Musculoskeletal Disorders in Great Britain 2014

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Summary


Musculoskeletal Disorders (MSDs) can affect muscles, joints and tendons in all parts of the body. Most work-related MSDs develop over time and can also result from fractures sustained in an accident.

The latest estimates from the Labour Force Survey (LFS) show that in Great Britain:

- The total number of MSD cases in 2013/14 was 526,000 out of a total 1,241,000 for all work-related illnesses.
- The number of new cases of MSDs in 2013/14 was 184,000, up from 141,000 in 2011/12.
- There has generally been a downward trend in the rate of total cases and new cases of work-related MSDs since 2001/02, although the latest year has a higher rate than in 2011/12.
- The total number of working days lost due to MSDs in 2013/14 was 8.3 million, an average of 15.9 days per case of MSDs. There has generally been a downward trend in the average days lost per worker due to MSDs since 2001/02.
- Activities in specialised construction, agriculture, postal and courier and health care had higher rates of total cases of MSDs compared to the average across industries.
- Building trades, nurses, personal care and skilled agriculture trades had higher rates of total cases of MSDs compared to the average across all occupations.

The THOR-GP reporting network did not suggest any significant changes in the reported incidence of work-related musculoskeletal disorders in the most recent three years (2011-2013) where a consistent method for reporting has been used.

General practitioners in the THOR-GP reporting scheme identify heavy lifting, keyboard work and manipulating materials as the main tasks associated with the development of work-related musculoskeletal disorders seen in their clinics.

Figure 1 Estimated rates for total cases (prevalence) and new cases (incidence) of work-related musculoskeletal disorders in GB, for people working in the last 12 months

Source: Labour Force Survey (LFS)
Note: No ill health data was collected in 2002/03 or 2012/13
Introduction

Musculoskeletal disorders (MSDs) can be sub divided into the more specific and recognised regions of the back, upper limbs and lower limbs. These sub categories, when combined, form the overall grouping values presented for the general classification of MSD illness type.

The Labour Force Survey (LFS) is the main source quoted by HSE for calculating estimates and rates of musculoskeletal disorders attributed to work in Great Britain. The LFS is a household survey consisting of around 44 000 households across Great Britain which provides information about the labour market. HSE commissions a module of questions in the LFS to gain a view of work-related illness based on individuals’ perceptions. The LFS provides national estimates and corresponding rates of the overall prevalence (total cases) of self-reported work-related illness during the previous 12 months, which includes long standing as well as new cases, of incidence (new cases) of work-related illness in the same period and of annual working days lost due to work-related illness. Estimates and rates relate to people working in the previous 12 months.

The Health and Occupation Research network for general practitioners (THOR-GP) is another source that HSE utilise to assess work-related musculoskeletal disorders. This network asks reporting general practitioners to assess whether new cases of musculoskeletal disorders presented in their surgeries are work-related, and if so, what was the work-related cause of this disorder. The two data sources may reflect different perceptions of work related attribution to individual cases.

Prevalence

There has generally been a downward trend in the prevalence rate of work-related MSDs since 2001/02, although the latest year has a statistically significantly higher rate than in 2011/12 (see Figure 2).

Figure 2 Prevalence (total cases) rates of work-related musculoskeletal disorders by type in Great Britain.

Working days lost

The estimated number of working days lost in 2013/14 due to MSDs was 8.3 million. On average, each person suffering from an MSD took 15.9 days off work, equating to an average loss of 0.34 days per worker. The average days lost per worker due to MSDs has generally followed a downward trend since 2001/02.
**Figure 3** Average days lost per person suffering from an MSD, for people working in the last 12 months

Source: Labour Force Survey (LFS)

Note: No ill health data was collected in 2002/03 or 2012/13
Musculoskeletal disorders affecting the back are a common work-related complaint reported through the Labour Force Survey (LFS). Latest results show:

There has generally been a downward trend in the prevalence rate of back disorders since 2001/02, although the prevalence rate increased between 2011/12 and 2013/14 (see Figure 4). The estimated prevalence of work-related back disorders was 295 000 in 2001/02 and has fallen to 228 000 in 2013/14.

There has generally been a downward trend in the incidence rate of back disorders since 2001/02, however the 2013/14 rate is not statistically significantly different from 2011/12 (see Figure 5). The estimated incidence of back disorders in 2013/14 was 69 000, a fall from 95 000 cases in 2001/02.

The estimated working days lost in 2013/14 due to MSDs affecting the back was 2.8 million. On average, each person with a back disorder took 12.3 days off work. This equates to an average loss of 0.11 days lost per worker which is unchanged from 2011/12.

The industries with the highest estimated prevalence rates for back disorders (averaged over the years 2010/11-2013/14, with no ill health data in 2012/13) are:

- Specialised construction
- Human health and Residential care

These industries have statistically significantly higher prevalence rates of back disorders than the average across all industries.

The occupations with the highest estimated prevalence rates of back disorders (averaged over the years 2010/11-2013/14, with no ill health data in 2012/13) are:

- Health professionals.
- Skilled trade occupations, in particular in skilled construction trades.
- Service and Leisure occupations, in particular caring personal services.
- Agriculture and related trades.

These occupational groups have statistically significantly higher prevalence rates of back disorders than the average across all occupations.

Figure 4 Prevalence (total cases) rates of back disorders, for people working in the last 12 months

Source: Labour Force Survey (LFS)
Note: No ill health data was collected in 2002/03 or 2012/13
Age and Gender

In 2013/14 the estimated prevalence of back disorders was 126,000 cases for males and 103,000 females. There is no statistical significant difference between the gender-specific prevalence rates.

For males, the 16-34 age group had a statistically significantly lower prevalence rate and the 35-44 age group a statistically significantly higher prevalence rate of back disorders than the other age groups in 2013/14.

For further information from the LFS on back disorders by age and gender see;
http://www.hse.gov.uk/statistics/lfs/backage1w12.xls

Country and Region of Residence

In 2013/14 the prevalence of back disorders in England was estimated at 197,000 cases. For Scotland, there were between 13,000 and 29,000 cases in this period. There are no comparable figures for Wales for this year as sample numbers are too small to provide reliable estimates.

There was no statistical significant difference between the prevalence rates of back disorders across the regions where rates are available in Great Britain. Sample numbers are not sufficiently large to produce rates for all regions.

For further information from the LFS on back disorders by country and region see;
Workplace Size

The estimated prevalence rate of back disorders by workplace size in 2013/14 was 700 per 100,000 employed for small workplaces (less than 50 employees), 550 per 100,000 employed for medium workplaces (50-249 employees) and 410 per 100,000 employed for large workplaces (250+ employees).

Large workplaces have a statistically significant lower prevalence rate compared to the other workplace size groups.

The prevalence rate of those who are self-employed on own or with partner but no employee was statistically significantly higher than the average across all those working in the last twelve months. The estimated prevalence of back disorders amongst this group was 35,000 cases.

For further information from the LFS on back disorders by workplace size see;

- www.hse.gov.uk/statistics/lfs/backsize1.xls
- www.hse.gov.uk/statistics/lfs/backsize2.xls

Causes of work-related back disorders in GB

The THOR-GP scheme assesses what were the likely work-related causes of back disorders. Within this scheme, the General Practitioner makes a judgement on the work relatedness of the back disorder based upon information and symptoms received from their patients.

General practitioners report the most likely work-related causes of back disorders is due to tasks such as heavy lifting, keyboard work and material manipulation (see Figure 6) and/or movements such as general lifting, postural aspects and handling materials (see Figure 7).

**Figure 6** Breakdown of back disorders by attributable task 2011-2013

- Heavy lifting: 50%
- Materials manipulation: 20%
- Keyboard: 15%
- Light lifting: 10%
- Guiding or holding: 5%
- Other: 10%

Source: THOR-GP
In the period 2009/10-2011/12 the LFS estimated that the main work activities causing or making back disorders worse were:

- Manual handling (lifting/carrying/pushing/pulling) with a prevalence of 112 000 cases
- Awkward or tiring positions with a prevalence of 53 000 cases
- Workplace accidents with a prevalence of 15 000 cases

For further information on the breakdown of musculoskeletal disorders affecting the back by task and movement see;

www.hse.gov.uk/statistics/tables/thorgp13.xls
www.hse.gov.uk/statistics/lfs/backmhw1_3yr.xls

**Working Days Lost**

The estimated number of working days lost in 2013/14 due to back disorders was 2.8 million. On average, each person with a back disorder took 12.3 days off work (see Figure 3), equating to an average loss of 0.11 days per worker. The average days lost per worker has generally followed a downward trend since 2001/02.
Upper Limb Disorders (ULDs)

Upper limb disorders include a large number of different work-related musculoskeletal complaints in the hand, wrist, arm, elbow, shoulder and neck.

The prevalence rate of ULDs was statistically significantly lower in 2013/14 than 2001/02 (see Figure 8), with corresponding estimates of 201 000 cases and 223 000 cases.

The incidence rate of ULDs in 2013/14 was comparable (not statistically significantly different) with that of 2001/02 (see Figure 9) with corresponding incidence estimates of 82 000 cases and 87 000 cases.

Figure 8 Prevalence (total cases) rates of upper limb disorders, for people working in the last 12 months

![Figure 8](image)

Source: Labour Force Survey (LFS)
Note: No ill health data was collected in 2002/03 or 2012/13

Figure 9 Incidence (new cases) rates of upper limb disorders

![Figure 9](image)

Source: Labour Force Survey (LFS)
Note: No ill health data was collected in 2002/03 or 2012/13

Industry and Occupation

Human health activities reported the highest prevalence rate of ULDs averaged over the period 2010/11-2013/14 (with no ill health data in 2012/13).

This area had a statistically significant higher prevalence rate, compared to the average prevalence rate across all industries. The occupations with the highest estimated prevalence rates of ULDs based on the average prevalence rate across the period 2010/11-2013/14 (with no ill health data in 2012/13) were:
Skilled construction and building trades
Health and social care associate professionals

These had a statistically significant higher prevalence rate than the average across all occupations.

For further information from the LFS on upper limb disorders by industry and occupation see;
www.hse.gov.uk/statistics/lfs/ulnind2_3yr.xls
www.hse.gov.uk/statistics/lfs/ulnocc2_3yr.xls

Age and Gender

Females had a statistically significant higher prevalence rate of ULDs with 790 cases per 100,000 compared to males with 520 cases per 100,000 in 2013/14. The associated prevalence estimates are 115,000 cases in females and 86,000 cases in males. Across all persons the 16 - 34 age group had a statistically significant lower prevalence rate, while the age groups 45-54 and 55+ both had a statistically significant higher prevalence rate than the other age groups. For further information from the LFS on upper limb disorders by age and gender see;
www.hse.gov.uk/statistics/lfs/ulnage1w12.xls
www.hse.gov.uk/statistics/lfs/typesex1w12.xls

Country and Region of Residence

England has an estimated 174,000 total cases of ULD and Scotland an estimated of between 11,000 and 26,000 cases. No figures are available for Wales as sample sizes are too small to provide reliable estimates. There was no statistical significant difference between the prevalence rates of ULDs across the regions where rates are available in Great Britain. Sample numbers are not sufficiently large to produce rates for all regions. For further information from the LFS on upper limb disorders by country and region of residence see;
www.hse.gov.uk/statistics/lfs/ulngor1w12.xls

Workplace Size

In 2013/14 the prevalence of ULDs by workplace size for small workplaces (less than 50 employees) was 97,000 cases, for medium workplaces (50-249 employees) 29,000 cases and for large workplaces (250+ employees) 38,000 cases. The associated prevalence rates per 100,000 people employed were 570 for small workplaces, 460 for medium workplaces and 570 for large workplaces. There is no statistically significant difference between the different workplace sizes for ULDs. The prevalence rate of those who are self-employed on own or with partner but no employee was statistically significantly higher than the average across all those working in the last twelve months. The estimated prevalence of ULDs amongst this group was 32,000 cases. For further information from the LFS on Upper Limb disorders by workplace size see;
www.hse.gov.uk/statistics/lfs/ulnsize1.xls
www.hse.gov.uk/statistics/lfs/ulnsize2.xls

This document is available from www.hse.gov.uk/statistics/
Causes of work-related Upper Limb Disorders (ULDs) in GB

General practitioners report the most likely work-related causes of ULDs by work task being guiding or holding tools, keyboard work and heavy lifting (See Figure 10). This is associated with physical movements including forceful upper limb grip, fine hand movements and lifting (See Figure 11).

Figure 10 Breakdown of upper limb disorders by attributable task 2011-2013

Figure 11 Breakdown of upper limb disorders by attributable movement 2011-2013

The LFS estimated that the main work activities causing or making ULD’s worse (based over the period 2009/10-2011/12 were:

- Manual handling (pulling/pushing and lifting) with a prevalence of 80 000 cases.
- Keyboard work or repetitive actions with a prevalence of 56 000 cases.
- Awkward and tiring positions with a prevalence of 28 000 cases.

For further information on the breakdown of upper limb disorders see;

www.hse.gov.uk/statistics/fs/ulnhw1_3yr.xls
www.hse.gov.uk/statistics/tables/thorgp12.xls

This document is available from www.hse.gov.uk/statistics/
Working Days Lost

The estimated number of working days lost in 2013/14 due to ULDs was 3.2 million. On average each person with an ULD took 15.9 days off work, equating to an average loss of 0.13 days per worker. The average days lost per worker has remained relatively stable for over a decade. See; Figure 3
Lower Limb Disorders (LLDs)

Lower limb disorders (LLDs) are the least commonly reported musculoskeletal disorders, and often tend to be associated with musculoskeletal conditions in other areas of the body such as the hips, legs or feet. Due to the small number of sample cases for LLDs it is not possible to produce the same level of analysis as for back and upper limb MSDs.

The prevalence rate of LLDs in 2013/14 was not statistically significantly different from 2011/12 or the prevalence rate in 2001/02 (See Figure 12). The trend has remained fairly stable over the last decade. The associated prevalence estimates for 2013/14 and 2001/02 are 96 000 cases and 97 000 cases.

The incidence rate of LLDs in 2013/14 was not significantly different from 2011/12 or the incidence rate in 2001/02. The trend has remained fairly stable over the last decade (see Figure 13). The incidence estimate for 2013/14 was 33 000 cases compared to 34 000 cases in 2001/02.

Figure 12 Prevalence (total cases) rates of lower limb disorders, for people working in the last 12 months

Figure 13 Incidence (new cases) rates of lower limb disorders, for people working in the last 12 months

For further information from the LFS on lower limb disorders see;

www.hse.gov.uk/statistics/lfs/swit3w12.xls
www.hse.gov.uk/statistics/lfs/swit6w12.xls
**Gender**

The sample cases for LLDs are too small to provide a breakdown of estimates and rates by combined age and gender as produced for backs and upper limb disorders. However, estimates and rates are available at the gender level for lower limbs. In 2013/14 the prevalence estimates were 62 000 cases for males and 34 000 cases for females. In 2013/14 the prevalence rate for males of LLDs was 370 cases per 100 000 and 230 cases per 100 000 for females. The trend over the last decade has remained stable and as such these rates are comparable (not statistically significantly different) with both 2011/12 and 2001/02.

For further information from the LFS on lower limb disorders by gender see;

www.hse.gov.uk/statistics/lfs/typesex1w12.xls

**Working Days Lost**

The estimated number of working days lost in 2013/14 due to LLDs was 2.3 million (See; Figure 3). On average, each person with a LLD took 24.3 days off work, equating to an average loss of 0.095 days per worker. The average days lost per worker has remained relatively stable for over a decade.
Industrial Injuries Disablement Benefit (IIDB)

We gather data from the Industrial Injuries Disablement Benefit (IIDB) schemes which compensate workers who have developed a serious musculoskeletal disorder that stops them from continuing in work.

The statistics produced from IIDB are subject to change over time, and in particular, when newly authorised conditions have been added to the scheme.

In such circumstances, we would expect a large increase in the numbers of individuals compensated for a particular condition in the years immediately following authorisation with a subsequent decline as the scheme processes the population affected.

Osteoarthritis of the knee has been a prescribed disease under the IIDB since 2009. In line with expectations the number of claims made under this disease, and all other MSD related diseases, have fallen each year since 2010 across both genders. The number of new cases of osteoarthritis of the knee recorded in 2013 was 735 compared to 23355 new cases in 2010. In this period, all cases have been in males.

For further details on Industrial Injuries Disablement Benefit see;

www.hse.gov.uk/statistics/tables/iidb02.xls
National Statistics

National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

An account of how the figures are used for statistical purposes can be found at www.hse.gov.uk/statistics/sources.htm.

For information regarding the quality guidelines used for statistics within HSE see www.hse.gov.uk/statistics/about/quality-guidelines.htm.

A revisions policy and log can be seen at www.hse.gov.uk/statistics/about/revisions/

Additional data tables can be found at www.hse.gov.uk/statistics/tables/.

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