

European Agency for Safety and Health at Work

EUROPEAN RISK OBSERVATORY REPORT

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Annex to Report:
Work-related musculoskeletal disorders –
Facts and figures

National Report: Europe

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Authors: Véronique De Broeck, Marthe Verjans - Institut pour la Prevention et le bien-être au travail/Instituut voor Preventie en Welzijn op het Werk, (PREVENT), Belgium

Edited and updated by Xabier Irastorza and Elke Schneider – European Agency for Safety and Health at Work (EU-OSHA)

This document is an annex to the Agency's Report "Work-related musculoskeletal disorders – Facts and figures" - Europe

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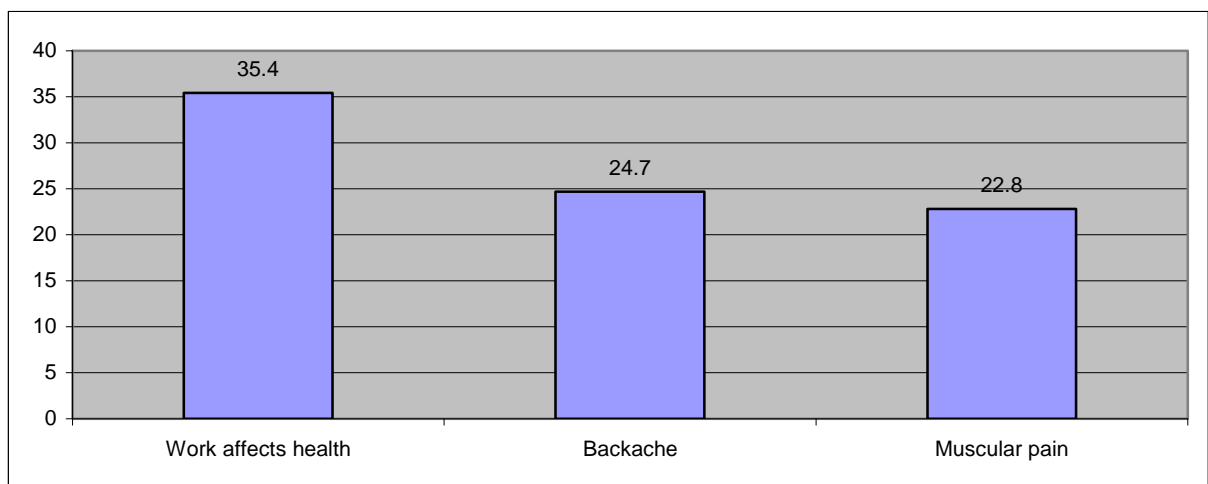
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Summary

Musculoskeletal disorders (MSDs) cover a broad range of health problems. The main groups are back pain/injuries and work related upper limb disorders, commonly known as “repetitive strain injuries” (RSI). Lower limbs can also be affected. Lifting, poor posture and repetitive movements are among the causes and some types of disorders are associated with particular tasks or occupations. Treatment and recovery are often unsatisfactory especially for more chronic causes. The end result can even be permanent disability, with the loss of job.

Every year millions of European workers in all types of jobs and employment sectors are affected by MSDs through their work. European studies provide substantial evidence that MSDs such as back, neck and upper limb disorders are a significant ill health and cost problem and are on the increase. In this sense, 24.7% of European workers complain of backache, 22.8% of muscular pains, 45.5% report working in painful or tiring positions while 35% are required to handle heavy loads in their work.

Figure 1: Percentage share of workers reporting health problems (general), EU27, 2005



European Survey on Working Conditions 2005

Health problems range from discomfort and minor aches and pains to more serious medical conditions requiring time off work, medical and hospital treatment. In this sense, the most common musculoskeletal occupational diseases¹ were epicondylitis of the elbow, tenosynovitis of the hand or wrist and carpal tunnel syndrome, a neurological disease of the wrist.

Groups at risk:

- Manual workers both skilled and unskilled are most at risk.
- Upper limb disorders affect women workers more than men largely because of the type of work they do. For example 41% of EU female workers do permanent repetitive work compared to 37.4% of EU male workers.
- Older workers in Europe report more MSDs problems. For example, 24.2% of workers over 55 years old report suffering from backache. Many older workers will have spent more time working in situations that are prone to lead to MSDs. Moreover, jobs are generally designed for young and healthy male workers.
- However young workers under 25 years old too report significant shares of MSDs: 17.7% of them suffer from backache while 16.5% complain of muscular pains.
- Workers in precarious employment, such as those on fixed-duration or temporary agency work, are significantly more exposed to repetitive work and working in painful/tiring positions.

¹ 2005 EODS data collection in 12 Member States (EU 15 except Germany, Greece and Ireland) providing data on recognised cases of occupational diseases

Source description

Statistical sources

Title	European Survey on Working Conditions
Acronym	ESWC
Institution	European Foundation for the Improvement of Working and Living Conditions (Dublin)
Country	EU
Periodicity	Every 4 years: 1991-1996-2000-2005
Type	Employee Survey
URL	http://www.eurofound.eu.int/working/surveys/index.htm http://www.eurofound.europa.eu/working/surveys/index.htm
Demographic group	Employees, self-employed without personnel and self-employed with less than 10 employees.
Objectives	Monitoring of trends in working conditions for employees and the self-employed throughout the European Union. This Survey provides an opportunity to monitor working conditions in the EU and to analyze specific themes in depth, such as: sector differences, working conditions and gender, age, or employment contracts, work organization, working hours, etc.
Description	Face-to face interviews in all EU countries, with approx. 1,000 people in each country are selected (random walk), structured questionnaire.
Content	This survey describes a broad range of questions in the field of working conditions.
Questions	Q.33. Does your work affect your health, or not? (yes, no). Q.33a. How does it affect your health?. Q33a_d Backache (mentioned, not mentioned). Q33a_g Muscular pains in shoulders, neck and/or upper/lower limbs (mentioned, not mentioned).

Title	Work and health in the EU: A statistical report
Editor	Eurostat
Country	EU
Time	2004
URL	http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-57-04-807/EN/KS-57-04-807-EN.PDF
Description	This report is a statistical portrait of health and safety at work in the European Union. It constitutes the first joint analysis of the various statistical data available at EU level. It describes the general picture of the working life including characteristics of the European labour force and overall importance of ill-health due to work-related factors.

Title	Work and health in the EU: A statistical report
	<p>Specific chapters describe statistical data on risk factors and outcomes of safety at work, work-related diseases and psychosocial problems linked to health and safety at work. The distribution of risk factors and the frequency of accidents at work; work-related diseases and work-related problems of psychosocial nature are described by age, gender, sector of economic activity, occupation and other relevant variables. The publication is based on statistical data collected by Eurostat over the period 1994-2002. Eurostat's data are complemented with data from other sources, especially by data from the European Foundation for the Improvement of Living and Working conditions. The data mainly cover the 15 Member States of the EU, but some preliminary data are available for trends in the incidence of accidents at work in the acceding and candidate countries.</p>
TOC	<p>Introduction</p> <p>Chapter 1: Overview of the working life in the EU</p> <ul style="list-style-type: none"> ▪ 1.1. Labour force in the EU. ▪ 1.2. Self-assessed work satisfaction and health risks of work. ▪ 1.3. Days lost because of accidents at work, occupational diseases and other illnesses. <p>Chapter 2: Safety at work</p> <ul style="list-style-type: none"> ▪ 2.1. Overview of the burden of accidents at work; ▪ 2.2. Age; ▪ 2.3. Sector of economic activity; ▪ 2.4. Size of the enterprise; ▪ 2.5. Experience; ▪ 2.6. Unusual working hours; ▪ 2.7. Dangerous substances; ▪ 2.8. Other direct risk factors; ▪ 2.9. Personal protective equipment; ▪ 2.10. Information about risks at work; ▪ 2.11. Consequences of accidents at work; ▪ 2.12. Commuting accidents. <p>Chapter 3 - Occupational and work-related diseases</p> <ul style="list-style-type: none"> ▪ 3.1. Introduction; ▪ 3.2. Musculoskeletal problems; ▪ 3.3. Respiratory and skin problems; ▪ 3.4. Hearing problems; ▪ 3.5. Psychosocial health problems; ▪ 3.6. Other health problems; ▪ 3.7. Long standing health problems or disability caused by work-related diseases;

Title	Work and health in the EU: A statistical report
	<ul style="list-style-type: none"> ▪ 3.8. Work-related mortality. <p>Chapter 4 - Violence, intimidation and discrimination at workplace</p> <ul style="list-style-type: none"> ▪ 4.1. Physical violence at work; ▪ 4.2. Intimidation; ▪ 4.3. Sexual discrimination; ▪ 4.4. Unwanted sexual attention; ▪ 4.5. Age discrimination; ▪ 4.6. Other forms of discrimination at work. <p>Chapter 5 - The policy context and conclusions</p> <ul style="list-style-type: none"> ▪ 5.1. The policy context of health and safety at work; ▪ 5.2. The new Community strategy on health and safety at work 2002-2006; ▪ 5.3. The policy context and statistics of health and safety at work; ▪ 5.4. Practical conclusions concerning the statistical information available. <p>Chapter 6 - Methodological notes</p> <ul style="list-style-type: none"> ▪ 6.1. Third European Survey on Working Conditions – ESWC; ▪ 6.2. European labour force survey – LFS; ▪ 6.3. European Statistics on Accidents at Work – ESAW; ▪ 6.4. European Occupational Diseases Statistics – EODS; ▪ Annex tables.

Title	The state of occupational safety and health in the European Union – Pilot study
Editor	European Agency for Safety and Health at Work
Country	EU
Time	2000
URL	http://osha.europa.eu/publications/reports/401/index.htm?set_language=en
Description	<p>The European Agency information project “The State of Occupational Safety and Health in the European Union – Pilot Study” is a first step to the development of a system for monitoring the safety and health in the European Union.</p> <p>It aims at providing decision makers at Member State and European level with an overview of the current safety and health situation in the European Union and in this way supporting the identification of common challenges and priority areas for preventive actions.</p> <p>The project report identifies for physical exposures, postures and movement exposures, handling chemicals, psychosocial working conditions and occupational safety and health outcome for example sectors/occupations most identified to be at risk.</p>

Title	The state of occupational safety and health in the European Union – Pilot study
	Further, the Focal Points and their national networks provided information on trends and needs for development of additional preventive actions related to these indicators. Implications of the “changes in working life” on occupational safety and health are also touched in this report.
TOC	<p>1. Introduction</p> <ul style="list-style-type: none"> ▪ 1.1 Purpose of the project; ▪ 1.2 How to read the report; <p>2. Data sources and methodology</p> <ul style="list-style-type: none"> ▪ 2.1 Concept of the manual; ▪ 2.2 Description of data sources used in the project; ▪ 2.3 Consolidation process; ▪ 2.4 Review of the consolidation process. <p>3. Major findings</p> <ul style="list-style-type: none"> ▪ 3.1 Overview of major findings for all exposure indicators and OSH outcomes; ▪ 3.2 Summary findings for each exposure indicator and OSH outcome; ▪ 3.3 The need for the development of additional preventive measures; ▪ 3.4 Overall European picture for individual risk categories; ▪ 3.5 Chemical/biological risks; ▪ 3.6 Emerging risks. <p>4. The working environment</p> <ul style="list-style-type: none"> ▪ 4.1 Occupational safety and health issues assessed; ▪ 4.2 Noise; ▪ 4.3 Vibration; ▪ 4.4 High temperature; ▪ 4.5 Low temperature; ▪ 4.6 Lifting/moving heavy loads; ▪ 4.7 Repetitive movements; ▪ 4.8 Strenuous working postures; ▪ 4.9 Handling chemicals; ▪ 4.10 Chemical/biological risks; ▪ 4.11 High speed work; ▪ 4.12 Work pace dictated by social demand; ▪ 4.13 Machine dictated work pace; ▪ 4.14 Physical violence; ▪ 4.15 Bullying and victimization; ▪ 4.16 Sexual harassment; ▪ 4.17 Monotonous work;

Title	The state of occupational safety and health in the European Union – Pilot study
	<ul style="list-style-type: none"> ▪ 4.18 Use of personal protective equipment (PPE); ▪ 4.19 Information given about risks at work; ▪ 4.20 Training provided by employers. <p>5. Occupational safety and health outcomes</p> <ul style="list-style-type: none"> ▪ 5.1 Occupational safety and health outcomes assessed; ▪ 5.2 Accidents at work with more than 3 days absence; ▪ 5.3 Fatal accidents at work; ▪ 5.4 Work-induced musculoskeletal disorders; ▪ 5.5 Stress; ▪ 5.6 Occupational sickness absence; ▪ 5.7 Occupational diseases. <p>6. Changes in working life</p> <ul style="list-style-type: none"> ▪ 6.1 Emerging risks; ▪ 6.2 Teleworking; ▪ 6.3 Employment status. <p>Appendices</p>

Analytical sources

Title	Time constraints at work and health risks in Europe
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2003
URL	http://www.eurofound.europa.eu/pubdocs/2003/07/en/1/ef0307en.pdf
Description	The third European survey on working conditions highlights the risks and dangerous working conditions that continue to pose a threat to workers' health, as well as the increase in time and organisational constraints at work. A study based on the statistical use of the data gathered from the survey provides a great deal of information on the organisation of working time. It also explores the links between the organisation of working time and the duration of working time, and the health risks to which workers in the EU are exposed.
TOC	Rising trend in atypical working hours - Working hours decline, but disparities remain - Industrial and market constraints on the pace of work - Intensity of work: impact on employees - Sources of strain - Health problems.

Title	Gender, jobs and working conditions in the European Union
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2002
URL	http://www.eurofound.europa.eu/pubdocs/2002/49/en/1/ef0249en.pdf
Description	<p>The rising proportion of women in employment in recent decades has been one of the major changes affecting European labour markets. However, 'weight of numbers' has not produced an automatic reduction in gender segregation, which remains a persistent feature of European society. There is still a 'glass ceiling' reinforced by workplace cultures and informal procedures that makes it difficult for women to break through into the higher levels of management. The unequal division of unpaid household work also persists. Women continue to shoulder the main responsibility for the second shift of running the home and looking after children, even when employed full-time.</p> <p>The present report examines the gender pattern of differences and similarities in working conditions in Europe. It also explains the reasons for the persistent gender segregation of the European labour markets and draws up policy recommendations for action aimed at providing decision makers with the relevant information they need. This research will undoubtedly contribute to a fuller understanding of the relationship between gender and many aspects of working conditions in the European Union.</p>
TOC	Trends in the gendered nature of working conditions - Gender segregation - Job content and workplace environment - Working time - The impact of working conditions on health, work-family compatibility and satisfaction - Conclusion - Appendix - Multivariate regression results - Bibliography.

Title	Sectoral profiles of working conditions
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2002
URL	http://www.eurofound.europa.eu/pubdocs/2002/75/en/1/ef0275en.pdf
Description	<p>The survey's aim is to provide an overall picture of the situation and the trends in working conditions in the EU.</p> <p>The Foundation has asked TNO Work & Employment to perform a secondary analysis on these surveys with the aim of:</p> <ol style="list-style-type: none"> 1. Identifying sector profiles with regard to working conditions; 2. Presenting the development of working conditions within and amongst sectors, using the previous Foundation surveys, which can be performed at branch or sector level (1 digit); 3. Comparing the survey results at sector level with other data sources (for example, national surveys, labour force surveys, etc.).

Title	Sectoral profiles of working conditions
TOC	<p>Introduction — Methods — Results - Conclusion - References Appendices</p> <ol style="list-style-type: none"> 1. Information on working conditions and scale construction; 2. Sectors according to NACE 2 - digit level; 3. Information on statistical techniques used in this report; 4. Characterisation of sectors by gender, age and job status; 5. Results of statistical tests; 6. Graphical presentation of ranking of sectors per working condition; 7. Sector profile graphics; 8. Graphical presentation of changes in working conditions by sector; 9. Graphical presentation of changes in sector profiles; 10. Sector rankings.

Title	Time and work: Duration of work
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2002
URL	http://www.eurofound.europa.eu/pubdocs/2002/11/en/1/ef0211en.pdf
Description	<p>This report, based on a secondary analysis of the Foundation's <i>Third European Survey on Working Conditions</i>, provides important information on developments regarding working time in Europe.</p> <p>While working time continues to be reduced, both collectively and on average, other trends are perhaps more worrying, such as the increased intensity of work, particularly for those already working long hours. It is also witnessing the spread of working time flexibility linked both to competitiveness targets and to the aim of reconciling professional life and non-working life.</p>
TOC	Foreword - Introduction - Duration of working time - Organisation of working time - Implications for health of long working hours - Implications for health of atypical time schedules - Intensity and working time - Conclusions - Bibliography

Title	Time and work: work intensity
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2002
URL	http://www.eurofound.europa.eu/pubdocs/2002/48/en/1/ef0248en.pdf
Description	Work intensity is on the increase in Europe. From 1995 to 2000, employees experienced an intensification of their jobs.

Title	Time and work: work intensity
	<p>This report, based on analysis of the results of the Third European Survey on Working Conditions carried out by the European Foundation for the Improvement of Living and Working Conditions, quantifies and describes the impact of this trend on the workers exposed to it.</p> <p>The pace of work is subject to different constraints, which can be grouped into two categories. Industrial constraints are related to a desire to standardise productive activity: production targets, speeds of automatic machine, automatic moving of products. Market constraints on the other hand arise from a concern to adapt to customer demand in the broadest sense. An increase in the pace of work can result in a deterioration of working conditions if it is not compensated by an increase in workers' autonomy.</p>
TOC	<p>The determinants of work intensity – Intensity as perceived by employees – Determinants of pace of work and subjective intensity – Intensity, job control and social support at work – Paces of work and working conditions – Work intensity and health problems – The evolution of work intensity – Annex I: Perceived intensity of work among different categories of employee – Annex II: the categories of the workforce most exposed to work intensity – Annex III: Constraints, autonomy and social support among various categories of employees – Annex IV: Glossary of specific terms.</p>

Title	Types of employment and health in the European Union
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	2002
URL	http://www.eurofound.europa.eu/pubdocs/2002/21/en/1/ef0221en.pdf
Description	<p>The objective of this report is to find out, on the basis of the third survey, the relationship between different forms of employment status (permanent, non-permanent and self-employed) and health.</p> <p>This report will also compare findings from the second survey of 1995 to identify trends regarding these issues.</p>
TOC	<p>Foreword - Introduction: Impact of new types of employment on health/ Hypotheses and objectives of report - Methodology: Variables/ Statistical analysis - Results: Variables / Health indicators / Job categories / Economic sectors / Countries / Country-level variables - Conclusions: Main findings / Future research and policy issues Bibliography</p>

Title	Employment status and health
Editor	European Foundation for the Improvement of Working and Living Conditions
Country	EU
Time	1999

Title	Employment status and health
URL	http://www.eurofound.europa.eu/pubdocs/1999/34/en/1/ef9934en.pdf
Description	This leaflet summarises the results of research on the relationship between employment status and health. A bibliographic review was undertaken and data from the 1996 Second European Survey on Working Conditions complemented by Eurostat data was also analysed.
TOC	Introduction - Workplace reorganisation: downsizing, reorganisation and job insecurity - Moving into and out of the labour market – Conclusion.

Title	Work-related neck and upper limb musculoskeletal disorders
Editor	European Agency for Safety and Health at Work
Country	EU
Time	1999
URL	http://osha.europa.eu/publications/reports/201/index.htm?set_language=en
Description	<p>This report has addressed the following questions:</p> <ul style="list-style-type: none"> ▪ What is the extent of work-related neck upper limb musculoskeletal disorders within European member states?; ▪ What is the epidemiological evidence regarding work risk factors?; ▪ Is their coherent supporting evidence from the literature on underlying mechanisms and physical changes to the neck and upper limbs?; ▪ Does intervention in the workplace reduce the risks of work-related neck and upper limb musculoskeletal disorders?; ▪ What strategies are available to prevent work-related neck and upper limb musculoskeletal disorders?; <p>It is important to recognise that this review was not intended to cover individual and other non-work factors and their relationship with neck and upper limb musculoskeletal disorders. It was not also intended to consider the role of clinical management, rehabilitation or return to work.</p>
TOC	<p>Foreword - Contents - Summary – <i>Introduction - Assessment of work-related neck and upper limb musculoskeletal disorders (WRULDs - Size of the WRULDs problem - Biological mechanisms - Work-relatedness of WRULDs - Scope for prevention)</i></p> <p>1. Introduction - 2. The nature of the disorders - 3. The relationship between work and neck and upper limb disorders - 4. Strategies for prevention - 5. Risk factors requiring - 6. Health and risk surveillance - 7. Developments in the context of other European Union initiatives - 8. Summary - Strategies for prevention - 9. Conclusions - 10. References - Annexes - 11. Appendices.</p>

1 General prevalence

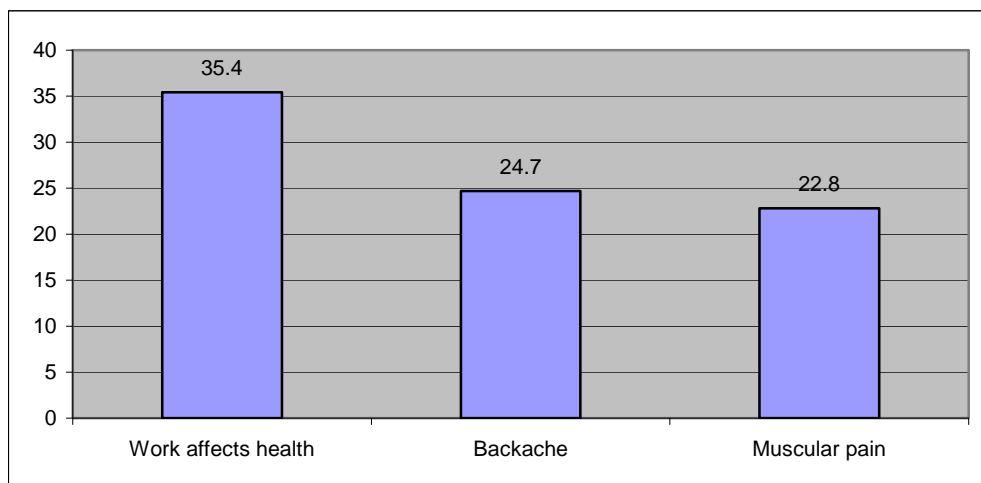
MSDs are commonly reported work related health problem by European workers

The Fourth European Survey on Working Conditions (ESWC) shows that 35.4% of respondents in the EU27 consider that their work affects their health. The most prevalent health problems are backache, muscular pains (combined index of pain in shoulders, neck and/or upper/lower limbs), overall fatigue and stress. Almost one quarter of respondents (22.8%) report muscular pains.

There are numerous established work-related risk factors for the various types of musculoskeletal disorders. These include physical, ergonomic and psychosocial factors. Unfortunately there are only limited European wide data on their occurrence and distribution in the population. According to the ESWC, 8.1% to 72.9% of workers² report exposure to risk factors of musculoskeletal diseases.

About 24.7% of European workers consider that their work affects their health in the form of backache. The situation is quite similar for muscular pains in shoulders, neck and/or upper/lower limbs, which are reported by about 22.8% of workers.

Figure 2: Percentage share of workers reporting health problems (general), EU27, 2005

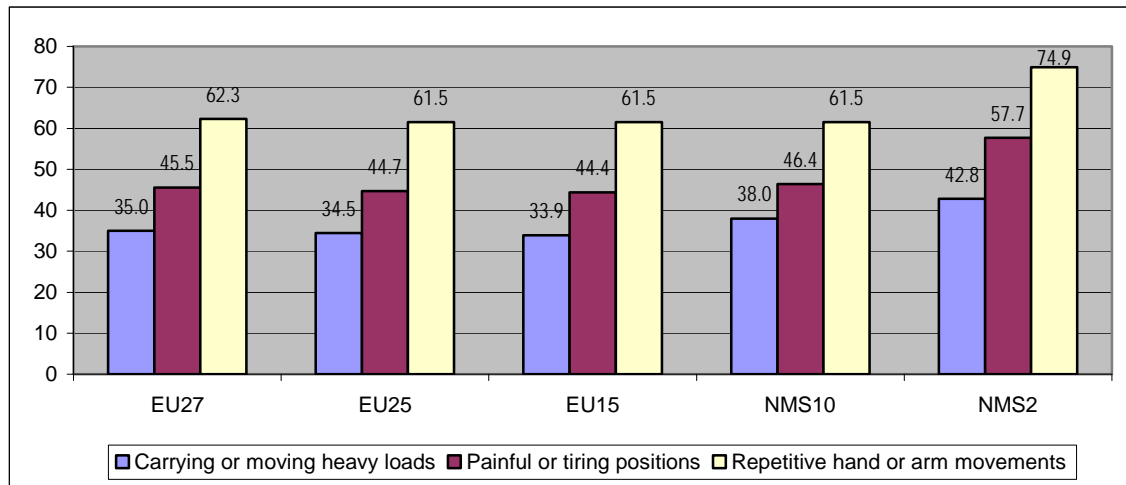


European Survey on Working Conditions 2005

Concerning risk factors, in 2005 45.5% of workers in the EU27 reported working in painful or tiring positions at least 25% of the time; 35% were required to handle heavy loads in their work and 62.3% reported repetitive hand or arm movements. The corresponding shares in the EU15 and EU25 were similar, while in the 10 Member States that joined the EU in 2004 -NMS10- and, particularly in Bulgaria and Romania -NMS2- the percentage of workers reporting exposure to the risk factors was higher.

² 8.1% of European workers report lifting or moving people for at least one quarter of their working time. Similarly, 24.2% of workers in the EU27 are exposed to vibrations from hand tools or machinery for at least one quarter of their working time, 45.5% are exposed to painful or tiring positions, 35% to carrying or moving heavy loads, 62.3% to repeated hand or arm movements and 72.9% are standing or walking at least one quarter of their working time.

Figure 3: Percentage workers carrying or moving heavy loads, working in painful/tiring positions and reporting repetitive hand/arm movements (all of them at least 25% of the time), by geographic area, 2005



European Survey on Working Conditions, 2005

According to the LFS 1999 ad hoc module, about 2.6% of European workers suffer from a musculoskeletal health problem, which according to their own judgement was caused or made worse by work. This means that about 4 million European workers (current or retired) have such musculoskeletal problems. About 0.8% of the respondents had suffered from conditions that led to 14 days or more of absence from work during the past 12 months.

Musculoskeletal disorders have a multifactorial aetiology and a mixture of genetic, environmental and behavioural factors are involved. It is difficult in most cases to point out the exact cause of an individual case of disease. Therefore musculoskeletal diseases are not very commonly accepted as occupational diseases in the national compensation or reporting systems.

Recognised cases of occupational MSDs

As regards musculoskeletal diseases, the European Schedule of Occupational Diseases³ includes specific conditions linked to vibration, local pressure and overuse of tendons, peritendinous tissues and of tendon insertions. Disorders of the lower back and neck and shoulder region are accepted as occupational diseases by only a few Member States and only for specific forms of disease⁴. It is therefore difficult to collect comprehensive European level data on recognised occupational musculoskeletal disorders.

According to the 2005 EODS data collection of 12 Member States providing data on recognised cases of occupational diseases, the most common musculoskeletal occupational diseases were epicondylitis of the elbow (16,054 cases) and tenosynovitis of the hand or wrist (12,962 cases). Additionally there were 17,395 cases of carpal tunnel syndrome, a neurological disease of the wrist. All in all, the number of accepted cases of occupational disease is smaller than the number of self-assessed work-related cases described in the previous section.

³ Commission Recommendation (EC) 3297/2003 of 19 September 2003 concerning the European Schedule of Occupational Diseases.

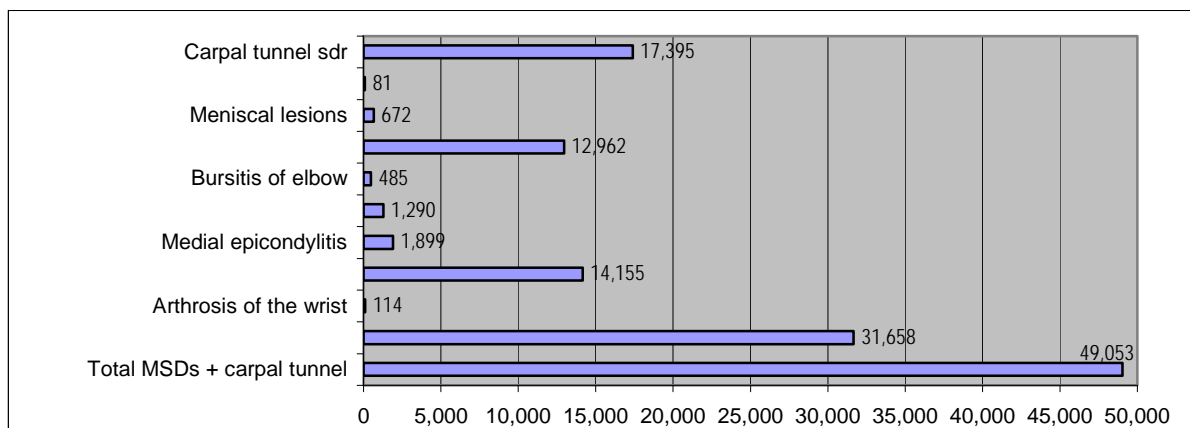
⁴ European Occupational Diseases Statistics (EODS) – Phase 1 methodology. Eurostat working papers. Population and social conditions 3/2000/E/no.19.

Table 1: Number of occupational diseases, EODS obligatory list (general)

	2001	2002	2003	2004	2005
Carpal tunnel (g560)	2,483	12,575	14,058	14,964	17,395
Musculoskeletal diseases (m00_to_m99)	11,189	24,696	26,601	28,734	31,658
Arthrosis of the elbow (m192)	12	88	90	87	81
Meniscal lesions (m232)	334	693	694	751	672
Hand or wrist tenosynovitis (m700)	5,379	10,028	11,246	11,629	12,962
Bursitis of elbow (m703)	183	380	338	340	485
Bursitis of knee (m704)	442	1,337	1,269	1,347	1,290
Medial epicondylitis (m770)	428	1,130	1,400	1,670	1,899
Lateral epicondylitis (m771)	4,157	10,658	11,494	12,840	14,155
Arthrosis of the wrist (m931)	254	382	70	70	114

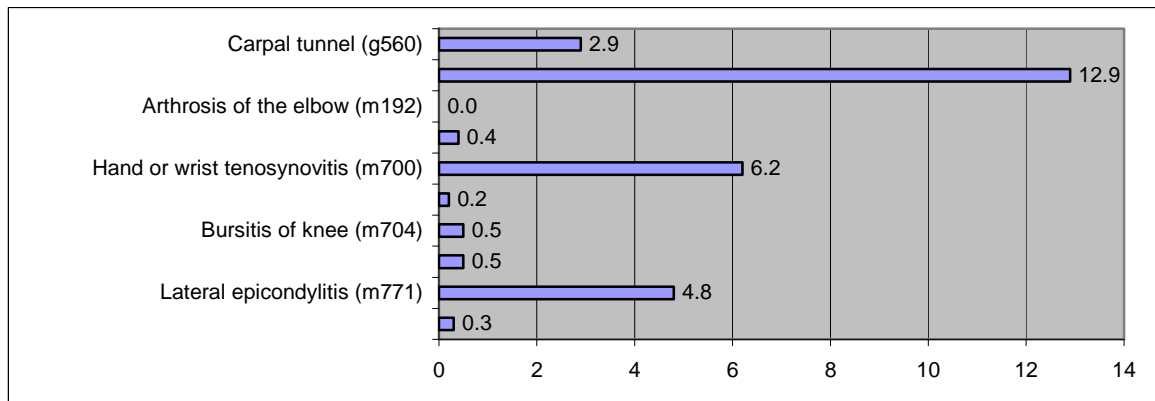
EODS

Figure 4: Absolute number of MSDs and carpal tunnel syndrome, 2005. EU15, except Germany, Greece and Ireland



EODS

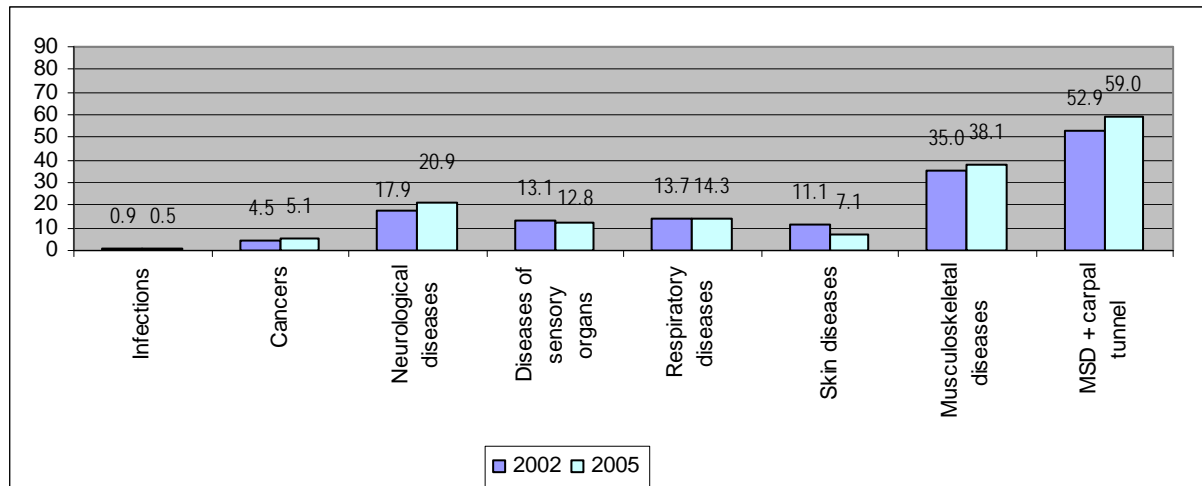
Figure 5: Incidence rate (per 100,000 workers) of occupational diseases, EODS obligatory list (general), 2001



EODS

When analysing the percentage distribution of occupational diseases it can be seen that MSDs represent the highest share among workers in the 12 countries under consideration (EU15, except Germany, Greece and Ireland). As shown in the graph, 38.1% of occupational diseases in 2005 were MSDs, and when including the carpal tunnel syndrome the share goes up to 59%. Neurological diseases, diseases of sensory organs and respiratory diseases follow at some distance.

Figure 6: Percentage distribution of occupational diseases, 2002-2005. EU15, except Germany, Greece and Ireland



EODS

Analytical reports: Time constraints at work and health risks in Europe Time and work: work intensity Time and work: duration of work

Health problems

Employees are increasingly inclined to believe that their work threatens their health and indeed report that their health suffers more if they are forced to work long hours. There is a distinct correlation between long working hours and employees reporting muscular pain.

According to employees, industrial constraints impact significantly on the risks of succumbing to both physical and psychological health problems. Market constraints have a considerably negative impact on psychological health and a more varying impact on physical health. The impact from the customer's presence is greater than that of simple dependence on demand.

Daily interruptions are linked to a distinct and significant increase in all risks of illnesses recorded (reported by employees and attributed by them to their work). These interruptions, common to so-called 'flexible' and poorly managed organisations, may well be a particularly harmful form of work intensification. Conversely, autonomy and social support at work are susceptible of reducing risks, at least on the psychological level.

Employees subject to the longest working hours are also in the group of employees forced to work at high speeds. In this sense, research shows that time pressures at work affect workers' state of health; all the mental problems and most of the physical disorders recorded seem to be closely linked to work intensity.

2 By age

Older workers in Europe report more MSDs problems but significant prevalence of MSDs among young workers under 25 years old

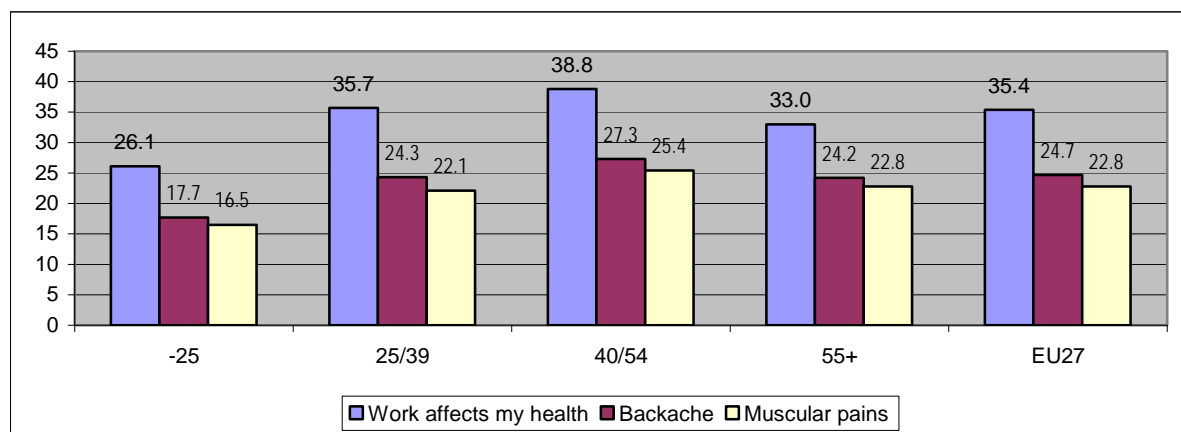
The 2005 ESWC data report a higher risk in the age category 40-54 years. The ageing of the labour force combined with a gradual reduction in the level of fitness with age increases the need for technical aids together with new methods. These are especially required within the Health and Social work sector because of its relatively high number of elderly women employees.

The share of workers who believe that their health is affected by work increases with age until the 40-54 age group: 38.8% in the EU27. The oldest group of workers reports a 33% share, a bit lower than that of the 25-39 age group (35.7%).

Similar patterns are found for backache and muscular pain, with increasing prevalence until the 40-54 age group. Over a quarter of workers in this age category (27.3%) complain of backache while the prevalence of muscular pains is very similar: 25.4%.

It has to be mentioned though that youngest workers (under 25 years of age) already report a 26.1% share of respondents who believe that their health is affected by work. 17.7% of young workers report suffering from backache while 16.5% complain of muscular pains. Taking into account population figures these shares represent approximately over 3.5 million young workers being affected by MSDs in the EU27.

Figure 7: Percentage share of workers reporting health problems, backache and muscular pains, by age, EU27, 2005

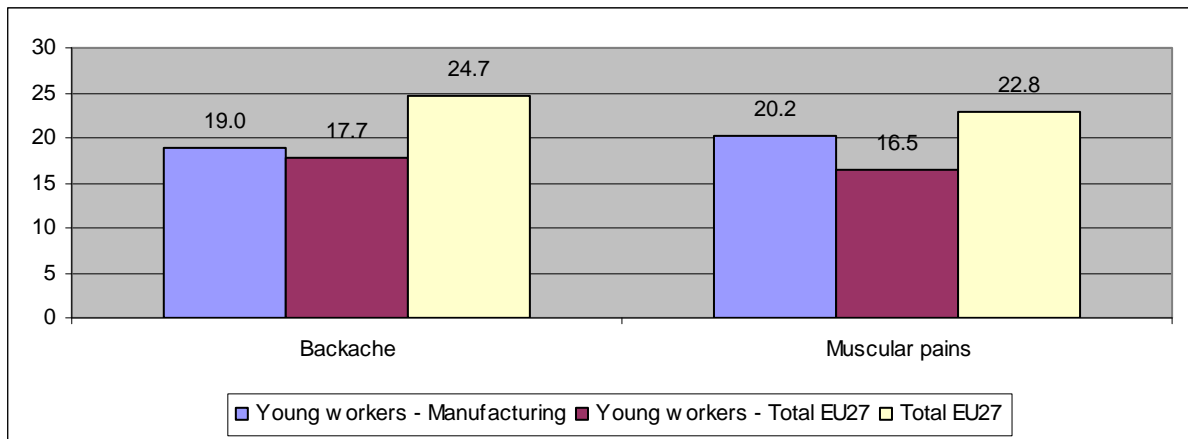


European Survey on Working Conditions 2005

Focusing on young workers, it is interesting to look at them in manufacturing, as they report a higher share of backache and muscular pains than the average prevalence for young workers across all sectors in the EU27. As shown by the ESWC, 19% of young workers under 25 years of age complain of backache as opposed to the average 17.7% for this age group across all sectors.

Similarly for muscular pains, over a fifth of young workers (20.2%) in the EU27 report suffering from work related muscular pains while the average for this age group across all sectors is 16.5%.

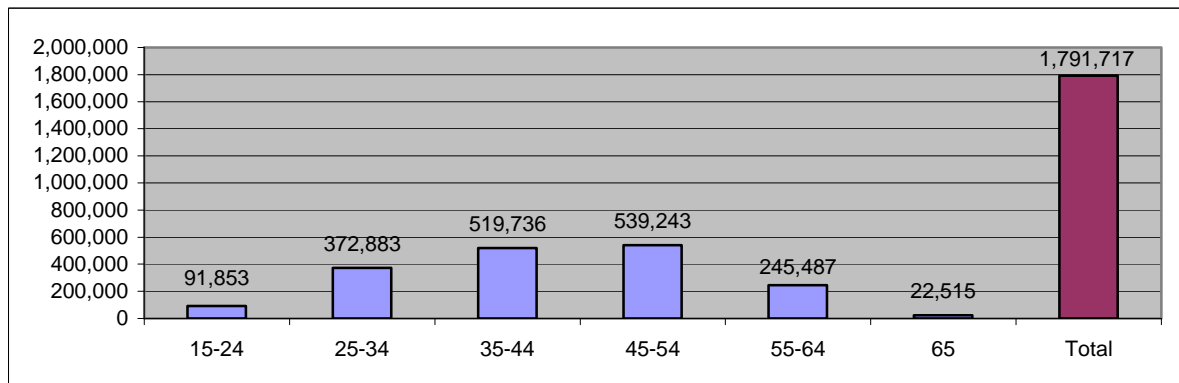
Figure 8: Percentage share of workers reporting backache and muscular pains: young workers (under 25) in manufacturing, total young workers in EU27 and total EU27, 2005



European Survey on Working Conditions 2005

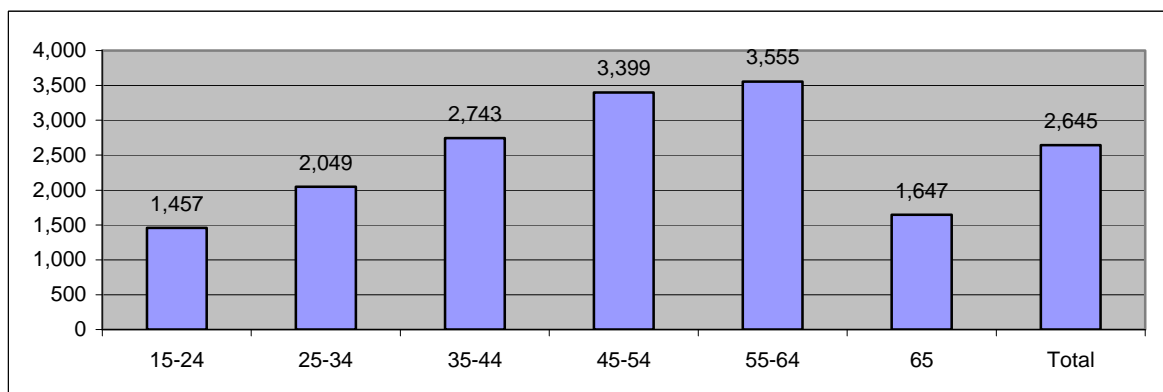
Data from the ad-hoc module of the LFS (1999) too reveal an increasing number of MSDs with age, until the 45-54 age group: 539,243 cases. In any case, when taking into account the standardised prevalence rate (per 100,000 workers) it is the age group 55-64 the one reporting the highest figures, with 3,555 cases per 100,000 workers.

Figure 9: Number of work-related health problems: musculoskeletal disorders, 1999



Ad hoc module LFS, 1999

Figure 10: Standardised prevalence rate of work-related health problems: musculoskeletal disorders (rate per 100 000 workers), 1999



Ad hoc module LFS, 1999

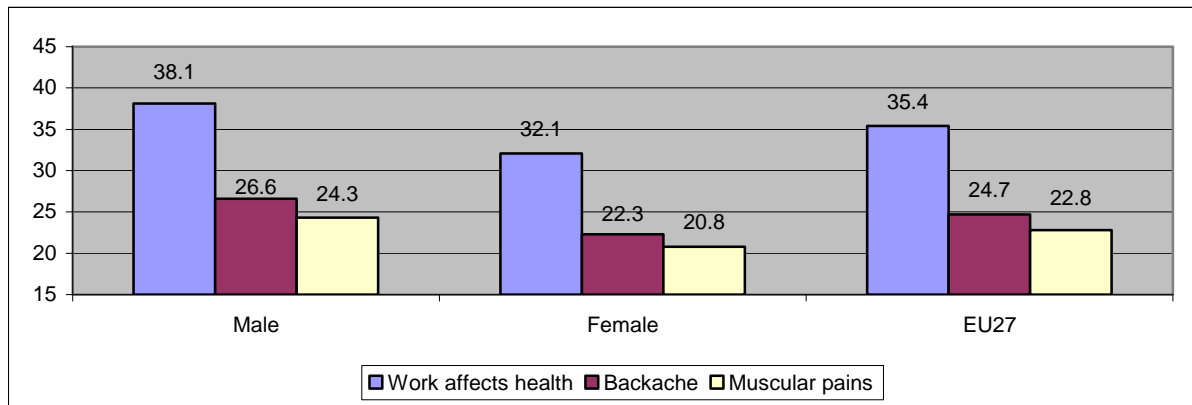
3 By gender

Slightly higher prevalence of MSDs among men than women

It is more or less equally common for both men and women to consider that their work affects their health: 38.1% and 32.1%, respectively.

Over one quarter (26.6%) of men and 22.3% of women in the EU27 suffer from backache, while muscular pains report slightly lower shares: 24.3% and 20.8%, respectively.

Figure 11: Percentage share of workers reporting health problems, backache and muscular pains, by gender, EU27, 2005

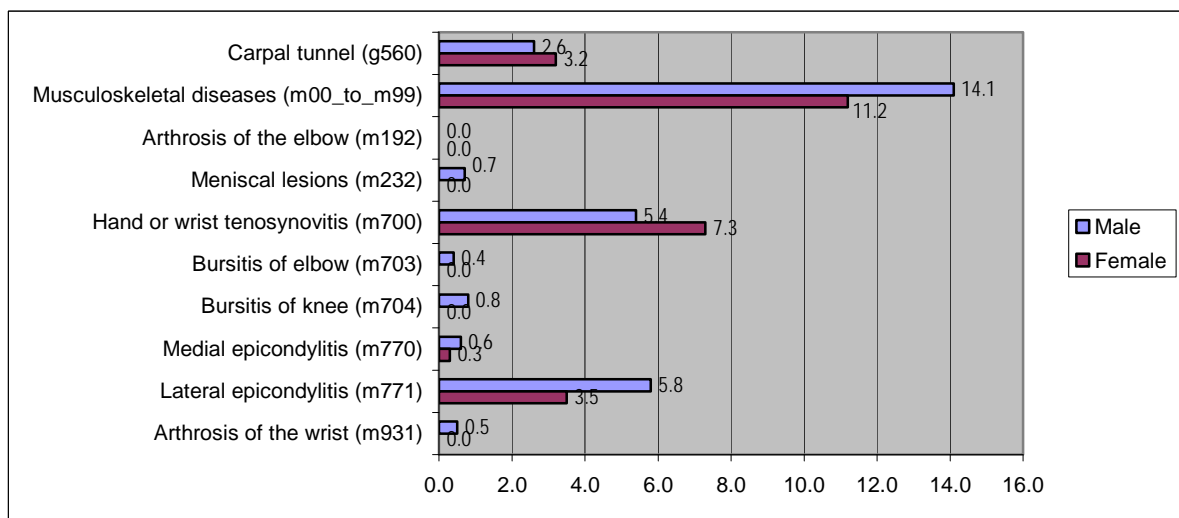


European Survey on Working Conditions 2005

Recognised cases of occupational MSDs

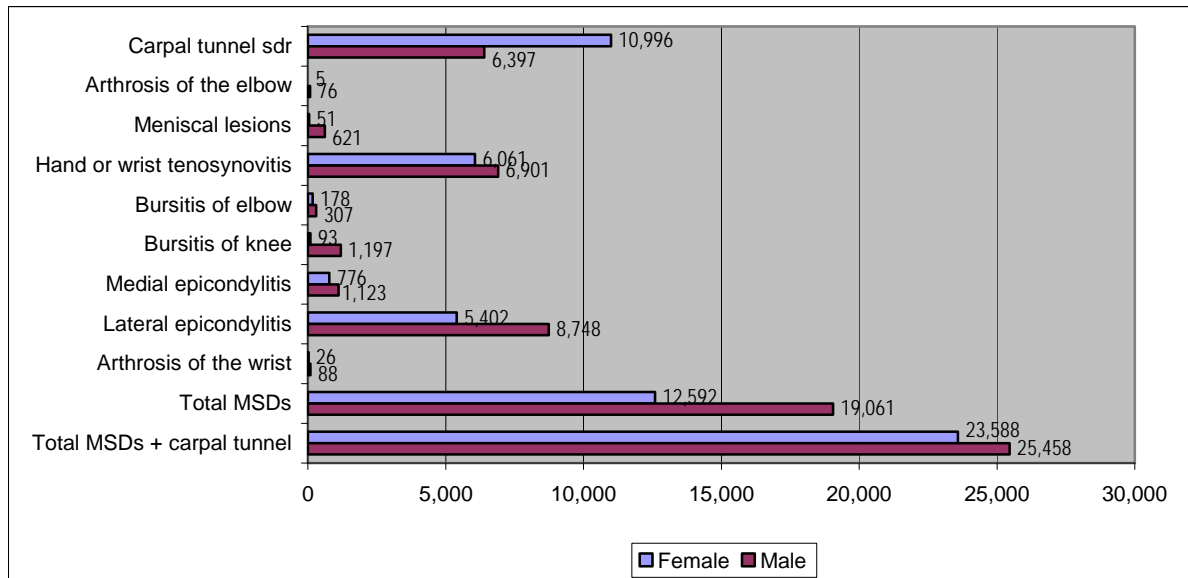
It can be seen that the incidence rate of MSDs is slightly higher among men (14.1 per 100,000 workers) than women (11.2 per 100,000 workers) but both genders have witnessed an increase in the number of MSDs between 2001 and 2005. The most common MSDs for both men and women are tenosynovitis of the hand or wrist and epicondylitis of the elbow. It is also worth stressing the greater number of cases of carpal tunnel syndrome among women than men: 10,996 and 6,397, respectively, in 2005.

Figure 12: Incidence rate (per 100,000 workers) of non-fatal occupational diseases, EODS obligatory list (by gender), 2001



EODS

Figure 13: Absolute number of MSDs and carpal tunnel sdr. EU15, except Germany, Greece and Ireland, by gender, 2005.

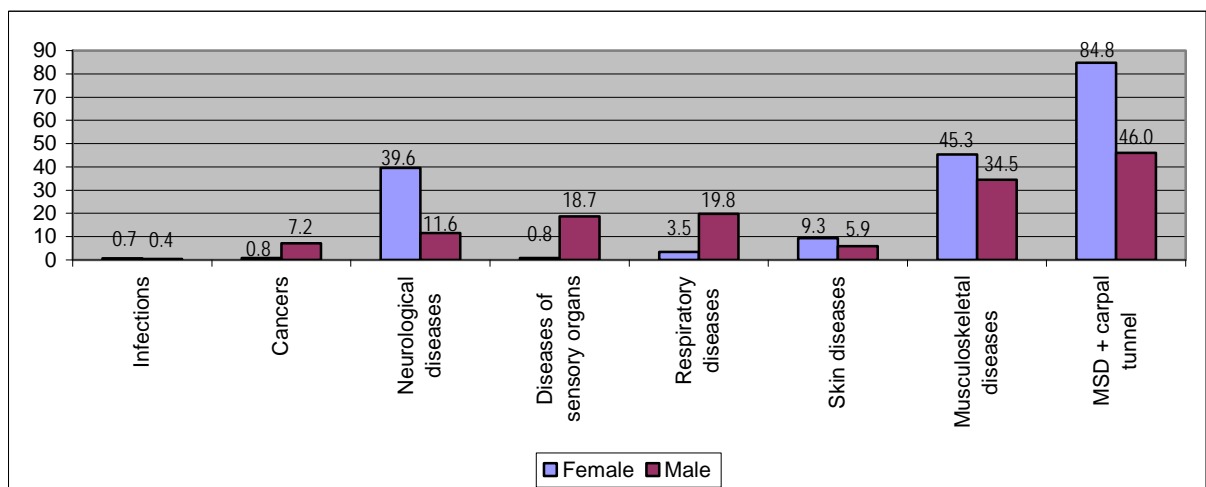


EODS

Finally, the percentage distribution of occupational diseases reveals that MSDs are the most frequent occupational disease for both genders. Among women neurological diseases come second, while men report respiratory diseases and diseases of sensory organs as the second and third most common diseases. It can be added too that while occupational diseases overall increased by 17% between 2002 and 2005, MSDs + carpal tunnel syndrome increased by 32% in the same period, and by 39% among women.

In this sense, it is important to stress once more the limitations of the data. Recognised occupational diseases is a very restrictive concept and therefore only a narrow view as it only covers certain diseases and for a number of countries (EU15 with the exception of Germany, Greece and Ireland).

Figure 14: Percentage distribution of occupational diseases. EU15, except Germany, Greece and Ireland, by gender, 2005



EODS

Analytical report: Gender, jobs and working conditions in the European Union

The impact of working conditions on health, work-family compatibility and satisfaction

In this chapter there was used multivariate analysis to examine which working conditions have the greatest impact on the probability of work-related illness, whether or not the job is judged to offer work-family compatibility, and satisfaction with working conditions.

Each of the following working conditions was found to have a significant and independent effect on the probability of having work-related illness. The 'traditional' health and safety hazards of poor ergonomic, physical and material conditions are bad for health. A number of aspects of working time conditions — having disruptive interruptions in the work-day, unsociable work schedules (evening, nights or long days), an intense pace of work and long hours of work — also increased the risk of work-related illness. Working-time autonomy helped to reduce the risk of work-related illness. Once specific working conditions are taken into account, being in managerial, professional or skilled manual work further increases the risk of work-related ill health.

When differences in men and women's working conditions and occupational position are controlled in the analysis there was found that women were more susceptible to work-related ill-health than men. This may be partly due to the additional domestic workloads that many women carry. It may also be because there are other working conditions that women are disproportionately exposed to but which are not picked up by the existing indicators in the survey. This issue requires further analysis and consideration in light of the current review of the EU regulatory framework on health and safety.

4 By sector

Sectors used in graphs, following the sections in NACE Rev 1.1:

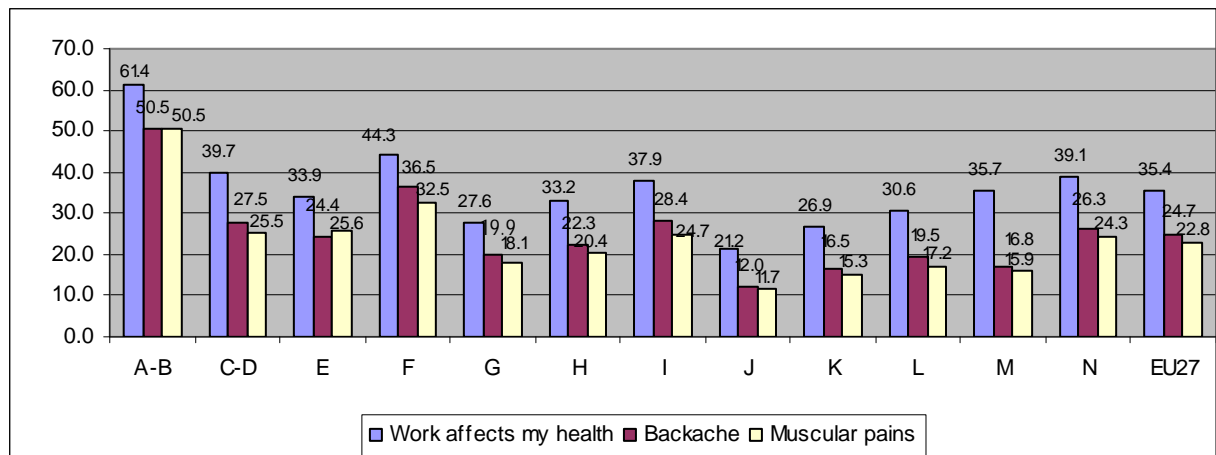
- A: Agriculture, hunting, forestry;
- B: Fishing;
- C: Mining;
- D: Manufacturing;
- E: Electricity, gas and water;
- F: Construction;
- G: Whole sale and retail, repairs;
- H: Hotels and restaurants;
- I: Transport and communication;
- J: Financial intermediation;
- K: Real estate, business activity;
- L: Public administration and defence;
- M: Education;
- N: Health and social work;
- O: Other community, social and personal service activities;
- P: Activities of households;
- Q: Extra-territorial organizations and bodies.

Agriculture, construction and transport and communication, sectors most at risk

About 35.4% of European workers consider that their work affects their health. 24.7% of them report suffering from backache, a share that is higher among workers in agriculture and fishing (50.5%), construction (36.5%) and transport, storage and communication (28.4%).

The situation is quite similar for muscular pains. About 22.8% of respondents consider that their work causes them a risk of such problems and the rate is the highest in agriculture and fishing (50.5%), construction (32.5%) and utilities (25.6%).

Figure 15: Percentage share of workers reporting health problems, backache and muscular pains, by sector, EU27, 2005

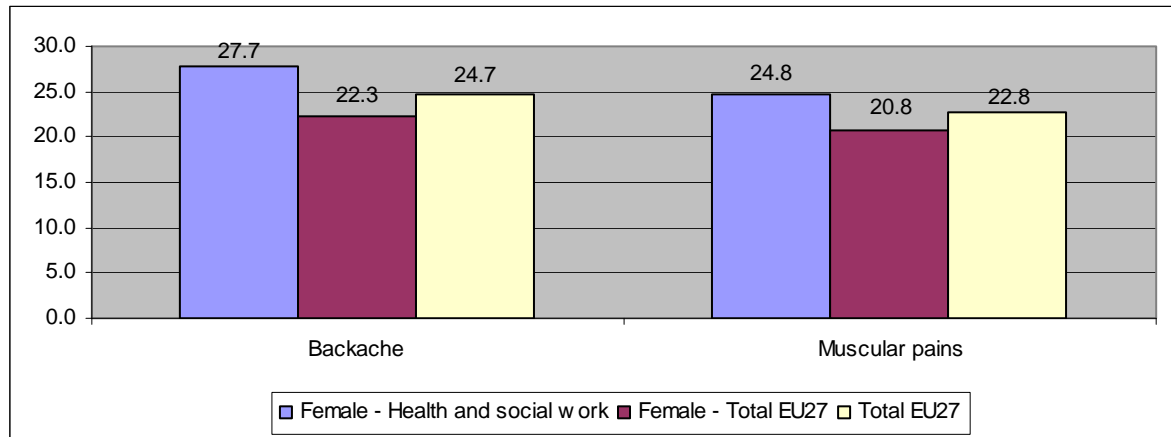


European Survey on Working Conditions 2005

It is interesting to look at women in health care. As shown by the ESWC it can be seen that this groups reports higher than average shares of MSDs: 27.7% of women in the sector complain of backache, as opposed to the overall shares of 22.3% (women across all sectors) and 24.7% (both genders across all sectors) in the EU27.

Similarly, when it comes to muscular pains, 24.8% of women in health and social work report suffering from muscular pain, as opposed to the overall shares of 20.8% (women across all sectors) and 22.8% (both genders across all sectors) in the whole of the EU27.

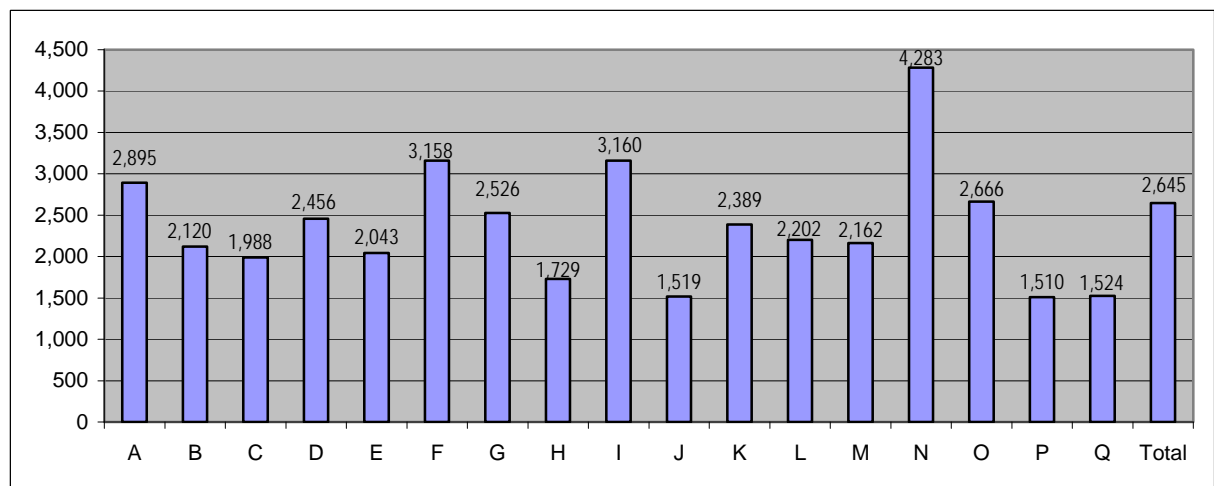
Figure 16: Percentage share of workers reporting backache and muscular pains, women in health and social work, total women in EU27 and total EU27, 2005



European Survey on Working Conditions 2005

Finally, data from the ad-hoc module of the LFS (1999) show that the highest prevalence rate of MSDs was found among workers in health and social work (N), transport, storage and communication (I), construction (F) and agriculture (A).

Figure 17: Standardised prevalence rate (per 100,000 workers) of musculoskeletal disorders, by sector, 1999



Ad hoc module LFS, 1999

Recognised cases of occupational MSDs

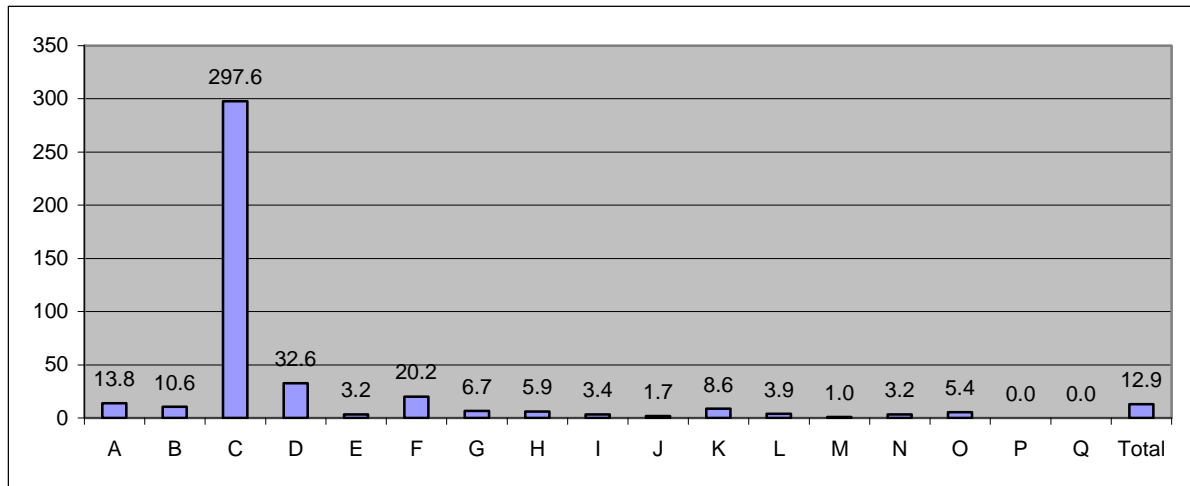
The incidence rate of recognised hand/wrist tenosynovitis and of elbow epicondylitis varies greatly between the sectors of economic activity. It is by far the highest in mining and quarrying (C), but also manufacturing (D), construction (F) and agriculture (A) have an incidence rate clearly higher than the sectors mostly involved with office type work. Nevertheless, it must be underlined that this is partly due to the fact that the national recognition practices are better established for recognition of such diseases occurring under non-office type working conditions. The causative factors reported for tenosynovitis and epicondylitis were repetitive work (91%), work postures (1%), mechanical vibrations (1%) and biomechanical factors in general (6%).

Table 2: Incidence rate (per 100,000 workers) of MSDs, EODS obligatory list, by sector, 2001

	Carpal tunnel (g560)	MSDs (m00_to_m99)	Meniscal lesions (m232)	Hand or wrist tenosynovitis (m700)	Bursitis of elbow (m703)	Bursitis of knee (m704)	Medial epicondylitis (m770)	Lateral epicondylitis (m771)	Arthrosis of the wrist (m931)
A	1.4	13.8	-	8.7	-	-	0.2	4.6	-
B	-	10.6	-	4.1	-	-	-	6.5	-
C	115.2	297.6	84.5	35.4	42.6	37.5	16.7	62.4	17.7
D	6.1	32.6	0.2	17.6	0.2	0.5	1.3	12.4	0.4
E	2	3.2	-	-	-	-	-	1.8	-
F	3.7	20.2	0.4	6.9	0.2	2.4	0.4	8.4	1.4
G	1.7	6.7	-	3.6	-	0.2	0.2	2.5	0.1
H	2	5.9	-	3.6	-	0.1	-	2.1	-
I	0.5	3.4	-	1.4	-	0.1	0.3	1.5	-
J	0.3	1.7	-	1.1	-	-	-	0.6	-
K	2.6	8.6	-	4.4	-	0.1	0.3	3.7	0.1
L	0.8	3.9	0.1	1.8	-	0.1	0.1	1.7	0.1
M	0.3	1	-	0.6	-	-	-	0.4	-
N	0.8	3.2	-	1.6	-	-	0.1	1.5	-
O	1.2	5.4	0.1	2.9	-	-	0.1	2	0.1
P	-	-	-	-	-	-	-	-	-
Q	-	-	-	-	-	-	-	-	-
Total	2.9	12.9	0.4	6.2	0.2	0.5	0.5	4.8	0.3

EODS

Figure 18: Incidence rate (per 100,000 workers) of musculoskeletal diseases (m00_to_m99), EODS obligatory list, 2001



EODS

Analytical report: Sectoral profiles of working conditions

Results

The two high risk sectors of catering, hotels and restaurants, and transport also show negative scores on work-related stress problems, with transport also having negative scores on work related musculoskeletal problems.

It is interesting to note that the public and social sectors were not at risk for unfavourable working conditions, but employees did report relatively high levels of work-related stress problems and (only the social sector) work-related musculoskeletal problems. These sectors have a high number of female workers, and a lot of workers are employees. It may be that factors other than working conditions alone are causing these health problems, for example, responsibilities for care at home, which is — even now — much more frequently provided by women than by men. Other, and particularly non-work-related, risks should be included to study this phenomenon better.

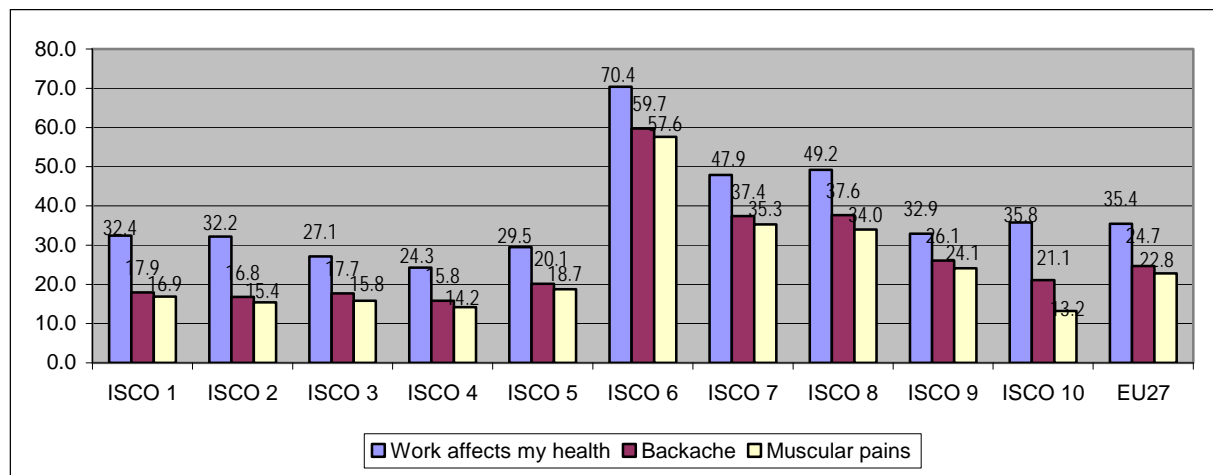
5 By occupation

Manual workers both skilled and unskilled are most at risk

The occupations reporting the highest shares of workers who believe that work affects their health are skilled agricultural and fishery workers (70.4%), plant and machine operators and assemblers (49.2%) and craft and related trades workers (47.9%).

Both backache and muscular pain provide similar results, with the occupations mentioned above reporting the highest prevalence. The shares of both backache and muscular pains are particularly high among skilled agricultural and fishery workers: 59.7% and 57.6%, respectively.

Figure 19: Percentage share of workers reporting health problems, backache and muscular pains, by occupation, EU27, 2005



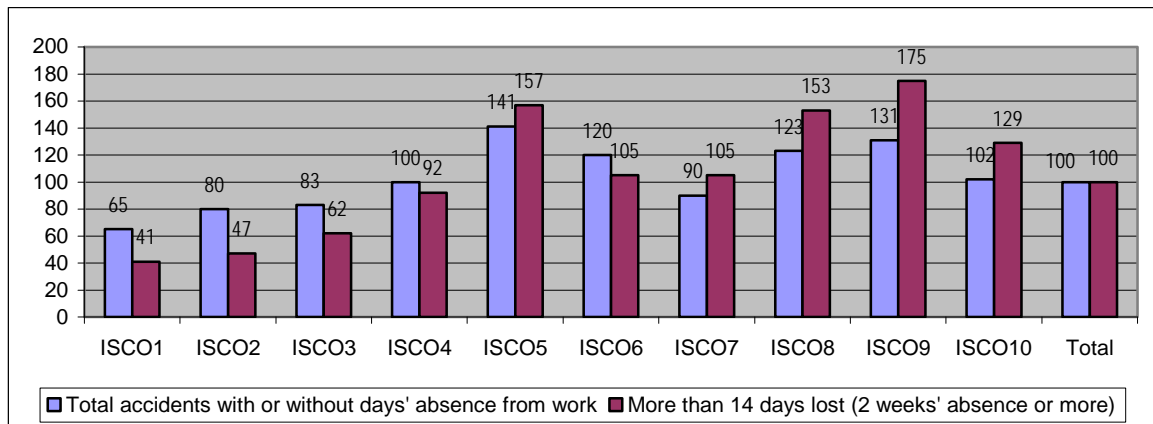
European Survey on Working Conditions 2005

ISCO Groups of occupation used in tables and figures:

- ISCO 1: Legislators, senior officials and managers;
- ISCO 2: Professionals;
- ISCO 3: Technicians and associate professionals;
- ISCO 4: Clerks;
- ISCO 5: Service workers and shop and market sales workers;
- ISCO 6: Skilled agricultural and fishery workers;
- ISCO 7: Craft and related trades workers;
- ISCO 8: Plant and machine operators and assemblers;
- ISCO 9: Elementary occupations;
- ISCO 10: Armed forces.

As shown in the graph below, the relative prevalence rate (with or without days' absence from work) of MSDs is highest among service workers and shop and market sales workers (ISCO 5), elementary occupations (ISCO 9), plant and machine operators and assemblers (ISCO 8) and skilled agricultural and fishery workers (ISCO 6). When taking into account absence from work, it can be seen that those in elementary occupations (ISCO 9) report the highest relative prevalence rate of being absent two weeks or more from work due to MSDs: 175 vs. the 100 EU average.

Figure 20: Relative prevalence rate of work-related health problems: Musculoskeletal disorders (EU mean rate = 100 for each severity), by occupation 1999

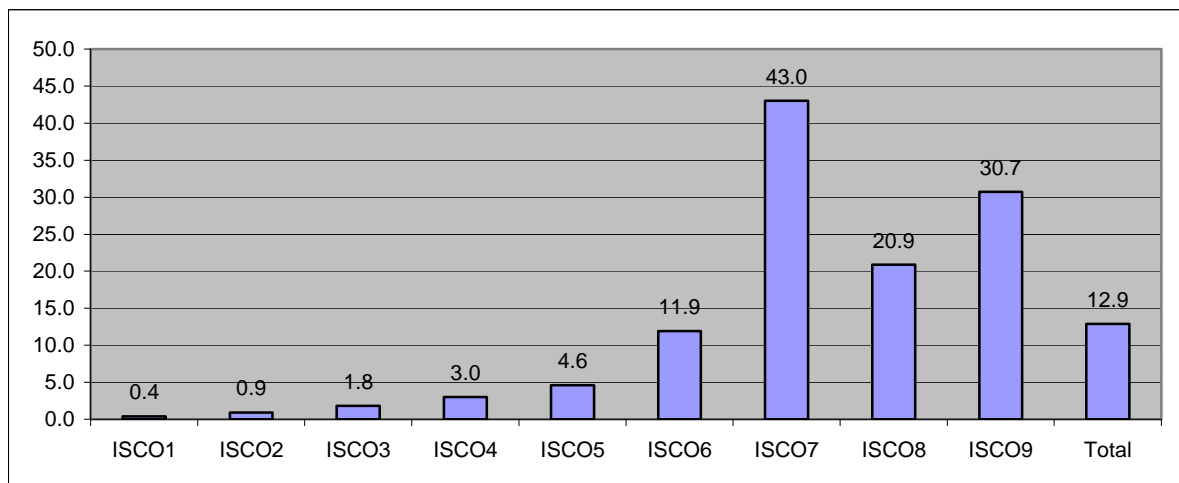


Ad hoc module LFS, 1999

Recognised cases of occupational MSDs

The incidence rate (per 100,000 workers) of recognised MSDs varies significantly among different occupational groups, being highest among craft and related trades workers (ISCO 7), elementary occupations (ISCO 9) and plant and machine operators and assemblers (ISCO 8).

Figure 21: Incidence rate (per 100 000 workers) of musculoskeletal diseases (m00_to_m99), EODS obligatory list, by occupation, 2001



EODS

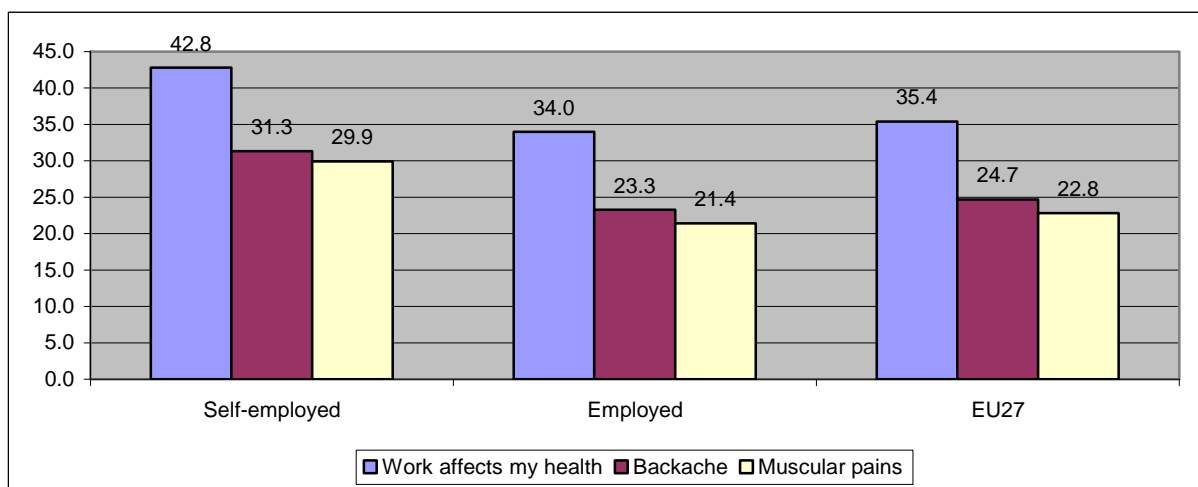
6 By employment status

Self-employed appear to be more at risk than employees

Work seems to be affecting the health of self-employed workers more than that of employees in the EU27: 42.8% and 34%, respectively, of workers in each of the groups report that work affects their health.

As far as backache is concerned, almost one third of self-employed workers (31.3%) complain of backache, while the share is 23.3% among employees. Similarly, 29.9% of self employed and 21.4% of employees report suffering from muscular pains.

Figure 22: Percentage share of workers reporting health problems, backache and muscular pains, by employment status, EU27, 2005



European Survey on Working Conditions 2005

Analytical report: Employment status and health

Main findings

- There is some evidence that **job insecurity** leads to worse self-rated physical health and an increase in some clinical symptoms. According to the 1996 survey on working conditions, temporary employees were more likely to report fatigue, backache and muscular pains but less likely to report health-related absenteeism in comparison with other types of employment status. Similar findings were observed across job categories, economic sectors and countries.
- The working conditions of temporary employees are worse than those of permanent workers. The former are more exposed to painful positions, intense noise, repetitive movements and short repetitive tasks. From the point of view of work organisation temporary workers although less exposed than permanent workers to high-speed work, have much less autonomy over the management of their work and time.
- Even if working conditions are the main explanatory variable for differences on health outcomes between permanent and temporary workers, associations between the types of employment status and health outcomes almost always persist after the adjustment by individual working conditions. This finding suggests that different types of employment status have an independent effect on the health-related outcomes studied regardless of working conditions.

- High levels of perceived co-worker, supervisor or trade union support can help to offset some of the negative effects of job insecurity, although this is at best a partial solution. Having information about the changes that are taking place and feeling that one has some control of the situation can also be helpful.
- However, the results of the research show that these buffers are not used. Temporary workers are less consulted about organizational change, receive less training and have fewer discussions about their work problems with colleagues, bosses and personnel representatives.

Analytical report: Types of employment and health in the European Union: Conclusions: Main findings

Overall patterns:

- In comparison to ES1995, an increase in all health indicators was observed.
- For all types of employment except self-employed, full-time workers usually reported worse health compared to part-time workers.
- Small employers and self-employed showed high levels of all health indicators.

Backache: Self-employed showed significant high levels of backache compared to permanent employment.

Muscular pains: Muscular pains were more likely among self-employed and full-time fixed term employment compared to permanent employment.

Job categories:

- The worst results were observed in agriculture and fishery workers, and craft and related trades workers.
- The best results were observed in legislators and managers, and professionals.
- Non-permanent employment was more likely to report dissatisfaction in elementary occupations, and service and sale workers.
- Agriculture and fishery workers, and legislators and managers were more likely to report health indicators.
- Self-employed had more risk of reporting worse health and less absenteeism than permanent employment across job categories.
- Small employers were less likely to report absenteeism than permanent employment across most job categories.

Economic sectors:

- The worst levels of health were observed in agriculture, hunting, forestry and fishing, and construction.
- The best level of health was observed in financial intermediation.
- For most economic sectors, non-permanent employment showed more dissatisfaction, but less absenteeism and stress.
- For most economic sectors, self-employed were more likely to report lower levels of health than permanent workers, but lower absenteeism.