100	-
	Tympanic disorder	-	1	-	-	-	-	-	100
	Other problems	1	1	-	-	-	-	50	50
	<b>Total female (a)</b>	<b>31</b>	<b>20</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>16</b>	<b>33</b>	<b>43</b>
<b>Total cases (a)</b>	<b>632</b>	<b>454</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>24</b>	<b>29</b>	<b>34</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.22** Work-related audiological disease: estimated number of cases reported by occupational physicians to OPRA by age, sex and diagnostic category: 1996-1999, Great Britain

Sex	Diagnostic category	Number of cases				Percentage age distribution of 1998 and 1999 cases					
		1996	1997	1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Senso. hearing loss	816	420	350	242	6	9	26	30	30	-
	Tinnitus	-	12	-	-	-	-	-	-	-	-
	Balance problem	-	-	-	-	-	-	-	-	-	-
	Tympanic disorder	24	-	-	12	-	100	-	-	-	-
	Other problems	-	12	-	12	-	100	-	-	-	-
<b>Total male (a)</b>	<b>840</b>	<b>408</b>	<b>350</b>	<b>266</b>	<b>6</b>	<b>12</b>	<b>24</b>	<b>29</b>	<b>28</b>	<b>-</b>	
Female	Senso. hearing loss	36	12	-	36	-	-	100	-	-	-
	<b>Total female (a)</b>	<b>36</b>	<b>12</b>	<b>-</b>	<b>36</b>	<b>-</b>	<b>-</b>	<b>100</b>	<b>-</b>	<b>-</b>	
<b>Total cases (a)</b>		<b>876</b>	<b>420</b>	<b>350</b>	<b>302</b>	<b>6</b>	<b>12</b>	<b>29</b>	<b>27</b>	<b>27</b>	<b>-</b>

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.23** Work-related hearing loss: estimated number of cases reported by audiological physicians and occupational physicians to OSSA/OPRA and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Audiological physicians		Occupational physicians (b)		Total (b)	
	major group	minor group	Average annual cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	<b>1</b>		<b>11</b>	-	-	-	<b>11</b>	-
<b>Professional</b>	<b>2</b>		<b>10</b>	-	6	-	<b>16</b>	1
<b>Associate professional and technical</b>	<b>3</b>		<b>16</b>	1	18	1	<b>34</b>	1
<b>Clerical and secretarial</b>	<b>4</b>		3	-	-	-	3	-
<b>Craft and related</b>	<b>5</b>		<b>178</b>	6	133	4	<b>310</b>	10
- Builders		504	20	15	-	-	20	15
- Metal working and maintenance fitters		516	37	10	78	21	115	31
- Electricians, electrical maintenance fitters		521	12	5	12	5	24	9
- Welding trades		537	11	11	6	6	17	18
- Printers		561	11	62	-	-	11	62
- Carpenters and joiners		570	11	5	6	3	17	7
<b>Personal and protective service</b>	<b>6</b>		<b>63</b>	2	12	-	<b>75</b>	3
- UK armed forces		600	49	57	6	7	55	64
- Firemen (leading officer and below)		611	9	21	-	-	9	21
<b>Sales</b>	<b>7</b>		1	-	-	-	1	-
<b>Plant and machine operatives</b>	<b>8</b>		<b>131</b>	5	115	5	<b>246</b>	10
- Machine tool operatives		840	22	25	6	7	28	32
- Press stamping and automatic machine operatives		841	9	35	-	-	9	35
- Drivers of road vehicles		872	11	2	-	-	11	2
- Rail engine drivers and assistants		882	13	59	-	-	13	59
<b>Other occupations</b>	<b>9</b>		<b>96</b>	5	25	1	<b>121</b>	6
- Coal mine labourers (c)		910	10	..	-	..	10	..
- Labourers in foundries		911	24	872	-	-	24	872
- Labourers in engineering and allied trades		912	11	83	-	-	11	83
- Other labourers in making industries (d)		919	25	..	24	..	49	..
<b>Missing occupation</b>			3	..	6	..	9	..
<b>All occupations</b>			<b>509</b>	<b>2</b>	<b>314</b>	<b>1</b>	<b>823</b>	<b>3</b>

**Notes:**

(a) SOC90 minor groups with 10 or more actual cases reported each year to either OSSA or OPRA are shown.

(b) See footnote (b) of Table A2.14.

(c) Rates for this group cannot be reliably computed since most coal mine labourers are no longer employed in this occupation.

(d) This group comprises a miscellany of jobs, for which it would not be meaningful to compute a rate.

.. Not applicable.

Figures shown in light, italic type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.24** Work-related hearing loss: estimated number of cases reported by audiological physicians and occupational physicians to OSSA/OPRA and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92		Audiological physicians		Occupational physicians (b)		Total (b)	
	Section	Division	Average annual cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Agriculture, hunting, forestry and fishing</b>	<b>A, B</b>		9	2	-	-	9	2
<b>Mining and quarrying</b>	<b>C</b>		18	17	12	11	30	28
- Coal, lignite mining, peat extraction (c)		10	16	..	6	..	22	..
<b>Manufacturing</b>	<b>D</b>		277	6	151	3	428	9
- Manufacturing of textiles		17	11	6	-	-	11	6
- Publishing, printing and recorded media		22	14	3	-	-	14	3
- Manufacture of chemicals and chemical products		24	9	3	12	4	21	7
- Manufacture of rubber and plastic products		25	9	3	12	5	21	8
- Manufacture of basic metals		27	125	65	7	3	131	68
- Manufacture of fabricated metal products		28	24	6	24	6	48	11
- Manufacture of motor vehicles		34	39	13	12	4	51	17
- Manufacture of other transport equipment		35	10	4	36	16	46	21
<b>Gas, electricity and water supply</b>	<b>E</b>		12	6	18	10	30	16
- Electricity, gas, steam etc supply		40	11	9	18	15	29	24
<b>Construction</b>	<b>F</b>		53	3	19	1	72	4
<b>Wholesale and retail trade</b>	<b>G</b>		5	-	6	-	11	-
<b>Hotels and restaurants</b>	<b>H</b>		-	-	-	-	-	-
<b>Transport, storage and communication</b>	<b>I</b>		42	3	18	1	60	4
- Transport by land, pipeline		60	31	5	6	1	37	6
<b>Financial intermediation</b>	<b>J</b>		-	-	-	-	-	-
<b>Real estate, renting and business activities</b>	<b>K</b>		2	-	-	-	2	-
<b>Public administration and defence</b>	<b>L</b>		73	5	42	3	115	8
<b>Education</b>	<b>M</b>		4	-	-	-	4	-
<b>Health and social work</b>	<b>N</b>		1	-	6	-	7	-
<b>Other community, social &amp; personal service</b>	<b>O</b>		9	1	12	1	21	2
<b>Private households with employed workers</b>	<b>P</b>		-	-	-	-	-	-
<b>Extra-territorial organisations and bodies</b>	<b>Q</b>		-	-	-	-	-	-
<b>Missing industry</b>			9	..	30	..	39	..
<b>All industries</b>			509	2	314	1	823	3

**Notes:**

- (a) SIC92 divisions with 10 or more actual cases reported each year to either OSSA or OPRA are shown.  
 (b) See footnote (b) of Table A2.14.  
 (c) Rates for this group cannot be reliably computed since most coal mine labourers are no longer employed in this industry. .. Not applicable.  
 Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.25** Work-related infections: estimated number of cases reported to SIDAW by CCDCs by age, sex and diagnostic category: 1998-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases		Percentage age distribution of 1998 and 1999 cases					
		1998	1999	16-24	25-34	35-44	45-54	55-64	65+
<b>Males</b>	Diarrhoeal diseases	158	126	35	23	17	15	8	-
	Hepatitis	5	4	-	38	38	13	13	-
	Legionellosis	12	2	-	-	23	46	31	-
	Leptospirosis	4	1	-	75	25	-	-	-
	Ornithosis	4	3	-	-	60	40	-	-
	Pulmonary tuberculosis	3	5	14	43	14	-	-	29
	Q Fever	-	3	-	-	33	33	33	-
	Other	15	6	13	40	27	20	-	-
	<b>Total males (a)</b>	<b>201</b>	<b>150</b>	<b>29</b>	<b>24</b>	<b>20</b>	<b>17</b>	<b>9</b>	<b>1</b>
<b>Females</b>	Diarrhoeal diseases	487	161	23	24	22	22	7	2
	Hepatitis	-	3	-	-	50	50	-	-
	Legionellosis	1	-	-	-	-	100	-	-
	Ornithosis	-	3	-	67	33	-	-	-
	Pulmonary tuberculosis	4	1	25	-	50	25	-	-
	Other	54	29	22	22	33	11	11	-
	<b>Total females (a)</b>	<b>546</b>	<b>197</b>	<b>22</b>	<b>24</b>	<b>23</b>	<b>22</b>	<b>7</b>	<b>2</b>
<b>Missing sex</b>	<b>391 (b)</b>	<b>272 (c)</b>	<b>20</b>	<b>40</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>-</b>	
<b>Total cases (a)</b>	<b>1 138</b>	<b>619</b>	<b>25</b>	<b>24</b>	<b>21</b>	<b>20</b>	<b>8</b>	<b>1</b>	

**Notes:**

- (a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.  
 (b) Comprises 375 diarrhoeal, 2 ornithosis and 14 other cases.  
 (c) Comprises 196 diarrhoeal, and 76 other cases.

**Table A2.26** Work-related infections: number of cases reported to SIDAW by CCDCs and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Average annual cases 1998-1999	Rate per 100 000 workers per year
	major group	minor group		
<b>Managers and administrators</b>	<b>1</b>		<b>13</b>	-
– Farm owners and managers, etc		160	9	5
<b>Professional</b>	<b>2</b>		<b>35</b>	<b>1</b>
– Primary, nursery education teacher		234	14	4
<b>Associate professional and technical</b>	<b>3</b>		<b>152</b>	<b>6</b>
– Nurses		340	142	28
<b>Clerical and secretarial</b>	<b>4</b>		<b>7</b>	-
<b>Craft and related</b>	<b>5</b>		<b>38</b>	<b>1</b>
– Butchers, meat cutters		581	12	27
– Fishmongers, poultry dressers		582	15	156
<b>Personal and protective service</b>	<b>6</b>		<b>464</b>	<b>17</b>
– Foreign and commonwealth armed forces		601	24	193
– Chefs, cooks		620	18	7
– Care assistants and attendants		644	393	90
<b>Sales</b>	<b>7</b>		<b>6</b>	-
<b>Plant and machine operatives</b>	<b>8</b>		<b>26</b>	<b>1</b>
– Other food, drink and tobacco operatives		809	8	6
<b>Other occupations</b>	<b>9</b>		<b>86</b>	<b>4</b>
– Farm workers		900	12	11
– Postal workers, mail sorters		940	22	14
– Kitchen porters		952	7	5
– Catering assistants		953	17	8
– Cleaners, domestics		958	19	3
<b>Missing occupation</b>			<b>53</b>	..
<b>All occupations</b>			<b>879</b>	<b>3</b>

**Notes:**

(a) SOC90 minor groups with 10 or more actual cases reported each year to SIDAW are shown.

.. Not applicable.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.27** Work-related infections: number of cases reported to SIDAW by CCDCs and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92		Average annual cases 1998-1999	Rate per 100 000 workers per year
	section	division		
<b>Agriculture, hunting, forestry and fishing</b>	<b>A, B</b>		<b>22</b>	<b>5</b>
– Agriculture, hunting etc		01	21	5
<b>Mining and quarrying</b>	<b>C</b>		<b>1</b>	<b>1</b>
<b>Manufacturing</b>	<b>D</b>		<b>59</b>	<b>1</b>
– Manufacture of food products and beverages		15	45	9
– Manufacture of leather and leather goods		19	9	23
<b>Gas, electricity and water supply</b>	<b>E</b>		<b>1</b>	-
<b>Construction</b>	<b>F</b>		<b>3</b>	-
<b>Wholesale and retail trade</b>	<b>G</b>		<b>13</b>	-
– Retail trade		52	12	-
<b>Hotels and restaurants</b>	<b>H</b>		<b>32</b>	<b>3</b>
<b>Transport, storage and communication</b>	<b>I</b>		<b>24</b>	<b>1</b>
– Post, telecommunications		64	22	4
<b>Financial intermediation</b>	<b>J</b>		<b>-</b>	-
<b>Real estate, renting and business activities</b>	<b>K</b>		<b>2</b>	-
<b>Public administration and defence</b>	<b>L</b>		<b>30</b>	<b>2</b>
<b>Education</b>	<b>M</b>		<b>26</b>	<b>1</b>
<b>Health and social work</b>	<b>N</b>		<b>627</b>	<b>23</b>
<b>Other community, social &amp; personal service</b>	<b>O</b>		<b>8</b>	<b>1</b>
<b>Private households with employed persons</b>	<b>P</b>		<b>2</b>	<b>1</b>
<b>Extra-territorial organisations and bodies</b>	<b>Q</b>		<b>-</b>	-
<b>Missing industry</b>			<b>33</b>	..
<b>All industries</b>			<b>879</b>	<b>3</b>

**Notes:**

(a) SIC92 divisions with 10 or more actual cases reported each year to SIDAW are shown.

.. Not applicable.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.28** Work-related musculoskeletal disorders: estimated number of cases reported by rheumatologists to MOSS by age, sex and diagnostic category: 1998-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases		Percentage age distribution of 1998 and 1999 cases					
		1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Upper limb disorders	648	913	3	23	25	26	18	5
	Raynauds/HAV/VWF	84	180	-	23	14	27	23	14
	Other hand/wrist/arm	300	421	2	28	22	28	15	3
	Elbow	132	144	-	13	43	26	17	-
	Shoulder	144	192	7	21	32	18	18	4
	Spine/back disorders	312	432	3	26	32	21	18	-
	Neck/thoracic/spine	108	204	4	35	27	23	12	-
	Lumber spine/trunk	216	252	5	21	33	21	21	-
	Lower limbs	192	72	5	23	27	32	14	-
	Hip/knee/leg	84	48	9	18	45	27	-	-
	Ankle/foot	108	24	-	27	9	36	27	-
	Other	24	60	-	-	14	57	14	14
	<b>Total males (a)</b>	<b>1 152</b>	<b>1 441</b>	<b>3</b>	<b>23</b>	<b>27</b>	<b>26</b>	<b>17</b>	<b>3</b>
	Female	Upper limb disorders	996	912	4	19	33	30	12
Raynauds/HAV/VWF		-	36	-	33	33	-	-	33
Other hand/wrist/arm		660	624	7	20	32	27	13	1
Elbow		168	96	-	5	50	41	5	-
Shoulder		192	156	-	24	24	41	10	-
Spine/back disorders		336	336	5	16	23	41	13	2
Neck/thoracic/spine		192	204	3	15	30	42	9	-
Lumber spine/trunk		144	132	9	17	13	39	17	4
Lower limbs		60	84	-	-	17	33	33	17
Hip/knee/leg		12	12	-	-	50	-	50	-
Ankle/foot		48	84	-	-	18	36	27	18
Others		48	48	-	-	25	38	38	-
<b>Total females (a)</b>		<b>1 392</b>	<b>1 344</b>	<b>4</b>	<b>17</b>	<b>28</b>	<b>34</b>	<b>14</b>	<b>2</b>
<b>Total cases (a)</b>		<b>2 544</b>	<b>2 785</b>	<b>4</b>	<b>20</b>	<b>28</b>	<b>30</b>	<b>15</b>	<b>3</b>

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.29** Work-related musculoskeletal disorders: estimated number of cases reported by occupational physicians to OPRA by age, sex and diagnostic category: 1996-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases				Percentage age distribution of 1998 and 1999 cases					
		1996	1997	1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Upper limb disorders	..	..	1 746	2 029	6	19	34	27	13	-
	Raynauds/HAV/VWF	306	143	605	522	2	17	39	27	14	-
	Other hand/wrist/arm	571	588	658	1 039	10	24	30	25	11	1
	Elbow	362	196	398	324	3	12	36	32	17	-
	Shoulder	207	184	121	156	4	18	35	26	17	-
	Spine/back disorders	..	..	785	1 035	4	30	34	23	9	-
	Neck/thoracic/spine	122	192	181	156	4	28	29	18	21	-
	Lumber spine/trunk	844	688	616	903	4	29	36	24	7	-
	Lower limbs	..	..	158	350	2	15	30	25	25	2
	Hip/knee/leg	228	84	110	325	3	18	26	27	23	3
	Ankle/foot	24	24	48	25	-	1	49	16	33	-
	Others	132	50	72	120	-	31	44	6	19	-
	<b>Total males (a)</b>	<b>2 722</b>	<b>2 052</b>	<b>2 664</b>	<b>3 498</b>	<b>5</b>	<b>22</b>	<b>34</b>	<b>25</b>	<b>13</b>	<b>-</b>
	Female	Upper limb disorders	..	..	1 568	1 273	9	25	28	28	9
Raynauds/HAV/VWF		-	-	-	13	-	-	-	100	-	-
Other hand/wrist/arm		744	709	1 160	1 019	10	29	26	27	8	-
Elbow		245	99	216	133	-	12	46	42	-	-
Shoulder		361	136	204	132	14	21	21	18	25	-
Spine/back disorders		..	..	830	912	4	24	31	26	15	-
Neck/thoracic/spine		312	182	300	156	5	24	45	18	8	-
Lumber spine/trunk		713	541	530	768	4	25	26	28	17	-
Lower limbs		..	..	84	108	6	25	19	13	31	6
Hip/knee/leg		12	48	60	60	10	20	20	10	30	10
Ankle/foot		-	12	24	48	-	33	17	17	33	-
Others		72	89	96	60	-	31	31	31	8	-
<b>Total females (a)</b>		<b>2 279</b>	<b>1 744</b>	<b>2 458</b>	<b>2 293</b>	<b>7</b>	<b>25</b>	<b>29</b>	<b>27</b>	<b>12</b>	<b>-</b>
<b>Total cases (a)</b>		<b>5 001</b>	<b>3 796</b>	<b>5 122</b>	<b>5 791</b>	<b>6</b>	<b>24</b>	<b>32</b>	<b>26</b>	<b>13</b>	<b>-</b>

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis..

.. Not applicable.

**Table A2.30** Work-related upper limb disorders: estimated number of cases reported by rheumatologists and occupational physicians to MOSS/OPRA and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Rheumatologists		Occupational physicians (b)		Total (b)	
	major group	minor group	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	<b>1</b>		<b>72</b>	<b>2</b>	<b>61</b>	<b>2</b>	<b>133</b>	<b>3</b>
<b>Professional</b>	<b>2</b>		<b>72</b>	<b>3</b>	<b>103</b>	<b>4</b>	<b>175</b>	<b>6</b>
<b>Associate professional and technical</b>	<b>3</b>		<b>114</b>	<b>5</b>	<b>300</b>	<b>12</b>	<b>414</b>	<b>17</b>
– Nurses		340	36	7	48	10	84	17
<b>Clerical and secretarial</b>	<b>4</b>		<b>390</b>	<b>10</b>	<b>525</b>	<b>14</b>	<b>915</b>	<b>24</b>
– Accounts clerks, book-keepers etc		410	18	3	42	7	60	10
– Clerks nos		430	48	8	139	23	187	31
– Other secretaries, personal assistants		459	72	14	139	26	211	40
– Computer operators, data processing operators		490	90	69	55	42	145	111
<b>Craft and related</b>	<b>5</b>		<b>397</b>	<b>13</b>	<b>597</b>	<b>19</b>	<b>993</b>	<b>32</b>
– Bricklayers, masons		500	24	27	31	35	55	62
– Metalwork, maintenance fitters		516	6	2	72	20	78	21
– Welding trades		537	24	25	44	45	68	69
– Sewing machinists etc		553	42	34	13	10	55	44
– Glass products and ceramic makers		590	6	17	60	172	66	189
– Gardeners, groundspersons		594	30	27	55	48	85	75
<b>Personal and protective service</b>	<b>6</b>		<b>84</b>	<b>3</b>	<b>109</b>	<b>4</b>	<b>193</b>	<b>7</b>
<b>Sales</b>	<b>7</b>		<b>72</b>	<b>4</b>	<b>61</b>	<b>3</b>	<b>133</b>	<b>7</b>
<b>Plant and machine operatives</b>	<b>8</b>		<b>204</b>	<b>8</b>	<b>1 101</b>	<b>45</b>	<b>1 305</b>	<b>53</b>
– Food etc process operatives		809	6	5	46	38	52	43
– Rubber process operatives		824	12	87	43	309	55	397
– Metal dressing operatives		843	-	-	72	837	72	837
– Assemblers/lineworkers (electrical/electronic goods)		850	-	-	61	5	61	5
– Assemblers/lineworkers (vehicles & other metal goods)		851	36	46	277	355	313	401
– Packers, bottlers, canners, fillers		862	12	6	169	87	181	93
– Service pipe layers and jointers		895	-	-	60	355	60	355
<b>Other occupations</b>	<b>9</b>		<b>294</b>	<b>14</b>	<b>430</b>	<b>20</b>	<b>724</b>	<b>34</b>
– Coal mine labourers (c)		910	54	..	6	..	60	..
– Other labourers in making and processing industries nec (d)		919	18	..	127	..	145	..
– Road construction and maintenance workers		923	-	-	78	379	78	379
– Cleaners, domestics		958	48	7	36	5	84	11
<b>Missing occupation</b>			36	..	24	..	60	..
<b>All occupations</b>			<b>1 735</b>	<b>7</b>	<b>3 308</b>	<b>13</b>	<b>5 043</b>	<b>20</b>

**Notes:**

- (a) SOC90 minor groups with 10 or more actual cases reported across both schemes from 1998-1999 are shown.  
 (b) See footnote (b) of Table A2.14.  
 (c) Rates in this job cannot be reliably computed, since most coal-mine labourers are no longer employed in this occupation.  
 (d) This group comprises a miscellany of jobs, for which it would not be meaningful to compute a rate.  
 .. Not applicable.  
 nos Not elsewhere classified.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.31** Work-related spine/back disorders: estimated number of cases reported by rheumatologists and occupational physicians to MOSS/OPRA and estimated rates per 100 000 workers per year, by occupation: 1998-1999, Great Britain

Occupation (a)	SOC90		Rheumatologists		Occupational physicians (b)		Total (b)	
	major group	minor group	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	<b>1</b>		30	1	12	-	42	1
<b>Professional</b>	<b>2</b>		48	2	43	2	91	3
<b>Associate professional and technical</b>	<b>3</b>		54	2	373	15	427	17
– Nurses		340	12	2	241	48	253	51
<b>Clerical and secretarial</b>	<b>4</b>		90	2	120	3	210	6
– Secretaries, personal assistants		459	24	5	42	8	66	12
<b>Craft and related</b>	<b>5</b>		120	4	186	6	306	10
<b>Personal and protective service</b>	<b>6</b>		114	4	373	14	487	18
– Assistant nurses, nursing auxiliaries		640	12	8	126	79	138	86
– Care assistants and attendants		644	42	10	150	34	192	44
<b>Sales</b>	<b>7</b>		60	3	36	2	96	5
– Sales assistants		720	42	4	24	2	66	6
<b>Plant and machine operatives</b>	<b>8</b>		90	4	332	13	422	17
– Assemblers/lineworkers (vehicles & other metal goods)		851	-	-	120	154	120	154
<b>Other occupations</b>	<b>9</b>		66	3	302	14	368	18
– Other labourers in making and processing industries nec (c)		919	6	..	60	..	66	..
<b>Missing occupation</b>			36	..	6	..	42	..
<b>All occupations</b>			708	3	1 781	7	2 489	10

**Notes:**

(a) SOC90 minor groups with 10 or more actual cases reported across both schemes from 1998-1999 are shown.

(b) See footnote (b) of Table A2.14.

(c) This group comprises a miscellany of jobs, for which it would not be meaningful to compute a rate.

.. Not applicable.

nec Not elsewhere classified.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.32** Work-related upper limb disorders: estimated number of cases reported by rheumatologists and occupational physicians to MOSS/OPRA and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92 Section Division	Rheumatologists		Occupational physicians (b)		Total (b)	
		Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Agriculture, hunting, forestry and fishing</b>	<b>A, B</b>	<b>72</b>	<b>15</b>	<b>13</b>	<b>3</b>	<b>85</b>	<b>18</b>
<b>Mining and quarrying</b>	<b>C</b>	<b>60</b>	<b>57</b>	<b>54</b>	<b>52</b>	<b>114</b>	<b>109</b>
<b>Manufacturing</b>	<b>D</b>	<b>391</b>	<b>8</b>	<b>1 642</b>	<b>33</b>	<b>2 033</b>	<b>41</b>
– Manufacture of food products and beverages	15	36	7	185	36	221	43
– Manufacture of chemicals and chemical products	24	30	9	174	54	204	63
– Manufacture of other non-metallic mineral products	26	6	4	121	72	127	75
– Manufacture of basic metals	27	18	9	169	88	187	97
– Manufacture of fabricated metal products	28	24	6	118	28	142	33
– Manufacture of electronic equipment and apparatus	32	-	-	90	56	90	56
– Manufacture of motor vehicles	34	60	20	415	137	475	157
<b>Gas, electricity and water supply</b>	<b>E</b>	-	-	186	101	186	101
– Electricity, gas, steam and hot water supply	40	-	-	150	126	150	126
<b>Construction</b>	<b>F</b>	<b>174</b>	<b>10</b>	<b>15</b>	<b>1</b>	<b>189</b>	<b>11</b>
<b>Wholesale and retail trade</b>	<b>G</b>	<b>162</b>	<b>4</b>	<b>170</b>	<b>4</b>	<b>332</b>	<b>8</b>
– Retail trade	52	132	5	152	6	284	11
<b>Hotels and restaurants</b>	<b>H</b>	<b>54</b>	<b>5</b>	<b>1</b>	<b>-</b>	<b>55</b>	<b>5</b>
<b>Transport, storage and communication</b>	<b>I</b>	<b>54</b>	<b>3</b>	<b>86</b>	<b>5</b>	<b>140</b>	<b>9</b>
– Post and telecommunication	64	36	7	61	12	97	19
<b>Financial intermediation</b>	<b>J</b>	<b>120</b>	<b>11</b>	<b>48</b>	<b>4</b>	<b>168</b>	<b>15</b>
– Financial intermediation, except insurance and pension	65	72	12	6	1	78	13
<b>Real estate, renting and business activities</b>	<b>K</b>	<b>96</b>	<b>4</b>	<b>66</b>	<b>3</b>	<b>162</b>	<b>7</b>
<b>Public administration and defence</b>	<b>L</b>	<b>90</b>	<b>6</b>	<b>362</b>	<b>25</b>	<b>452</b>	<b>31</b>
<b>Education</b>	<b>M</b>	<b>54</b>	<b>3</b>	<b>91</b>	<b>5</b>	<b>145</b>	<b>7</b>
<b>Health and social work</b>	<b>N</b>	<b>180</b>	<b>6</b>	<b>372</b>	<b>13</b>	<b>552</b>	<b>20</b>
<b>Other community, social and personal service</b>	<b>O</b>	<b>54</b>	<b>4</b>	<b>145</b>	<b>11</b>	<b>199</b>	<b>15</b>
– Recreational, cultural and sporting activities	92	30	4	138	20	168	24
<b>Private households with employed workers</b>	<b>P</b>	-	-	-	-	-	-
<b>Extra-territorial organisations and bodies</b>	<b>Q</b>	-	-	-	-	-	-
<b>Missing industry</b>		<b>174</b>	<b>..</b>	<b>60</b>	<b>..</b>	<b>234</b>	<b>..</b>
<b>All Industries</b>		<b>1 735</b>	<b>7</b>	<b>3 308</b>	<b>13</b>	<b>5 043</b>	<b>20</b>

**Notes:**

(a) SIC 92 divisions with 10 or more actual cases reported each year to either MOSS or OPRA are shown.

(b) See footnote (b) of Table A2.14.

.. Not applicable.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.33** Work-related spine/back disorders: estimated number of cases reported by rheumatologists and occupational physicians to MOSS/OPRA and estimated rates per 100 000 workers per year, by industry: 1998-1999, Great Britain

Industry (a)	SIC92		Rheumatologists		Occupational physicians (b)		Total (b)	
	Section	Division	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year	Average estimated cases 1998-1999	Rate per 100 000 workers per year
	Agriculture, hunting, forestry and fishing	A,B		-	-	-	-	-
Mining and quarrying	C		6	6	54	52	60	58
Manufacturing	D		96	2	464	9	560	11
- Manufacture of motor vehicles		34	-	-	186	62	186	62
Gas, electricity and water supply	E		12	7	42	23	54	29
Construction	F		72	4	12	1	84	5
Wholesale and retail trade	G		66	2	66	2	132	3
Hotels and restaurants	H		18	2	6	1	24	2
Transport, storage and communication	I		66	4	55	3	121	8
Financial intermediation	J		24	2	6	1	30	3
Real estate, renting and business activities	K		18	1	18	1	36	2
Public administration and defence	L		90	6	271	18	361	24
Education	M		54	3	37	2	91	5
Health and social work	N		102	4	691	25	793	28
Other community, social & personal service	O		12	1	42	3	54	4
Private households with employed workers	P		-	-	-	-	-	-
Extra-territorial organisations and bodies	Q		-	-	-	-	-	-
Missing industry			72	..	18	..	90	..
All Industries			708	3	1 781	7	2 489	10

**Notes:**

(a) SIC92 divisions with 10 or more actual cases reported each year to either MOSS or OPRA are shown.

(b) See footnote (b) of Table A2.14.

.. Not applicable.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.34** Work-related mental ill health: estimated number of cases reported by psychiatrists to SOSMI by age, sex and diagnostic category: 1999, Great Britain

Sex	Diagnostic category	Estimated number of cases	Percentage age distribution of cases in 1999					
			1999	16-24	25-34	35-44	45-54	55-64
Male	Anxiety/depression	1 692	1	14	37	34	12	1
	Post-traumatic stress disorder	240	16	16	16	37	-	16
	Other work-related stress	132	9	36	9	18	27	-
	Alcohol or drug abuse	276	5	33	33	24	5	-
	Psychotic episode	108	-	44	22	22	11	-
	Other	120	10	40	20	30	-	-
	<b>Total male (a)</b>	<b>2 460</b>	<b>3</b>	<b>20</b>	<b>32</b>	<b>32</b>	<b>11</b>	<b>3</b>
Female	Anxiety/depression	1 104	9	18	27	39	7	-
	Post-traumatic stress disorder	96	-	50	13	38	-	-
	Other work-related stress	36	-	-	67	33	-	-
	Alcohol or drug abuse	96	14	-	57	29	-	-
	Psychotic episode	132	18	18	36	18	9	-
	Other	132	9	18	36	36	-	-
	<b>Total female (a)</b>	<b>1 476</b>	<b>8</b>	<b>20</b>	<b>30</b>	<b>35</b>	<b>6</b>	<b>-</b>
<b>Total cases (a)</b>	<b>3 936</b>	<b>5</b>	<b>20</b>	<b>31</b>	<b>33</b>	<b>9</b>	<b>2</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.35** Work-related mental ill health: estimated number of cases reported to OPRA by age, sex and diagnostic category: 1996-1999, Great Britain

Sex	Diagnostic category	Estimated number of cases				Percentage age distribution of 1998 and 1999 cases					
		1996	1997	1998	1999	16-24	25-34	35-44	45-54	55-64	65+
Male	Anxiety/depression	420	602	571	703	-	15	34	45	6	-
	Post-traumatic stress disorder	85	144	108	24	-	18	64	18	-	-
	Other work-related stress	194	458	458	434	1	15	29	43	12	-
	Alcohol or drug abuse	12	12	25	-	-	52	-	48	-	-
	Psychotic episode	-	-	-	-	-	-	-	-	-	-
	Other	1	25	96	84	-	36	21	36	7	-
	<b>Total male (a)</b>	<b>628</b>	<b>1 145</b>	<b>1 113</b>	<b>1 172</b>	<b>1</b>	<b>16</b>	<b>33</b>	<b>42</b>	<b>9</b>	<b>-</b>
Female	Anxiety/depression	372	388	724	822	1	15	28	43	13	-
	Post-traumatic stress disorder	12	12	24	60	-	29	14	14	43	-
	Other work-related stress	386	337	372	528	4	23	30	30	14	-
	Alcohol or drug abuse	12	12	-	-	-	-	-	-	-	-
	Psychotic episode	-	-	-	-	-	-	-	-	-	-
	Other	-	37	60	72	18	27	36	18	-	-
	<b>Total female (a)</b>	<b>638</b>	<b>702</b>	<b>1 000</b>	<b>1 386</b>	<b>3</b>	<b>18</b>	<b>29</b>	<b>35</b>	<b>15</b>	<b>-</b>
<b>Total cases (a)</b>	<b>1 266</b>	<b>1 847</b>	<b>2 113</b>	<b>2 558</b>	<b>2</b>	<b>17</b>	<b>31</b>	<b>38</b>	<b>12</b>	<b>-</b>	

**Notes:**

(a) Column totals may not sum due to cases with sex not recorded and individuals with more than one diagnosis.

**Table A2.36** Work-related mental ill health: estimated number of cases reported by psychiatrists to SOSMI (1999) and by occupational physicians to OPRA (1998-1999) and estimated rates per 100 000 workers per year, by occupation: Great Britain

Occupation (a)	SOC90		Psychiatrists		Occupational physicians (b)	
	major group	minor group	Estimated number of cases 1999	Rate per 100 000 workers	Average estimated cases 1998-1999	Rate per 100 000 workers per year
<b>Managers and administrators</b>	<b>1</b>		<b>564</b>	<b>14</b>	<b>284</b>	<b>7</b>
<b>Professional</b>	<b>2</b>		<b>936</b>	<b>34</b>	<b>451</b>	<b>17</b>
- Medical practitioners		220	180	127	36	25
- Secondary education teachers, etc		233	120	36	18	5
- Primary, nursery education teachers, etc		234	252	72	181	52
<b>Associate professional and technical</b>	<b>3</b>		<b>588</b>	<b>24</b>	<b>613</b>	<b>25</b>
- Computer analysts, programmers		320	132	67	6	3
- Nurses		340	240	48	324	65
<b>Clerical and secretarial</b>	<b>4</b>		<b>408</b>	<b>11</b>	<b>430</b>	<b>11</b>
- Clerks nos		430	72	12	168	28
<b>Craft and related</b>	<b>5</b>		<b>216</b>	<b>7</b>	<b>49</b>	<b>2</b>
<b>Personal and protective service</b>	<b>6</b>		<b>612</b>	<b>23</b>	<b>235</b>	<b>9</b>
- Police officers (Sergeant and below)		610	228	162	36	26
<b>Sales</b>	<b>7</b>		<b>132</b>	<b>7</b>	<b>49</b>	<b>2</b>
<b>Plant and machine operatives</b>	<b>8</b>		<b>312</b>	<b>13</b>	<b>124</b>	<b>5</b>
<b>Other occupations</b>	<b>9</b>		<b>156</b>	<b>8</b>	<b>92</b>	<b>4</b>
<b>Missing occupation</b>			12	..	12	..
<b>All occupations</b>			<b>3 936</b>	<b>16</b>	<b>2 336</b>	<b>9</b>

**Notes:**

(a) SOC 90 minor groups with 10 or more actual cases reported each year to either SOSMI or OPRA are shown.

(b) See footnote (b) of Table A2.14.

.. Not applicable.

nos Not otherwise specified.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.

**Table A2.37** Work-related mental ill health: estimated number of cases reported by psychiatrists to SOSMI (1999) and by occupational physicians to OPRA (1998-1999) and estimated rates per 100 000 workers per year, by industry: Great Britain

Industry (a)	SIC92		Psychiatrists		Occupational physicians (b)	
	section	division	Estimated number of cases 1999	Rate per 100 000 workers	Average estimated cases 1998-1999	Rate per 100 000 workers per year
Agriculture, hunting, forestry and fishing	A,B		48	10	-	-
Mining and quarrying	C		12	12	67	64
Manufacturing	D		396	8	311	6
Gas, electricity and water supply	E		60	33	121	66
Construction	F		180	10	13	1
Wholesale and retail trade	G		144	4	90	2
Hotels and restaurants	H		48	4	6	1
Transport, storage and communication	I		288	18	49	3
Financial intermediation	J		324	29	19	2
– Financial Intermediation, except insurance and pensions		65	264	43	1	-
Real estate, renting and business activities	K		252	10	48	2
– Other business activities		74	120	7	6	-
Public administration and defence	L		636	43	537	36
Education	M		576	29	205	10
Health and social work	N		744	27	835	30
Other community, social & personal service	O		120	9	25	2
Private households with employed workers	P		-	-	-	-
Extra-territorial organisations and bodies	Q		-	-	-	-
Missing industry			108	..	12	..
<b>All industries</b>			<b>3 969</b>	<b>16</b>	<b>2 336</b>	<b>9</b>

**Notes:**

(a) SIC 92 divisions with 10 or more actual cases reported each year to either SOSMI or OPRA are shown.

(b) See footnote (b) of Table A2.14.

.. Not applicable.

Figures shown in light type where estimated cases and rates are based on less than 10 actual cases.



**Table A2.38** Death certificates mentioning specified asbestos-related disease 1975-1998p (a) (b)

Disease	YEAR OF DEATH									
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
<b>Asbestosis</b>										
<b>A</b> Together with lung cancer	49	53	59	60	45	57	77	75	58	58
<b>B</b> Together with mesothelioma	50	75	53	85	75	69	65	80	88	89
<b>C</b> Alone or together with other diseases	48	63	74	49	54	48	60	53	62	67
<b>Total A+C</b>	97	116	133	109	99	105	137	128	120	125
<b>Total asbestosis deaths (A+B+C)</b>	147	191	186	194	174	174	202	208	208	214
<b>Mesothelioma</b>										
Of pleura	207	231	258	283	342	368	326	347	469	483
Of peritoneum	20	32	25	33	37	43	27	31	41	45
Of pleura and peritoneum	6	7	11	23	13	8	7	20	9	12
Site not specified	38	42	38	54	41	37	108	109	53	81
<b>D Total mesothelioma deaths (includes B above)</b>	271	312	332	393	433	456	468	507	572	621
<b>Males</b>	219	256	272	330	341	354	395	415	477	536
<b>Females</b>	52	56	60	63	92	102	73	92	95	85
<b>Total number of deaths (A+B+D)</b>	368	428	465	502	532	561	605	635	692	746

**Notes:**

p Provisional

(a) Data for 1994-1998 remains provisional for mesothelioma until the completeness of the register has been checked against details recorded by cancer registries. The latest year for which cancer registrations are available is 1993.

(b) The Office for National Statistics (ONS) discontinued medical enquiries in 1993. Therefore, for deaths registered from 1993 onwards, there is often less information available to accurately code the specific site of the mesothelioma.

**YEAR OF DEATH**

1985	1986	1987	1988	1989	1990	1991	1992	1993	1994p	1995p	1996p	1997p	1998p
66	84	57	78	74	76	57	70	70	70	62	61	69	46
86	65	110	89	97	120	88	86	135	108	76	79	64	55
74	82	86	73	81	88	106	80	103	104	104	135	121	119
140	166	143	151	155	164	163	150	173	174	166	196	190	165
226	231	253	240	252	284	251	236	308	282	242	275	254	220
455	531	610	645	645	658	750	758	589	572	606	568	613	648
48	43	44	55	54	59	50	58	46	51	51	47	60	61
16	14	19	20	15	17	18	19	15	15	17	16	16	10
98	116	141	152	195	161	204	263	503	604	643	673	652	808
617	704	814	872	909	895	1 022	1 098	1 153	1 242	1 317	1 304	1 341	1 527
532	603	708	759	774	777	873	963	1 007	1 090	1 138	1 148	1 168	1 328
85	101	106	113	135	118	149	135	146	152	179	156	173	199
757	870	957	1 023	1 064	1 059	1 185	1 248	1 326	1 416	1 483	1 500	1 531	1 692

**Table A2.39** Death certificates mentioning mesothelioma by age and sex 1975-1998p\**Age group*

	1975-77	1978-80	1981-83	1984-86	1987-89	1990-92	1993-95p	1996-98p
<b>Males</b>								
0-44	40	42	58	55	73	67	42	31
45-54	146	168	166	204	274	326	354	340
55-64	243	304	426	552	685	715	810	836
65-74	233	355	420	533	752	933	1 235	1 357
75+	85	156	217	327	457	572	794	1 080
<b>Total</b>	<b>747</b>	<b>1 025</b>	<b>1 287</b>	<b>1 671</b>	<b>2 241</b>	<b>2 613</b>	<b>3 235</b>	<b>3 644</b>
<b>Females</b>								
0-44	13	17	16	18	10	16	12	5
45-54	17	22	26	18	29	44	52	41
55-64	51	78	81	65	91	66	97	93
65-74	58	95	89	109	136	175	171	177
75+	29	45	48	61	88	101	145	212
<b>Total</b>	<b>168</b>	<b>257</b>	<b>260</b>	<b>271</b>	<b>354</b>	<b>402</b>	<b>477</b>	<b>528</b>
<b>Total</b>	<b>915</b>	<b>1 282</b>	<b>1 547</b>	<b>1 942</b>	<b>2 595</b>	<b>3 015</b>	<b>3 712</b>	<b>4 172</b>

**Notes:***p* Provisional

\* See footnote to Table A2.38

**Table A2.40** Mesothelioma crude death rates (per million) by region\*

<i>Region</i>	<i>Males</i>			<i>Females</i>		
	1990-92	1993-95p	1996-98p	1990-92	1993-95p	1996-98p
North	52.86	68.73	74.97	6.31	7.36	8.68
Yorkshire and Humberside	27.17	39.17	41.46	5.51	5.35	8.61
North West	32.29	34.70	40.26	4.06	4.47	5.32
West Midlands	17.59	27.15	32.67	1.62	3.36	4.71
East Midlands	23.11	29.78	33.89	4.56	4.33	5.08
South West	38.74	37.17	49.79	4.68	4.21	4.69
East Anglia	28.32	36.60	48.13	6.02	4.05	6.09
South East (not Greater London)	36.69	44.40	47.09	4.26	6.78	7.55
Greater London	27.77	34.44	36.09	5.85	5.71	5.62
South East	33.22	40.53	42.79	4.88	6.36	6.79
Wales	19.45	31.19	32.33	4.04	4.92	2.68
Scotland	40.77	45.21	46.41	5.81	7.94	5.43
Great Britain	<b>31.70</b>	<b>38.76</b>	<b>43.11</b>	<b>4.66</b>	<b>5.49</b>	<b>6.03</b>

**Notes:***p* Provisional

\* See footnote to Table A2.38

**Table A2.41** Deaths due to occupationally related lung disease, other than mesothelioma and asbestosis 1988-98 (a)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Pneumoconiosis (other than asbestosis)	281 (1)	318 (2)	328 (2)	287	274 (1)	281 (1)	276 (1)	287	223	230 (2)	268 (2)
Byssinosis	22 (13)	25 (17)	19 (12)	16 (13)	21 (14)	11 (6)	7 (5)	6 (6)	3 (3)	5 (1)	5 (1)
Farmer's lung and other occupational allergic alveolitis	9	8 (1)	6	8 (1)	4 (1)	12 (1)	10 (1)	10	1	5 (1)	8
<b>Total</b>	<b>312</b>	<b>351</b>	<b>353</b>	<b>311</b>	<b>299</b>	<b>304</b>	<b>293</b>	<b>303</b>	<b>227</b>	<b>240</b>	<b>284</b>

**Notes:**

(a) The data in this Table are derived from death certificates.

The figure is the number of deaths coded to the disease as underlying cause.

Figures in brackets show the number of females. Where no figure is given, all cases were male.

Source: ONS, GRO(S)

**Table A2.42a** Male lead workers under medical surveillance, 1993/94 to 1998/99

<i>Maximum measured blood-lead µg/100ml</i>	1993/94		1994/95		1995/96		1996/97		1997/98		1998/99	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total under surveillance</b>	<b>17 199</b>	<b>100.0</b>	<b>16 821</b>	<b>100.0</b>	<b>15 455</b>	<b>100.0</b>	<b>16 210</b>	<b>100.0</b>	<b>17 523</b>	<b>100.0</b>	<b>17 199</b>	<b>100.0</b>
<40	13 509	78.5	13 304	79.1	12 364	80.0	12 824	79.1	14 369	82.0	14 288	83.1
40<50	2 038	11.8	1 870	11.1	1 636	10.6	1 761	10.9	1 849	10.6	1 686	9.8
50<60	972	5.7	1 023	6.1	972	6.3	1 049	6.5	930	5.3	903	5.3
60<70	476	2.8	432	2.6	357	2.3	449	2.8	265	1.5	251	1.5
70<80	154	0.9	153	0.9	92	0.6	104	0.6	74	0.4	55	0.3
80 and over	50	0.3	39	0.2	34	0.2	23	0.1	36	0.2	16	0.1
Individuals suspended	116	0.7	121	0.7	75	0.5	48	0.3	55	0.3	179	1.0

**Table A2.42b** Female lead workers under medical surveillance, 1993/94 to 1998/99

<i>Maximum measured blood-lead µg/100ml</i>	1993/94		1994/95		1995/96		1996/97		1997/98		1998/99	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total under surveillance</b>	<b>831</b>	<b>100.0</b>	<b>854</b>	<b>100.0</b>	<b>949</b>	<b>100.0</b>	<b>922</b>	<b>100.0</b>	<b>848</b>	<b>100.0</b>	<b>776</b>	<b>100.0</b>
<25	n/a	-	n/a	-	n/a	-	807	87.5	768	90.6	689	88.8
25<30	n/a	-	n/a	-	n/a	-	51	5.5	30	3.5	37	4.8
30<40	n/a	-	n/a	-	n/a	-	44	4.8	40	4.7	32	4.1
<40	801	96.4	822	96.3	921	97.0	902	97.8	838	98.8	758	97.7
40 and over	30	3.6	32	3.7	28	3.0	20	2.2	10	1.2	18	2.3
Individuals suspended	12	1.4	9	1.1	12	1.3	3	0.3	3	0.4	18	2.3

**Notes:**

n/a. Not available

**Table A2.43a** Male lead workers under medical surveillance, by age, blood-lead level and industry sector, 1998/99

Sector	<i>Percentage in blood-lead category (<math>\mu\text{g}/100\text{ml}</math>)</i>							Total under surveillance	Aged under 18 years
	<20	20-29	30-39	40-49	50-59	60-69	70+		
Smelting, refining, alloying, casting	44.6	20.4	17.5	11.2	4.8	1.1	0.3	4 599	7
Lead battery industry	21.5	20.4	22.6	19.3	12.2	3.3	0.7	3 715	1
Badge and jewellery enamelling and other vitreous enamelling	25.0	58.3	16.7	-	-	-	-	12	-
Glass making	44.9	29.6	18.1	4.9	1.8	0.6	-	950	21
Manufacture of pigments and colours	77.8	13.3	5.8	2.1	1.0	-	-	618	3
Potteries, glazes and transfers	51.9	27.4	14.1	5.9	0.7	-	-	135	-
Manufacture of inorganic and organic lead compounds	54.7	21.8	13.8	6.1	2.9	0.5	0.2	1 271	-
Shipbuilding, repairing and breaking	84.4	7.8	3.9	-	0.8	3.1	-	128	-
Demolition industry	58.7	16.3	12.4	8.5	2.9	0.7	0.5	412	-
Painting buildings and vehicles	67.4	13.2	8.6	4.5	3.6	1.6	1.1	642	-
Work with metallic lead and lead containing alloys	61.4	18.6	12.4	4.9	2.0	0.5	0.2	1 726	5
Other processes	68.4	14.9	8.8	4.1	2.4	1.0	0.5	2 617	4
Scrap industry	24.9	27.0	21.1	13.6	9.6	2.7	1.1	374	-
<b>All sectors</b>	<b>48.0</b>	<b>19.5</b>	<b>15.6</b>	<b>9.8</b>	<b>5.3</b>	<b>1.5</b>	<b>0.4</b>	<b>17 199</b>	<b>41</b>

**Table A2.43b** Female lead workers under medical surveillance, by age, blood-lead level and industry sector, 1998/99

Sector	<i>Number in category</i>					Total under surveillance	Aged under 18 years
	<20	20-24	25-29	30-39	40+		
Smelting, refining, alloying, casting	136	15	10	5	-	166	-
Lead battery industry	39	15	11	20	10	95	-
Badge and jewellery enamelling and other vitreous enamelling	2	1	-	-	-	3	-
Glass making	96	10	3	2	-	111	2
Manufacture of pigments and colours	25	-	-	-	1	26	-
Potteries, glazes and transfers	81	7	2	3	-	93	1
Manufacture of inorganic and organic lead compounds	44	-	-	-	-	44	-
Shipbuilding, repairing and breaking	-	-	-	-	-	-	-
Demolition industry	4	-	-	-	-	4	-
Painting buildings and vehicles	-	-	-	-	-	-	-
Work with metallic lead and lead containing alloys	85	10	7	1	2	105	-
Other processes	110	3	3	1	5	122	3
Scrap industry	6	-	1	-	-	7	-
<b>All sectors</b>	<b>628</b>	<b>61</b>	<b>37</b>	<b>32</b>	<b>18</b>	<b>776</b>	<b>6</b>

### **ANNEX 3: ENQUIRY CONTACT POINTS**

Enquiries about statistics for injuries arising from work activity, dangerous occurrences, gas safety and enforcement action should be addressed to:

Safety and Enforcement Statistics Unit  
Health and Safety Executive  
Room 512, Daniel House, Trinity Road,  
Bootle, Merseyside L20 7HE  
Tel: 0151 951 4604/4842  
Website: [www.hse.gov.uk/hse/hsestats.htm](http://www.hse.gov.uk/hse/hsestats.htm)

Enquiries about occupational ill-health statistics should be addressed to:

Epidemiology and Medical Statistics Unit  
Health and Safety Executive  
Room 244, Magdalen House, Trinity Road,  
Bootle, Merseyside L20 3QZ  
Tel: 0151 951 4540/4538/3416/3051  
Website: [www.hse.gov.uk/hthdir/noframes/emsu.htm](http://www.hse.gov.uk/hthdir/noframes/emsu.htm)

Enquiries about social security statistics should be addressed to:

Department of Social Security  
Room B2711, Central Office, Benton Park Road,  
Longbenton, Newcastle upon Tyne, NE98 1YX  
Tel: 0191 225 7373

Enquiries about domestic accident statistics should be addressed to:

Department of Trade and Industry  
Room 434-436, 1 Victoria Street,  
London SW1H 0ET  
Tel: 020 7215 5745

Enquiries about road traffic accident statistics should be addressed to:

Department of the Environment  
Transport and the Regions  
1st Floor, Zone 2/18, Great Minster House,  
76 Marsham Street  
London SW1P 4DR  
Tel: 020 7890 3078

General enquiries about National Statistics should be addressed to:

National Statistics Public Enquiry Service  
Room DG/18, 1 Drummond Gate,  
London SW1V 2QQ  
Tel: 020 7533 5888  
Website: [www.statistics.gov.uk](http://www.statistics.gov.uk)



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