

# Work-related Musculoskeletal Disorder (WRMSDs) Statistics, Great Britain, 2015

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## Background

Work related musculoskeletal disorders (WRMSDs) can be sub divided into the more specific and recognised body regions of the back, upper limbs and lower limb disorders. These sub categories when combined, form the overall grouping values presented in this document for the general classification of MSD illness type.

Musculoskeletal disorders can affect muscles, joints and tendons in all parts of the body. Most WRMSDs develop over time. They can be episodic or chronic in duration and can also result from injury sustained in a work related accident. Additionally they can progress from mild to severe disorders. These disorders are seldom life threatening but they impair the quality of life of a large proportion of the adult population.

Work related disorders can develop in an occupational setting due to the physical tasks with which individuals carry out their normal work activities. WRMSDs are associated with work patterns that include: Fixed or constrained body positions, Continual repetition of movements, Force concentrated on small parts of the body, such as the hand or wrist, A pace of work that does not allow sufficient recovery between movements. Additionally workplace psychosocial factors such as organisational culture, the health and safety climate and human factors may create the conditions for WRMSDs to occur. Generally, none of these factors acts separately to cause WRMSDs. They more commonly occur as a result of a combination and interaction among them.

WRMSDs in Great Britain have shown a consistent downward trend over the last number of years. It is not possible to understand fully why there is a downward trend but WRMSDs still remain one of the major causes of occupational ill-health. It is possible that greater awareness of the scale of the problem has led to changes to work patterns, work design or general changes in workers attitudes and behaviours as a result of organisational cultural change may have exerted downward pressure on the overall scale of the problem. However to date WRMSDs in Great Britain remains an ill health related condition that places significant burdens on employers and employees accounting for 44% of all work related ill-health.

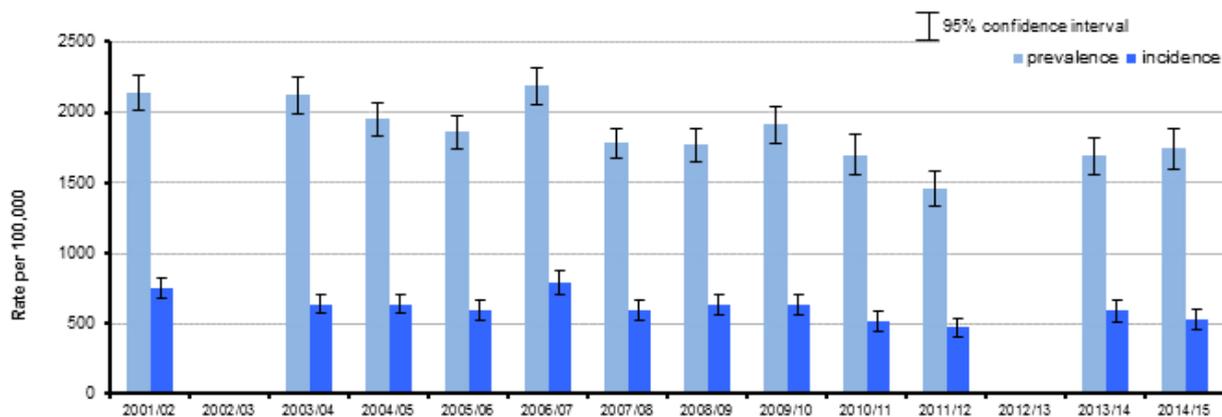
The rest of this document looks in more detail at the statistics related to WRMSDs to get a clearer understanding of the problem within the working environment in Great Britain.

This document cites two main sources for WRMSD statistics. The first is the Labour Force Survey (LFS), an annual survey of 41,000 households in Great Britain. The second is analysis from a survey of occupationally trained General Practitioners across Great Britain called, "The health and occupation network of general practitioners" (THOR-GP).

The latest estimates from the Labour Force Survey (2015) show that in Great Britain,

- The total number of WRMSDs cases (prevalence) in 2014/15 was 553,000 out of a total of 1,243,000 for all work related illnesses, 44% of the total.
- The number of new cases of WRMSDs (incidence) in 2014/15 was 169,000, an incidence rate of 530 cases per 100,000 people. The estimated number and rate fell in the ten years to 2011/12. The level in 2014/15 was similar to those in 2011/12 and 2013/14 (no data was collected in 2012/13).
- An estimated 9.5 million working days were lost due to WRMSDs, an average of 17 days lost for each case. This represents 40% of all days lost due to work related ill-health in 2014/15. Agriculture; construction; health and social care; and transportation and storage industries all show elevated rates of musculoskeletal disorders.
- By occupation elevated rates of musculoskeletal disorders are seen in occupations that are common across the above industries (such as health and caring occupations; skilled agricultural and construction trades; and postal workers), and also in some occupations common across other industries (such as manufacturing and public administration and defence).

**Figure 1. Estimated rates for total cases (prevalence) and new cases (incidence) of WRMSDs in Great Britain for people working in the last 12 months**



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

[www.hse.gov.uk/statistics/lfs/swit3w12.xlsx](http://www.hse.gov.uk/statistics/lfs/swit3w12.xlsx)

### Working days lost

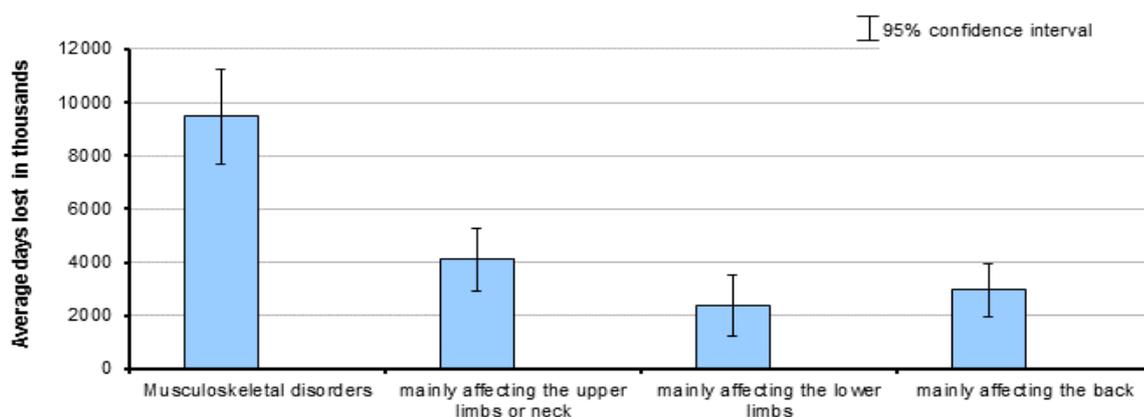
An estimated 9,466,000 working days were lost due to WRMSDs, an average of 17.1 days lost for each case.

However, whilst the number of days lost is significantly lower than days lost in 2001/02, there has been no significant change over the last five years.

WRMSDs represent 40% of all days lost due to work related ill health in Great Britain in 2014/15.

Within the total number of 9,466,000 days lost due to WRMSDs, WRULDs account for around 43% of days lost at 4,112,000, with back disorders around 31% of days lost at 2,857,000 days and WRLLDs 25% at 2,396,000 days.

**Figure 2. Average days lost in thousands for WRMSDs in Great Britain 2014/15**



## WRMSDs by industry and occupation

The industries with the highest rates of WRMSDs averaged over the 3 year period, 2011/12, 2013/14 and 2014/15 are agriculture and forestry, construction, transport and storage and public administration and defence. Compared with the average rate for all industry these industries have significantly higher rates of WRMSDs.

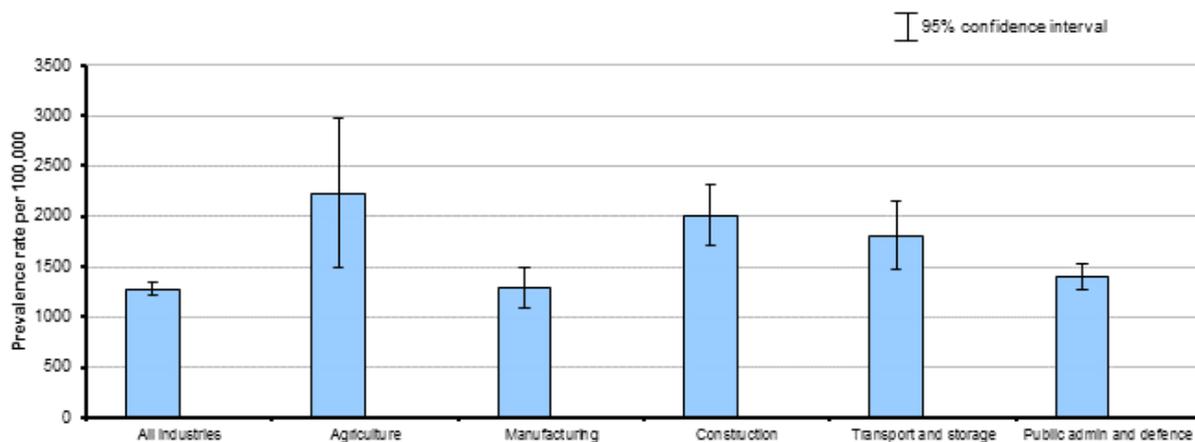
Looking more closely at these industry areas, the following sectors are those with the highest rates of WRMSDs. (Figure 3)

Within the agricultural industry it has been consistently shown that musculoskeletal disorders (WRMSDs) are the most common of all occupational non-fatal injuries and illnesses for farm workers, especially those who are involved in labour-intensive practices (McCurdy et al., 2003, Meyers et al., 1997, Villarejo, 1998 and Villarejo and Baron, 1999). Whilst in agriculture in Great Britain is highly mechanised and not as labour intensive as other countries agricultural workers are still at risk from WRMSDs. These include: lifting and carrying heavy loads (over 50 lb); sustained or repeated full body bending (stoop); and very highly repetitive hand work (clipping, cutting).

Historically workers in the postal industry have reported higher rates of WRMSDs due to lifting and carrying mail sacks. Industrial automation of tasks has reduced the scope over the years however a recent report in the USA by the National Institute for Occupational Safety and Health (NIOSH) has suggested that investigators have identified excessive heavy lifting and several ergonomic hazards -- design features that tax or endanger the human body excessively - associated with the Postal Services automated mail-processing equipment. The agency warns that these hazards put employees at potential risk for crippling low back problems as well as musculoskeletal disorders of the upper body; other NIOSH studies have found that machine-paced postal workers reported a higher incidence of fatigue, blurred vision, and neck, arm, or hand complaints.

In the UK, the main postal workers union, the Communication Workers Union (CWU) suggested that postal workers representing 0.7% of the UK workforce reported 10% of WRMSDs (Hooper 2015)

**Figure 3. Prevalence rate (total cases) of work related musculoskeletal disorders in Great Britain by industry averaged over the 3 year period 2011/12, 2013/14 and 2014/15.**



[www.hse.gov.uk/statistics/lfs/msdind2\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/msdind2_3yr.xlsx)

Within the broad category of public administration and defence, health and social care workers are at higher risk of WRMSDs. Most attention has been directed towards nursing— as the largest occupational group in the health care sector— in terms of mitigation of risks associated with WRMSDs. However, the health care sector employs a large range of occupations, including paramedics, care assistants, theatre support staff, maintenance, food services, and cleaning staff (Hignett, Fray, et al., 2007) all of which require further attention to reduce risks associated with WRMSDs (Oakman et al., 2014). The main physical risk in terms of WRMSDs has focussed on patient handling.

The construction industry has a long history of higher rates of WRMSDs due to the physical nature of working in that industry. Plasterers, bricklayers and joiners are the trades frequently cited within construction at high risk (EU –OSHA, 2015).

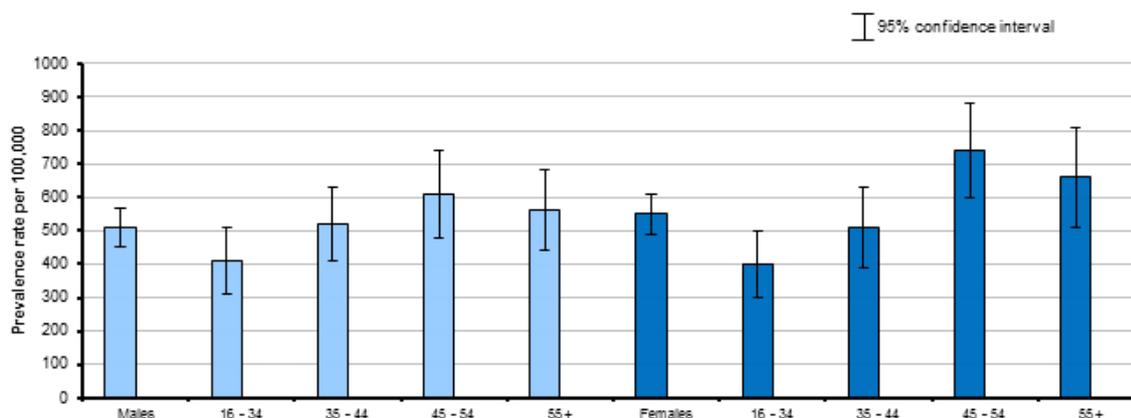
Tasks carried out within construction trades require the use of hand tools and power tools, entailing the use of multiple body regions, constant movement in awkward positions, and repetitive, forceful, use of the back and upper and lower extremities.

The particular tasks undertaken by construction workers largely depend on the trades they are employed in and the particular construction site they are on. Tasks can vary throughout the day, but can also be repetitive.

### **WRMSDs and age and gender**

Historically, the prevalence rates across genders and age groups are statistically significantly lower than the corresponding period 10 yrs. ago, 2001/02, 2003/04 and 2004/05.

**Figure 4. Prevalence rate (total cases) of WRMSDs by age and gender in Great Britain 3 year average 2011/12, 2013/14 and 2014/15**



[www.hse.gov.uk/statistics/lfs/msdage1\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/msdage1_3yr.xlsx)

Males in the 16-34 age range have statistically significantly lower prevalence rates of WRMSDs than the other age ranges. For the three year average, the 16-34 year age bracket had a prevalence rate estimate of 970 cases per 100,000 people employed compared with a rate of 1650 cases per 100,000 people employed for all males as a whole. Males in the 45-54 and the 55 years plus category had rates significantly higher than all males as a whole with rates of 2170 and 2200 respectively per 100,000 people employed compared with 1650 cases per 100,000 persons employed.

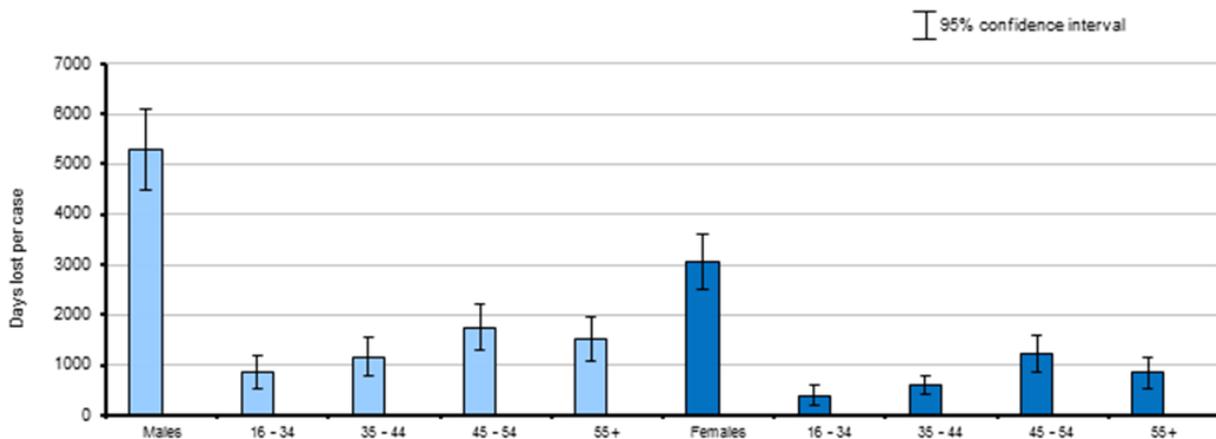
This pattern is replicated in females, with the 16-34 age range statistically significantly lower than females as a whole at 840 cases per 100,000 people employed, compared with 1610 cases per 100,000 people employed as a whole. The age ranges 45-54 and the 55 years plus age range had significantly higher rates at 1590 and 2320 cases per 100,000 people employed, compared with 1610 cases as a whole across all the age ranges.

In Britain, as in many developed nations, the populations, including worker populations, are ageing. This has generated increased research into the control of age related workplace risks, particularly those associated with occupational ill health.

Age is not the most important determinant of health, nor does ageing inevitably bring illness and disease. Negative beliefs about ageing, including that older age is a risk factor for injury at work, have however, tended to preclude older workers from workplaces (HSE, 2010)

The studies on functional capability indicate age-related changes in functional capabilities of adults and it is generally agreed that as we age we are not able to perform to the same level as when we were young (Savinainen et al., 2004; Atwood, 2005; Kowalsi-Trakofler et al., 2005; Kenny et al., 2008; Welch et al., 2008). In terms of WRMSDs, there are three main musculoskeletal changes reported in the literature; a reduction in joint mobility, decrease in muscular strength and the slowing of reaction and movement times.

**Figure 5. Average days lost for WRMSDs by age and gender in Great Britain 3 year average 2011/12, 2013/14 and 2014/15**



[www.hse.gov.uk/statistics/lfs/msdage3\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/msdage3_3yr.xlsx)

It is estimated over the three year average mentioned above that average days lost for males were 5,287,000. With the age ranges the 16-34 year range had statistically significantly lower days lost than all other age ranges, however the 45-54 and the 55 year plus had a significantly higher rate of days lost than the average over the entire age range 16-55+ years.

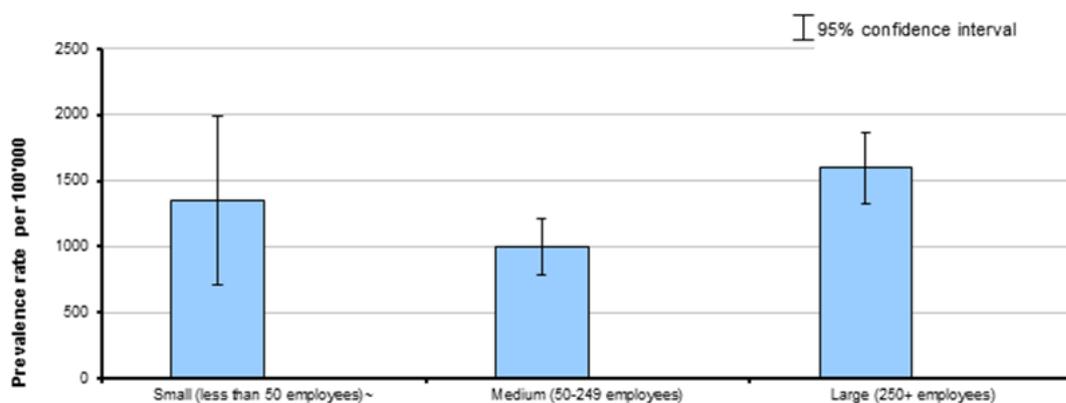
Females averaged 3,053,000 days lost per year over this period. The age range 16-34 years had a significantly lower days lost rate than the average over the entire range whilst those in the 55 years plus category had a higher days lost rate than the average of the whole age range 16- 55 years plus.

The days lost for this period are significantly lower than the three year period 2001/02, 2003/04 and 2004/05.

### **WRMSDs by workplace size**

The prevalence rate for WRMSDs by workplace size in 2014/15 was statistically significantly lower in medium enterprises at 1000 cases per 100,000 for people employed in the last 12 months compared with 1350 cases for small enterprises and 1600 cases for large enterprises which were not statistically difference across all enterprises

**Figure 6. Estimated prevalence rates of self-reported musculoskeletal disorders caused or made worse by current or most recent job, for small, medium and large workplaces, for people working in the last 12 months, 2014/15**

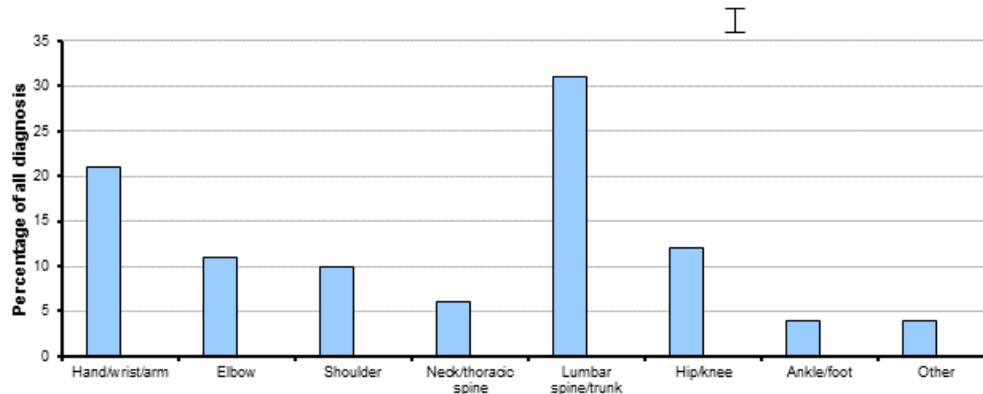


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## General Practitioners Scheme and WRMSDs.

The THOR-GP scheme sponsored by the Health and Safety Executive from 2005 until the present day is a survey where a sample of General Practitioners across Great Britain record work related ill-health from their patients in their local surgeries. The advantage of this survey has been to have a greater understanding of the conditions with which people present symptoms and how the condition might have occurred.

**Figure 7. Cases of WRMSDs by anatomical site THOR-GP, three-year aggregate total 2012 to 2014 (diagnoses total 3708).**



[www.hse.gov.uk/statistics/tables/thorgp15.xlsx](http://www.hse.gov.uk/statistics/tables/thorgp15.xlsx)

An example of some typical WRMSDs cases reported to specialist physicians in Great Britain 2002-2008 (THOR)

WRMSDs in butchers from the health and occupation reporting network (THOR) data (2002-08)

Of the 10 cases (aged 29-64 years) reported by rheumatologists, all except 1 case was male:

- 6 cases were hand/wrist/arm problems (1 with a co-diagnosis of shoulder)
- 3 cases were elbow diagnoses
- 1 case was simply reported as joint arthritis,
- Associated tasks were lifting and chopping, cutting meat and twisting, turning, carrying meat,

There were 6 case reports of hand/wrist/arm problems (including tenosynovitis, tendonitis and thumb fracture) and 1 case of shoulder pain reported to OPRA, attributed to tasks including, boning, cutting, and, trimming.

GPs reported 16 cases of work-related MSDs in butchers and meat cutters,. The cases were aged 18 to 58 years, and 15 of the 16 were males. Of these 8 cited hand/wrist/arm as the affected area (including Raynaud's syndrome, tenosynovitis and carpal tunnel syndrome), and a further 4 cases were diagnosed as tennis elbow. The remainder were single cases of:

- Neck/thoracic spine (muscle strain)
- Low back pain
- Heel pain
- Muscular injury to chest.

The tasks associated with these cases included, deboning, poor lifting technique, repetitive action, prolonged standing, holding/chopping/handling/preparing meat and "struggling with a stropky ewe".

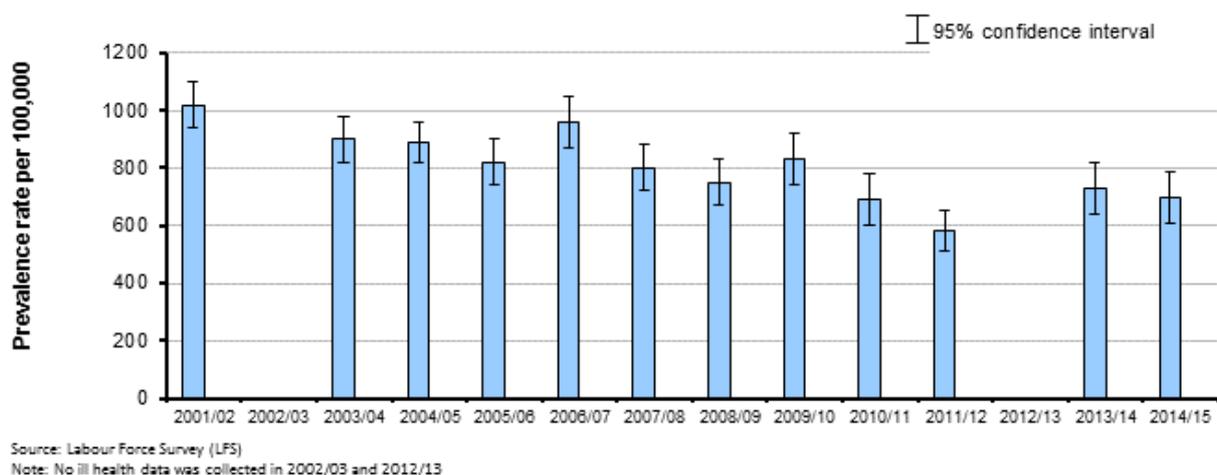
## WRMSDs Back Disorders

Work related low back pain is a major ill health condition in Great Britain and across the EU more generally. Typical low back pain has a recurrent course with fluctuating symptoms. The majority of back pain patients will have experienced a previous episode and acute attacks often occur as exacerbations of chronic low back pain. Low back pain is also a socioeconomic problem associated with work absenteeism, disablement and high healthcare costs (Van Tulder, 2006).

WRMSDs affecting the back are a common work related complaint reported through the Labour Force Survey Latest results show:

- There has generally been a downward trend in the prevalence rate of back disorders since 2001/02. In 2014/15 the prevalence rate was 700 cases per 100,000 people employed compared with 1020 cases in 2001/02. This equates to 223,000 total cases in 2014/15 compared with 294,000 total cases in 2001/02 a statistically significant reduction.
- The prevalence rate in 2014/15 is not statistically different from the previous year 2013/14, being 730 cases per 100,000 or 227,000 total cases, and is of a similar order over the last five year period.
- In 2014/15 the working days lost due to work related back disorders was 2,957,000 days with the average number of days lost per case of 13.3 days. Days lost per case are significantly lower than the 2001/02 average days lost of 18.5 days per case. Over the last five years the average days lost per case is of a similar order.

**Figure 8. Prevalence rate (total cases) of work related back disorders in Great Britain per 100,000 for people employed in the last 12 months**

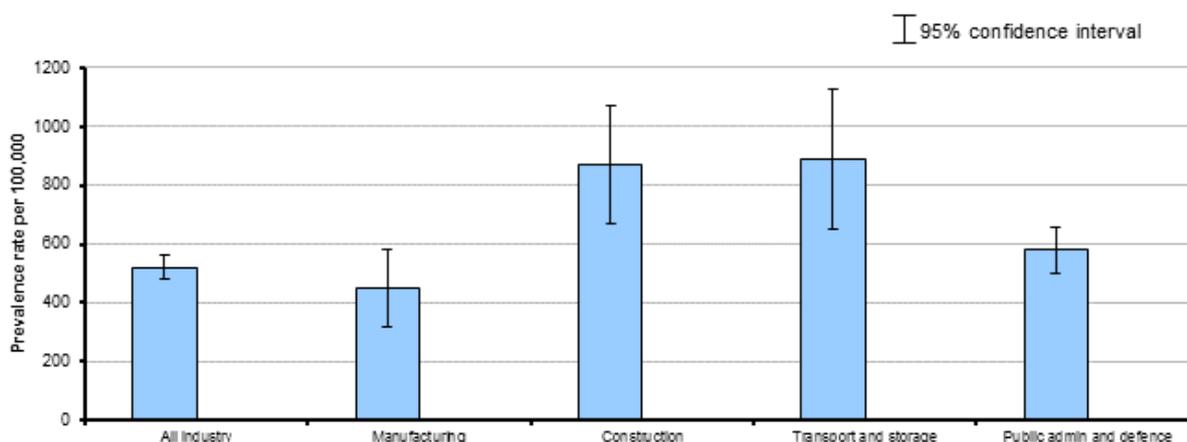


[www.hse.gov.uk/statistics/lfs/swit3w12.xlsx](http://www.hse.gov.uk/statistics/lfs/swit3w12.xlsx)

### **Back disorders by industry and occupation**

The prevalence rates for back disorders are statistically significantly higher in the construction and transport industries compared with the average across all industries. The transport and storage industries have a rate of 890 cases per 100,000 people, with 870 cases in the construction industry and 520 cases across all industries, in the three year period 2011/12, 2013/14 and 2014/15.

**Figure 9. Industries with the highest estimated prevalence rates for back disorders, averaged over the 3 year period 2011/12, 2013/14 and 2014/15**

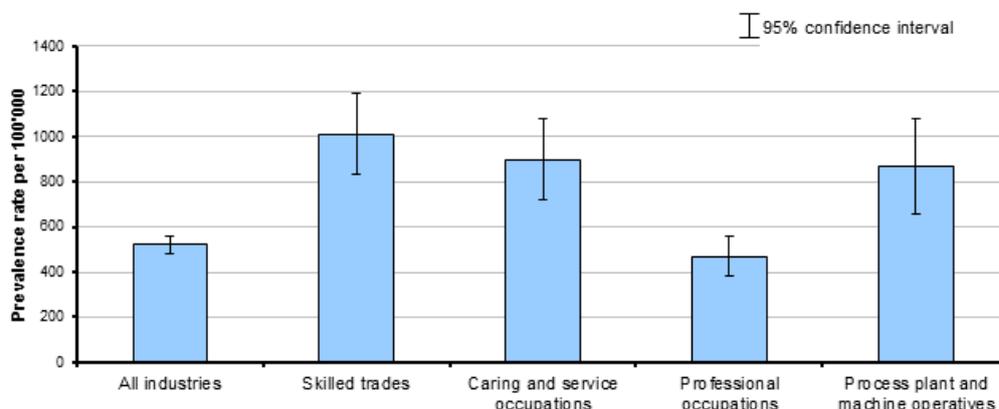


[www.hse.gov.uk/statistics/lfs/backind2\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/backind2_3yr.xlsx)

The occupations that have the highest prevalence rates of back disorders are reflective of the industry areas mentioned above. Skilled trades, caring and service occupations and process plant and machine operatives are the occupation categories with statistically higher prevalence rates compared with all occupations.

Within these broad categories, caring personal services has significantly higher prevalence rates: 970 cases per 100,000 people employed, compared with an all industry average of 520 cases per 100,000 people employed. In addition, skilled trade occupations had significantly higher rates 1010 per 100,000 people employed and, in particular, agricultural trades at 1540 cases per 100,000 people employed compared with all industries at 520 cases. Within process machine and plant operatives category, transport and mobile machine drivers had the higher rates at 1060 cases per 100,000 people employed. Within the professional occupational group, whilst the category is not statistically significantly higher than all industry, health professions (which are categorised within it) have higher rates than all industries at 980 cases per 100,000 people employed.

**Figure 10. Occupations with the highest estimated prevalence rate of back disorders, averaged over the 3 year period 20011/12, 2013/14 and 2014/15**



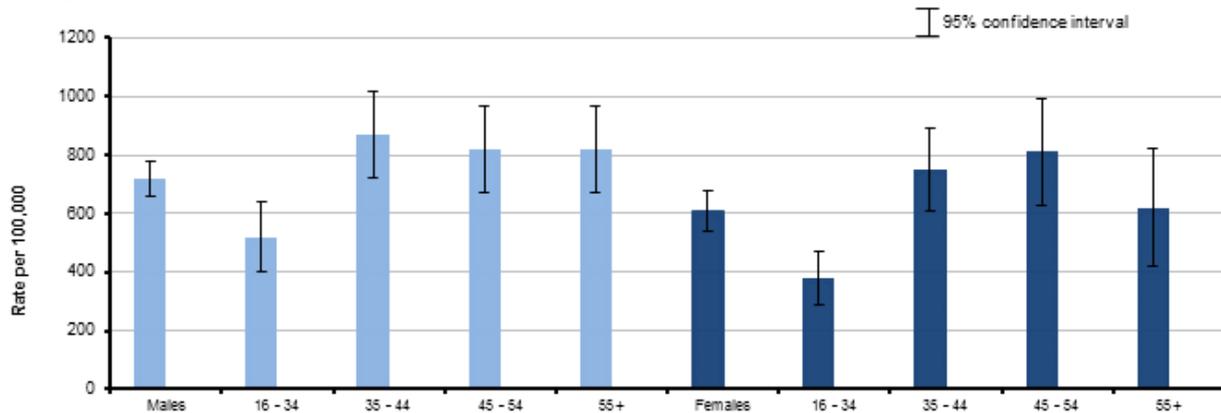
[www.hse.gov.uk/statistics/lfs/backocc2\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/backocc2_3yr.xlsx)

## Back disorders by age and gender

Males in the age range 35-44 years had a statistically significantly higher rate of back disorders compared with the other age ranges, with a prevalence rate of 870 cases per 100,000, compared with all males age ranges at 720 cases per 100,000. Males in the 16-34 year range had 520 cases per 100,000, statistically significantly lower than the average.

Females in the 16-34 age range had statistically significantly lower prevalence rates than all female age ranges, at 380 cases per 100,000, compared to 610 cases per 100,000 for all females. There was no statistically significant difference between other age ranges for females.

**Figure 11. Estimated prevalence rates of self-reported musculoskeletal disorders mainly affecting the back caused or made worse by work, by age and gender, for people working in the last 12 months, averaged 2011/12, 2013/14, 2014/15**

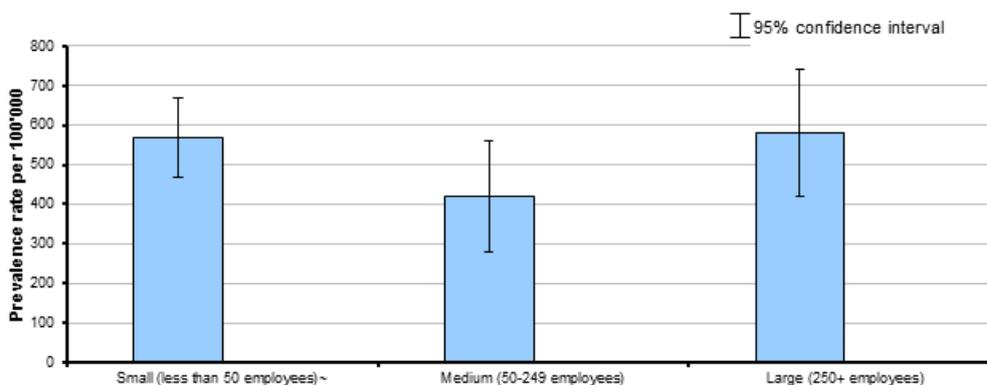


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## Back disorders by workplace size

The prevalence of back disorders by workplace size is not significantly different between small medium and large workplaces. This has also been the case over the last five years. The prevalence rates are 570 cases, 420 cases and 580 cases per 100,000 respectively.

**Figure 12. Estimated prevalence rates of self-reported musculoskeletal disorders mainly affecting the back caused or made worse by current or most recent job, for small, medium and large workplaces, for people working in the last 12 months, 2014/15**

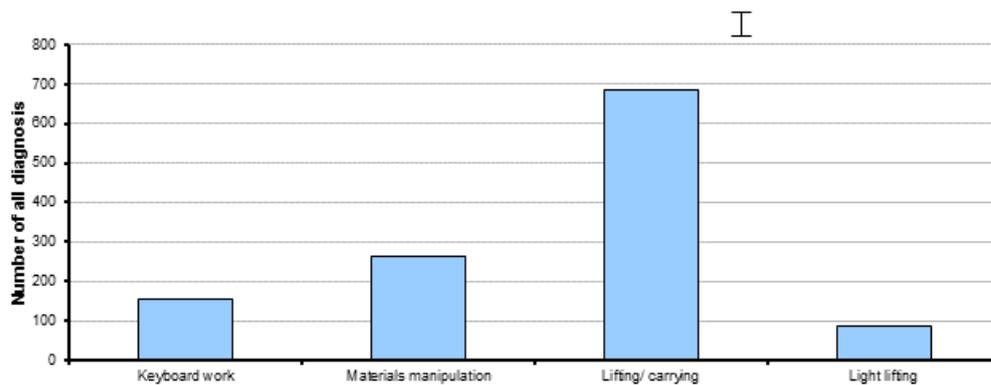


[www.hse.gov.uk/statistics/lfs/backsize2.xlsx](http://www.hse.gov.uk/statistics/lfs/backsize2.xlsx)

## Causative factors in low back pain

The general practitioners scheme which collects work related data from patients presenting within GP clinics provides some useful information on what the GP and patient considered was the main cause of back pain. Examining the case data from 2012-2014 it demonstrates that lifting and carrying remains the primary driver for low back pain at work. This has also traditionally been the case for many years across all industries. Material manipulation which also involves moving, pushing shoving and lifting is also an important cause presented.

**Figure 13. Spine or back disorders reported to General Practitioners scheme (THOR GP) according to main attributed task THOR-GP, three-year aggregate total 2012 to 2014**



[www.hse.gov.uk/statistics/tables/thorgp13.xlsx](http://www.hse.gov.uk/statistics/tables/thorgp13.xlsx)



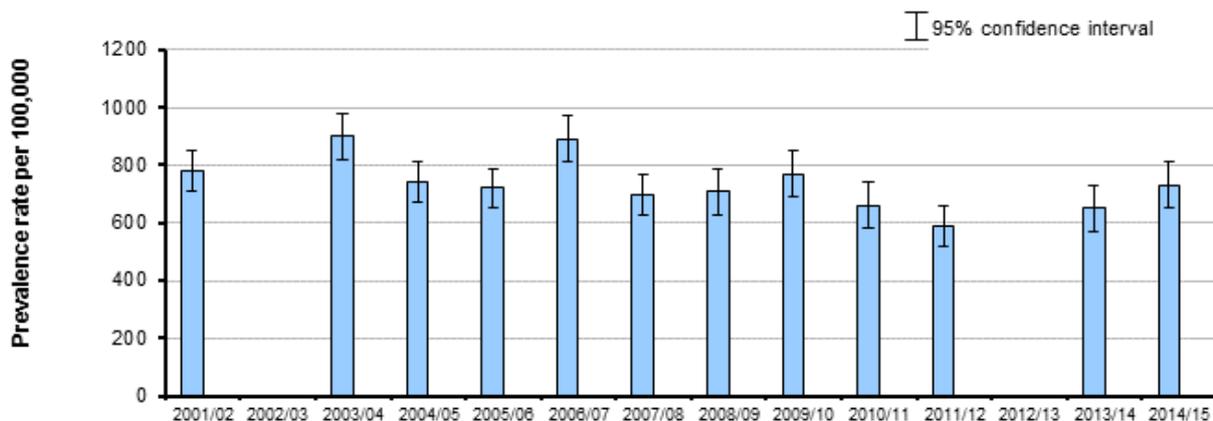
## Work Related Upper Limb Disorders (WRULDs)

Upper limb disorders include a large number of different WRMSDs in the hand, wrist, shoulder and neck. Typical examples include repetitive strain trauma, hand-wrist tendon syndromes, carpal tunnel syndrome or epicondylitis.

Hand- wrist tendon syndrome, for example, can occur in a work setting where there are repetitive movement of the hand and wrist, forceful movement or extensive flexion of the hand and wrist. Examples of occupations in which this could occur include the work in the food and drink industry involving repetitive food packing (Riihimaki, 1995).

The prevalence of WRULDs in 2014/15 was 233,000 total cases (case rate of 730 per 100,000 people employed). This was not statistically significantly different from 2013/14 with total cases at 203,000 a rate of 650 cases per 100,000 people employed, and the 2014/15 rate is of a similar order to that in 2001/02, with a prevalence of 223,000 cases, a rate of 780 per 100,000 people employed

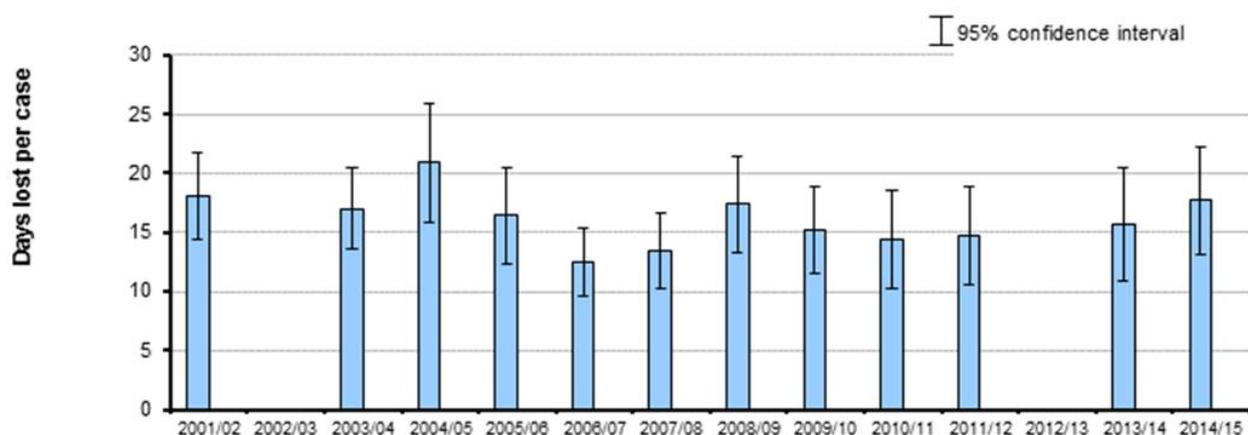
**Figure 14. Prevalence (total case) rate of WRULDs per 100,000 people employed in the last 12 months in Great Britain**



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

[www.hse.gov.uk/statistics/lfs/swit3w12.xlsx](http://www.hse.gov.uk/statistics/lfs/swit3w12.xlsx)

**Figure 15. Average days lost per case for WRULDs per 100,000 people employed in the last 12 months in Great Britain**



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

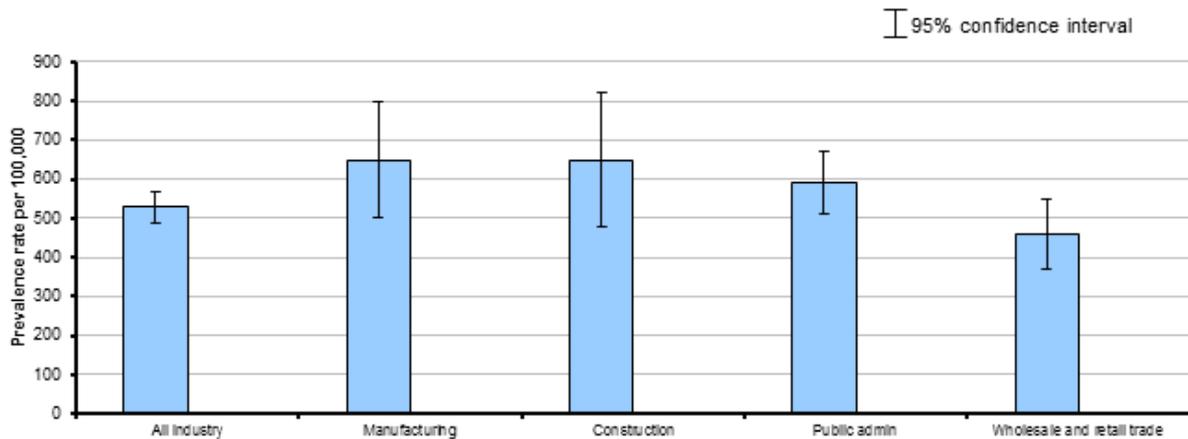
[www.hse.gov.uk/statistics/lfs/swit1.xlsx](http://www.hse.gov.uk/statistics/lfs/swit1.xlsx)

The number of days lost due to work related WRULD,s was 4,112,000 days, on average 17.7 days per case. This was not statistically significantly different from the previous year, 2013/14, with 15.7 days per case and was of a similar order to 2001/02 at 18.1 days per case.

## WRULDs by industry and occupation

The industries with the highest prevalence rates of WRULDs were the manufacturing and construction industries, each having a rate of 650 cases per 100,000 people employed, over the three year period, 2011/12, 2013/14 and 2014/15. This is not statistically significantly higher than the rate for all industries of 530 cases per 100,000. Activities in human health sector (within public administration category) had a prevalence rate of 890 cases, statistically significantly higher than the rate of all industries.

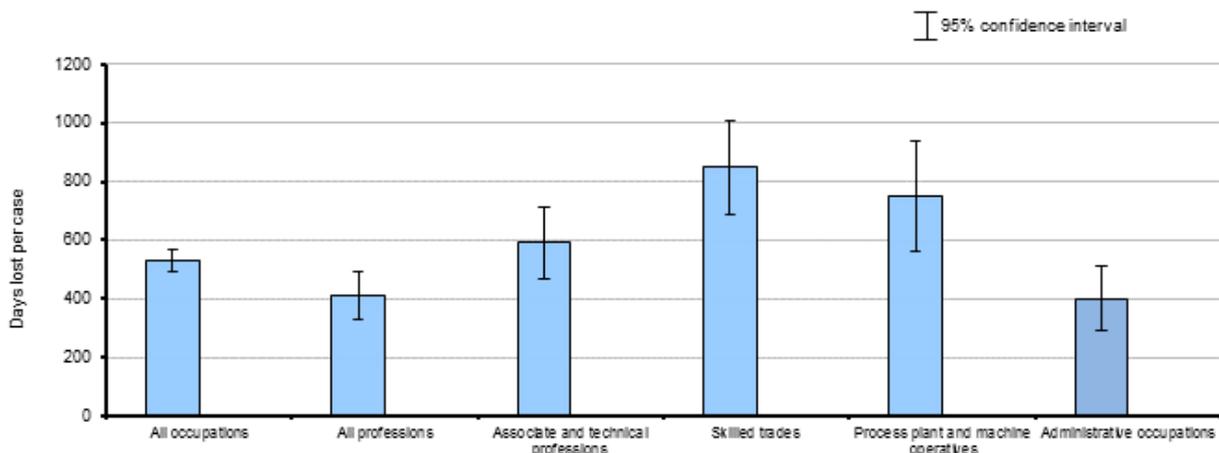
**Figure 16. Industries with the highest estimated prevalence rates for WRULDs averaged over the 3 year period 2011/12, 2013/14 and 2014/15**



[www.hse.gov.uk/statistics/lfs/ulnind2\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/ulnind2_3yr.xlsx)

The occupations reporting the highest rates reflect the industry sectors with the highest rates: skilled building trades; machine operatives; and human health professions. For the three year period 2011/12, 2013/14 and 2014/15 the prevalence rate per 100,000 people employed was 530 cases, however, for the skilled building trades this rose to 850 cases; for process plant and machine operatives the rate was 750 cases; and for the health professions the rate was 760 cases. Both the skilled trade professions and process and plant machine operatives had statistically higher rates than the average for all occupations.

**Figure 17. The occupations with the highest estimated prevalence rate for WRULDs averaged over the 3 year period 2011/12, 2013/14 and 2014/15**



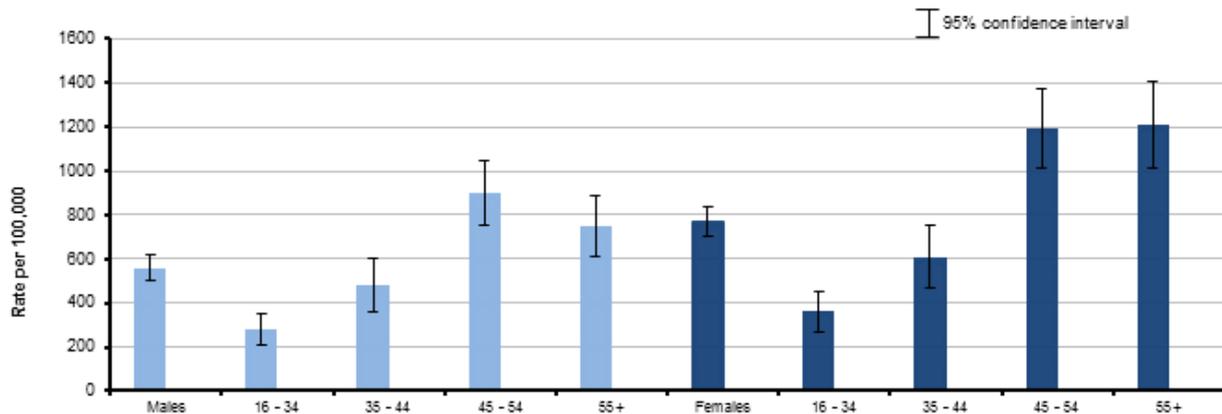
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### WRULDs by age and gender

The estimated prevalence rate for WRULDs for males by age is 560 cases per 100,000 people employed in the period 20011/12, 2013/14 and 2014/15. Looking more closely at the age ranges, Figure 18 shows that men in the 45-54 year range and in the 55+ range have statistically significantly higher estimated rates of WRULDs than other age ranges. Males in the age range 16-34 have statistically significantly lower WRULDs than the other age ranges.

For all females in the same period the prevalence rate was 770 cases per 100,000 people employed. Females in the 45-54 year age range and again in the 55+ age range had statistically significantly higher rates, being 1190 and 1210 cases respectively. Similarly females in the 16-34 age range had statistically lower rates at 360 cases.

**Figure 18. Estimated prevalence rate of WRULDs, by age and gender, for people working in the last 12 months, averaged 2011/12, 2013/14, 2014/15**

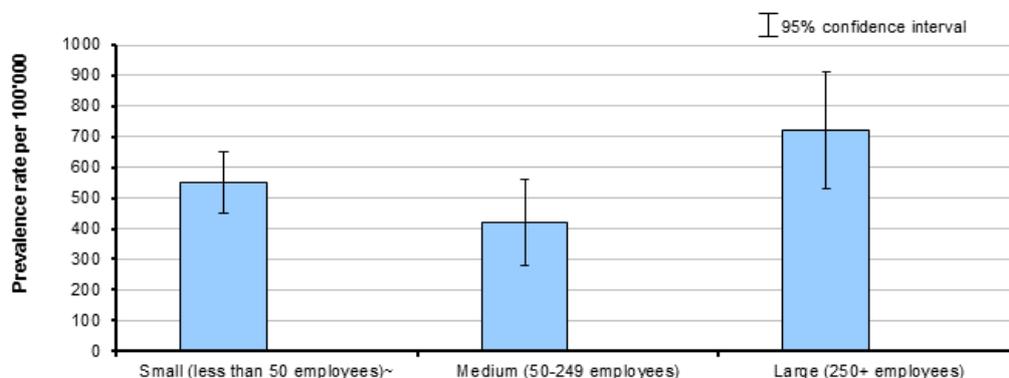


[www.hse.gov.uk/statistics/lfs/ulnage1\\_3yr.xlsx](http://www.hse.gov.uk/statistics/lfs/ulnage1_3yr.xlsx)

### WRULDs by workplace size

There was no significant difference in the prevalence rates of WRULDs by the size of the enterprise in 2014/15. Small businesses had a prevalence rate of 550 cases per 100,000 people employed compared with 420 cases and 720 cases for medium and large enterprises respectively.

**Figure 19. Comparison of estimated prevalence rates of self-reported WRULDs for small, medium and large workplaces, for people working in the last 12 months, 2014/15**

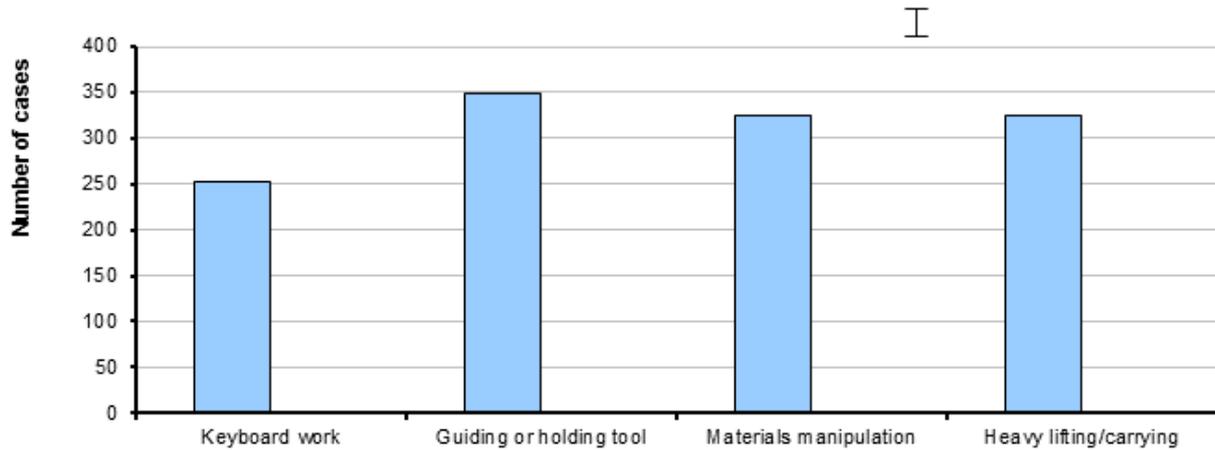


[www.hse.gov.uk/statistics/lfs/ulnsize2.xlsx](http://www.hse.gov.uk/statistics/lfs/ulnsize2.xlsx)

### ***The general practitioners scheme and WRULDs.***

The general practitioners scheme which collects work related data from patients presenting within GP clinics provides some useful information on what the GP and patient considered was the main cause of back pain. Examining the case data from 2012-2014 it demonstrates that heavy lifting, holding tools for periods of time, excessive keyboard work and pulling shoving carrying materials were the main causes for WRULDS cited by GP's and their patients in this period.

**Figure 20. Breakdown of upper limb disorders reported to THOR-GP according to attributed task THOR-GP, three-year aggregate total 2012 to 2014**



[www.hse.gov.uk/statistics/tables/thorgp12.xlsx](http://www.hse.gov.uk/statistics/tables/thorgp12.xlsx)



## Work Related Lower Limb Disorders (WRLLDs)

WRLLDs are distinct from WRMSDs affecting the back, the neck and the upper limbs, in that they can often give rise to greater degrees of immobility and thereby can degrade quality of life substantially (Bruchal, 1995; Lohmander et al., 2004). Like disorders of the upper limb and axial skeleton (neck and trunk), WRLLDs involve the muscles, tendons or nerves, ligaments and other tissues, and they are generally manifested by inflammation, pain, discomfort or tingling.

Historically WRLLDs are not as well documented in the occupational health literature as back and upper limb disorders. Reports of WRLLD symptoms tend not to be independent of reports of symptoms in other areas of the body (Gamperiene and Stigum, 1999; da Silva et al., 2006).

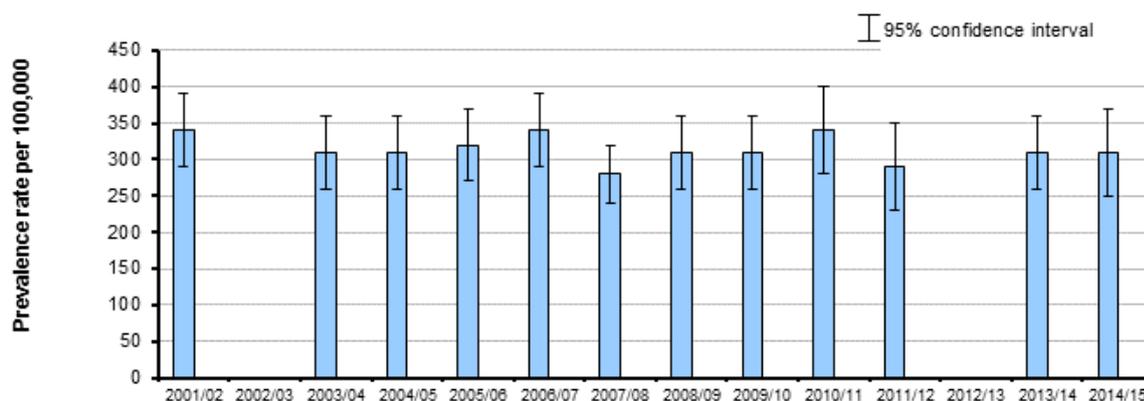
D,Souza et al. (2005) opined from their review of the literature surrounding general worker populations that the low prevalence of WRLLDs reported in the studies, could be due to other factors because true prevalence is not totally captured. For instance, workers who had withdrawn from the workplace or transferred to other jobs due to chronic injuries are likely to have been excluded from surveyed data, as has previously been suggested by Walker-Bone and Palmer (2002).

WRLLDs are often categorised as acute or overuse injuries. Acute can include meniscal tears of the knee or ankle and metacarpal fractures of the ankle and foot. Overuse injuries for example include in the hip and thigh, osteoarthritis and hamstrings strains, in the knee, osteoarthritis, patellofemoral pain syndrome, shin splints and in the foot and ankle, Achilles tendonitis, plantar fasciitis or ankle sprain amongst others.

According to many cross sectional studies workers in occupations with heavy physical demands have a higher prevalence of knee osteoarthritis than those in lower demanding work. Examples include carpet and floor layers whose job requires frequent kneeling had an increased prevalence of patellar osteophytosis (Riihimaki, 1995).

The prevalence rate of WRLLDs was 310 cases per 100,000 people employed and equated to a total case number of 97,000. This is of a similar order over the last 12 data collection points (measured between 2001-2015) and there was no significant difference in the rate between 2014/15 and 2001/02 of 340 cases per 100,000 people employed.

**Figure 21. Prevalence rate (total cases) of work related lower limb disorders in Great Britain per 100,000 for people employed in the last 12 months**

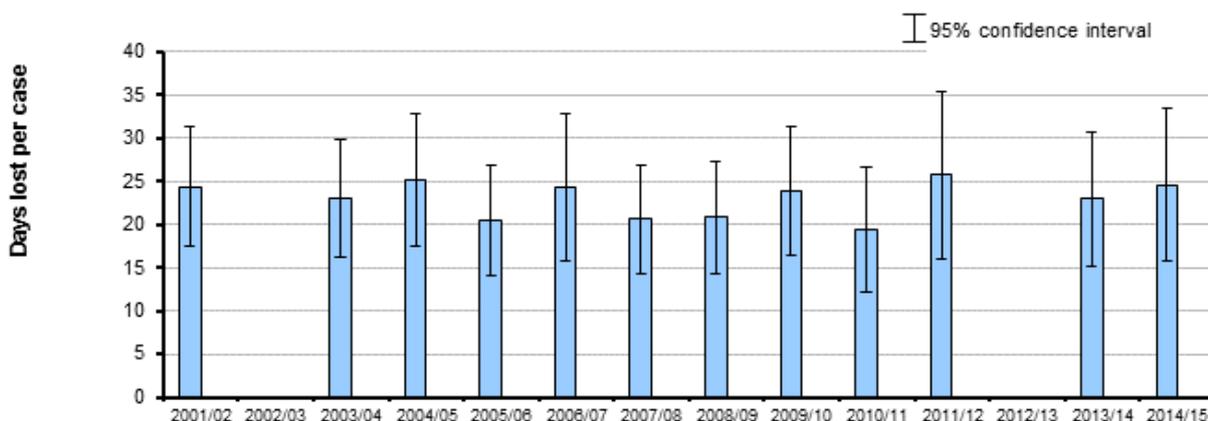


Source: Labour Force Survey (LFS)  
 Note: No ill health data was collected in 2002/03 and 2012/13

[www.hse.gov.uk/statistics/lfs/swit3w12.xlsx](http://www.hse.gov.uk/statistics/lfs/swit3w12.xlsx)

The number of working days lost in 2014/15 was 2,396,000 days lost at a rate of 24.6 days lost per case. This is of a similar order over the last 12 data collection periods and there is no significant difference in the rate of days lost per case. In 2001/02 the number of days lost was 2,379,000 cases with average days lost per case of 24.4.

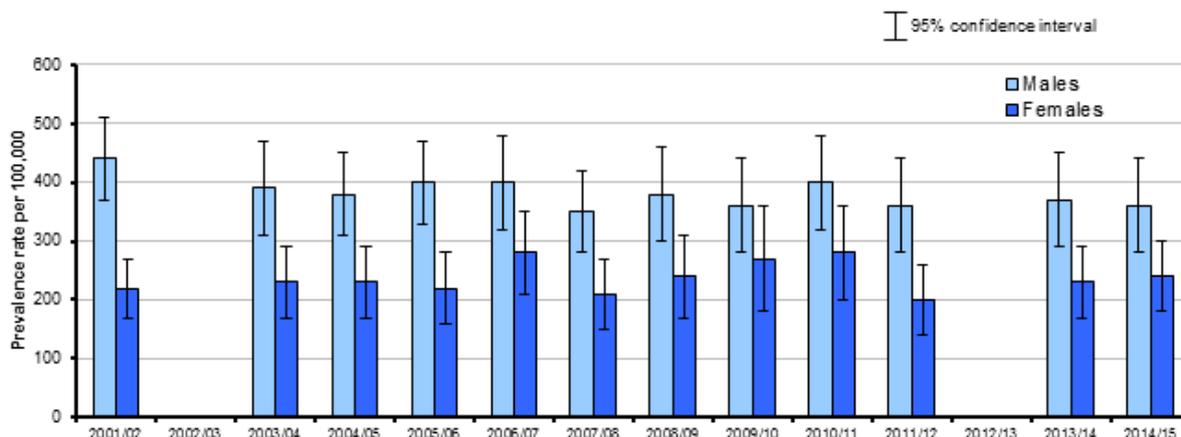
**Figure 22. Average days lost per case for WRLLDs per 100,000 people employed in the last 12 months in Great Britain 2014/15**



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

[www.hse.gov.uk/statistics/lfs/swit1.xlsx](http://www.hse.gov.uk/statistics/lfs/swit1.xlsx)

**Figure 23. Prevalence rate of WRLLDs by gender per 100,000 people employed in the last 12 months in Great Britain 2014/15**



The prevalence rate of WRLLDs is of a similar order in males over the time period 2001/02 to 2014/15 with no statistically significant differences. This is also the case for females over the same time period. In 2014/15 males had a rate of 360 cases per 100,000, in 2001/02 this was 440 cases. For females, the case rate was 240 cases in 2014/15 compared with a rate of 220 per 100,000 people employed in 2001/02.

## Conclusions

WRMSDs, while not life threatening, can impair the life quality and mobility of large numbers of the working population. The Labour Force Survey statistics over the last 15 years demonstrate that a significant number of WRMSDs are attributed to working practices across many diverse industries and occupations. WRMSDs accounted for 44% of the prevalence of all work related ill-health in Great Britain in 2014/15 and despite the downward trend in prevalence over the same period it remains a significant proportion of all work related ill-health. Equally so, WRMSDs working days lost (which place burdens on employers) account for 40% of all days lost due to work related illness in 2014/15 in Great Britain. Whereas the trend in the prevalence of back pain has been downward over the last 15 years, the prevalence of upper limb and lower limb disorders has tended to remain similar over the same period. The industries and occupations that have demonstrated the highest rates of musculoskeletal disorders have also remained similar; with industries with active physical work such as the construction industry or skilled trade occupations those with the highest rates. The size of the workplace does not seem to influence the prevalence rate of musculoskeletal disorders in general. Examining the prevalence in terms of age and gender, the overall rate for males and females is similar for all WRMSDs. However the age ranges 45-54 and 55+ tend to have the highest rates for both genders.

## Glossary of Acronyms

WRMSDs Work related musculoskeletal disorders

WRULDs Work related upper limb disorders

WRLLDs Work related lower limb disorders

LFS – Labour Force Survey

IIDB Industrial Injuries Disablement Benefit scheme

THOR – The health and occupational reporting network

THOR –GP The health and occupational reporting network – General Practitioners

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