

European Agency for Safety and Health at Work

EUROPEAN RISK OBSERVATORY REPORT

EN

ISSN 1830-5946

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

National Report: Czech Republic

TE – RO-09-009-EN



European Agency
for Safety and Health
at Work

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

You can find the full report –in English only- on the Agency's website:

<http://osha.europa.eu/en/publications/TERO09009ENview>

More information on the European Union is available on the Internet (<http://europa.eu>).

Cataloguing data can be found on the cover of this publication.

Luxembourg: Office for Official Publications of the European Communities, 2010

ISBN -13: 978-92-9191-261-2

DOI: 10.2802/10952

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Summary

During 1996-2005, a total of 6,047 cases of occupational musculoskeletal disorders (MSDs) were reported in the Czech Republic, which represents about 33% of all reported occupational diseases. The absolute number of reported occupational disorders decreased by 45% during 1996-2005 while the proportion of MSDs in the total number of occupational diseases remained relatively stable, about 30-35% of the total.

Fewer musculoskeletal disorders are reported in the Czech Republic than in other EU member states. Among other reasons, there is the fact that vertebrogenic disorders (such as low back pain) are not included in the Czech list of occupational diseases and therefore cannot be recognised as such. In this sense, the monitored musculoskeletal disorders include compressive neuropathies (e.g., carpal tunnel syndrome, cubital tunnel syndrome, and other peripheral mononeuropathies), arthroses, epicondylitis, tendonitis, bursitis and other.

Most occupational MSDs occurred in the age category 40-55 years (67% on average). The proportion of this category slightly decreased over time, while the share of those aged over 55 years increased from 8% to 20%.

Throughout the whole period under consideration male workers reported more cases of occupational MSDs than their female counterparts. However, the proportion of women in the total count of affected workers rose slightly from 24% in 1996 up to 33% in 2005. The prevalence of men was most pronounced in construction while the highest shares for women were found in education and health care.

Most cases of occupational MSDs occurred in mining or manufacturing (82% on average), followed by agriculture, hunting, forestry, and fishing (9%). This finding is consistent throughout the whole period under consideration.

Most cases of occupational MSDs occurred among craft and related trades workers (71%), followed by plant and machine operators and assemblers (17%).

The results from the Fourth European Survey on Working Conditions (ESWC) reveal that almost a quarter of Czech workers reported suffering from MSDs (22.9% backache and 23.7% muscular pains) and that the most affected age group was that of workers aged 25 to 39 years old. It is worth stressing though that youngest workers (15-24) too report a significant share of MSDs: 13.5% of them report suffering from backache and 16.7% from muscular pains. By gender, the prevalence of MSDs seems to be higher among men while in terms of activity sector, workers in construction and in transport and communications are the most affected by MSDs.

In terms of occupational groups, craft and related trades workers (ISCO 7), plant and machine operators and assemblers (ISCO 8) and elementary occupations (ISCO 9) present the highest MSDs prevalence rates whereas the shares of self-employed workers that report suffering from backache (27.8%) and muscular pain (26.5%) is greater than those of employees: 22.4% and 23.8%, respectively.

Source description

Statistical sources

Title	Czech National Registry of Occupational Diseases
Acronym	CNROD
Institution	National Institute of Public Health, Centre of Occupational Health (Prague)
Country	Czech Republic
Periodicity	Annual
Type	Database
URL	http://www.szu.cz/data-and-statistics/occupational
Demographic group	Employees
Objectives	Statistics on occupational diseases
Description	The database gathers individual data on all cases of occupational diseases reported in the Czech Republic.
Content	There are about 20 variables collected on each case of an occupational disease: e.g. identification of a patient, age, gender, occupation, risk factor, duration of exposure, diagnosis, identification of employer, sector of economic activity.
Question	N/A
Title	European Survey on Working Conditions
Acronym	ESWC
Institution	European Foundation for the Improvement of Working and Living Conditions (Dublin)
Country	EU
Periodicity	Every 5 years: 1990-1995-2000-2005
Type	Employee Survey
URL	http://www.eurofound.eu.int/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.

Title	European Survey on Working Conditions
Content	This survey describes a broad range of questions in the field of working conditions.
Question	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).

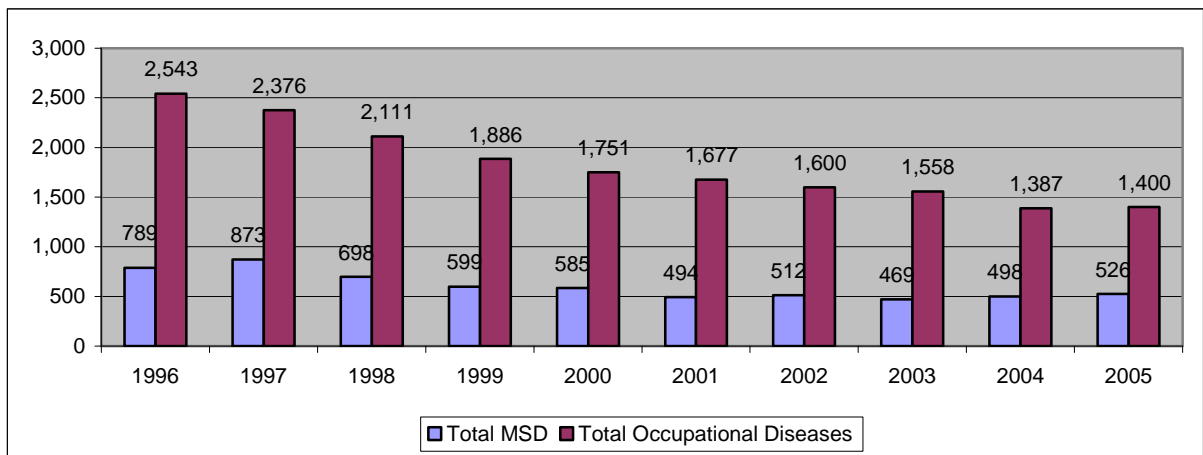
1 General prevalence

During 1996-2005, a total of 6,047 cases of occupational musculoskeletal disorders (MSDs) were reported in the Czech Republic, which represents about 33% of all reported occupational diseases.

The source of the reported data was the Czech National Registry of Occupational Diseases. Correspondingly, only occupational MSDs were taken into consideration. The year 1996 has been chosen as starting date because the current Czech list of occupational diseases is effective since that particular year. Consequently, any comparison with data before 1996 would be problematic.

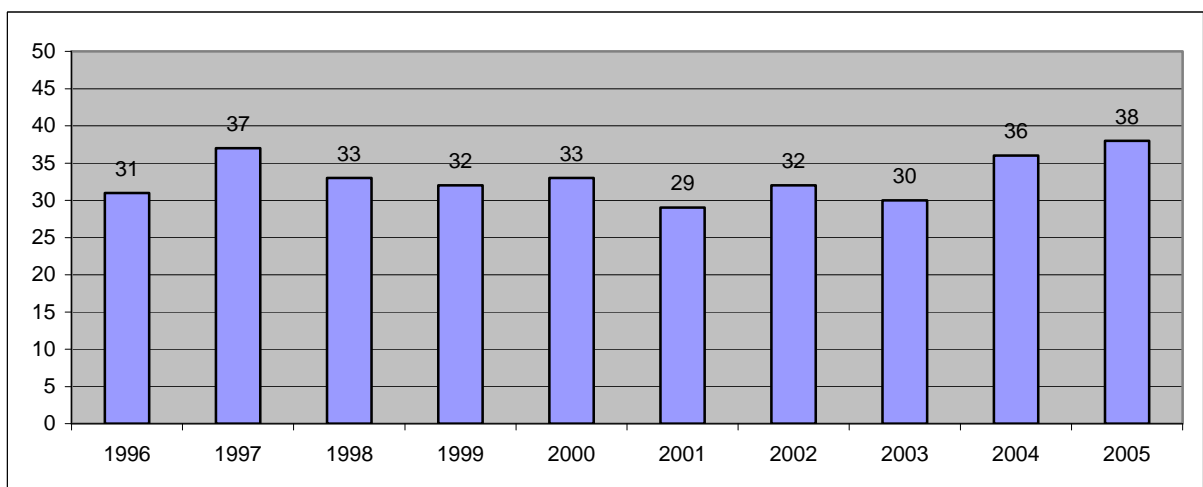
The absolute number of reported occupational disorders decreased by 45% between 1996 and 2005, while the proportion of MSDs in the total number of occupational diseases remained relatively stable, i.e. about 30-35%.

Figure 1: Number of occupational MSDs and of total occupational diseases in the Czech Republic, 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

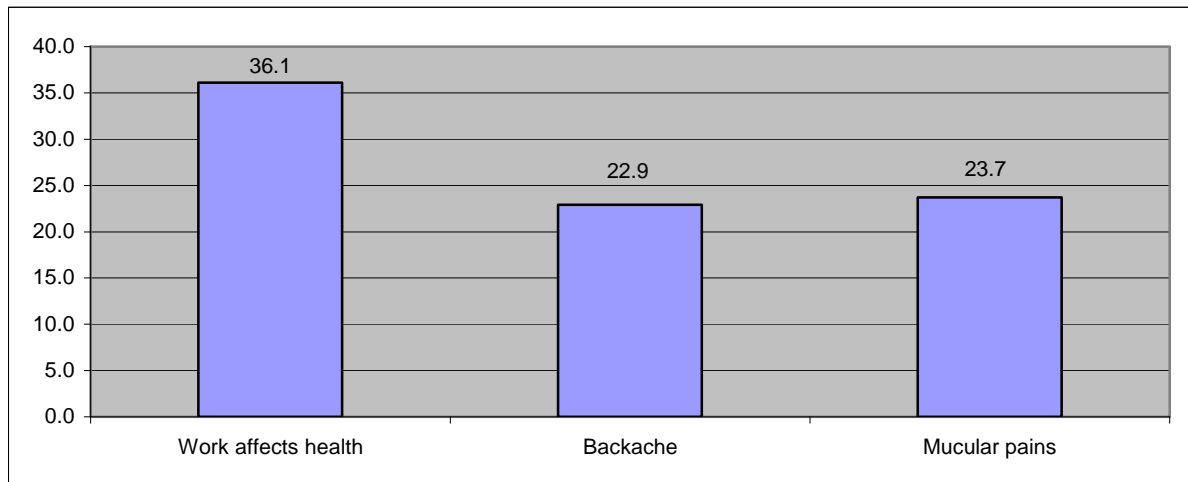
Figure 2: Percentage share of occupational MSDs in total occupational diseases in the Czech Republic, 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

Findings from the Fourth European Survey on Working Conditions (ESWC) reveal that more than one third of Czech workers (36.1%) consider that work affects their health. The prevalence of backache and muscular pains is relatively similar, around the 23% mark: 22.9% of workers reported to suffer from work related backache while 23.7% complained of muscular pains.

Figure 3: Effect on health: percentage share of workers reporting that work affects their health, backache and muscular pain, 2005

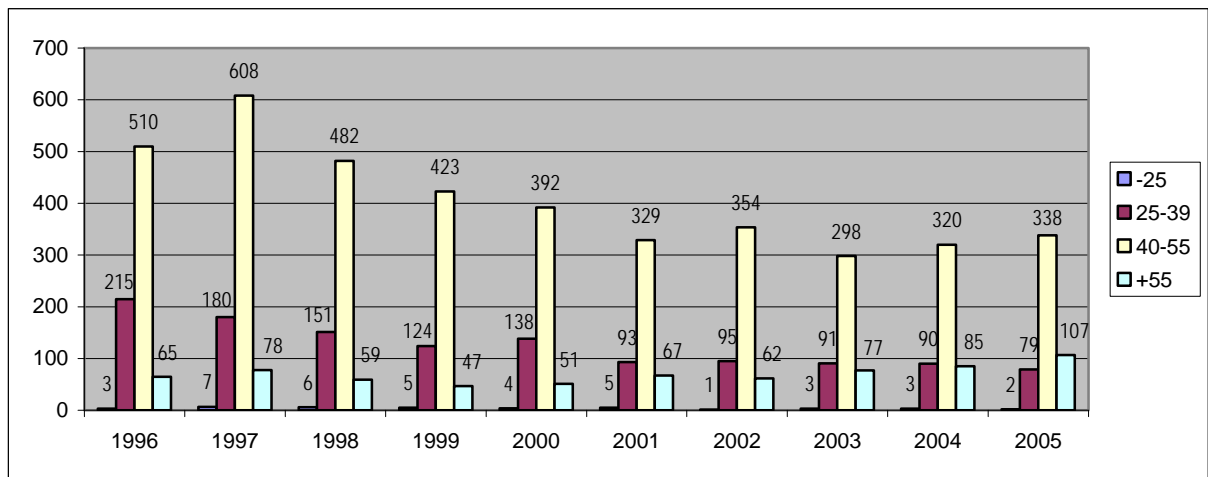


Source: European Survey on Working Conditions, 2005.

2 By age

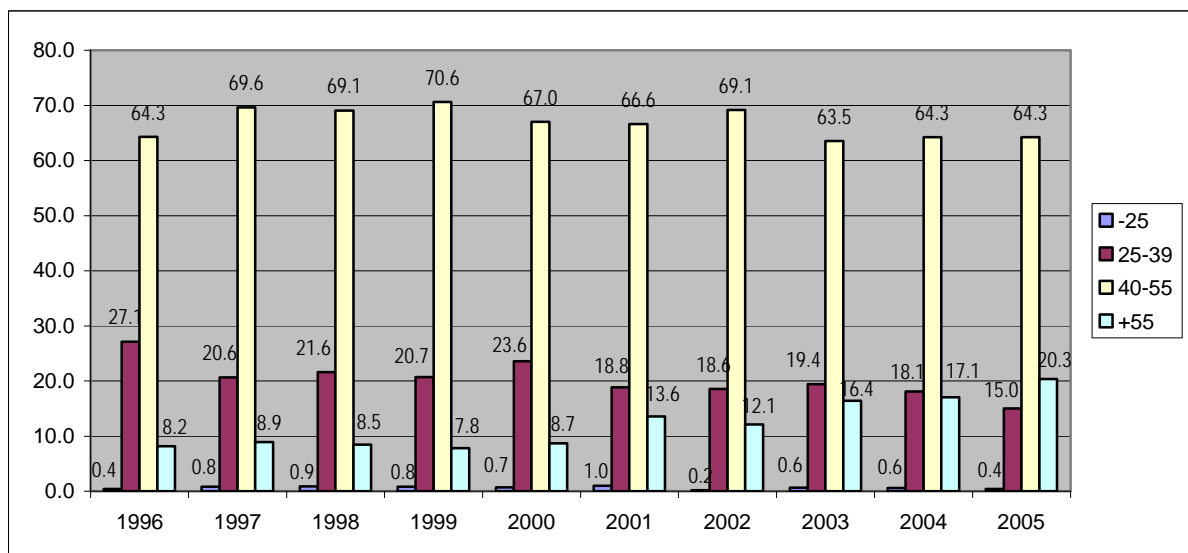
Between 1996 and 2005, most occupational MSDs were reported among workers in the age category 40 to 55 years old: on average, 67% of all cases were in this age category (4,054 out of a total of 6,047). The proportion of this category has decreased slightly over time, while the share in the total of those aged over 55 years old has increased from 8% to 20%.

Figure 4: Number of occupational musculoskeletal disorders in the Czech Republic, by age, 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

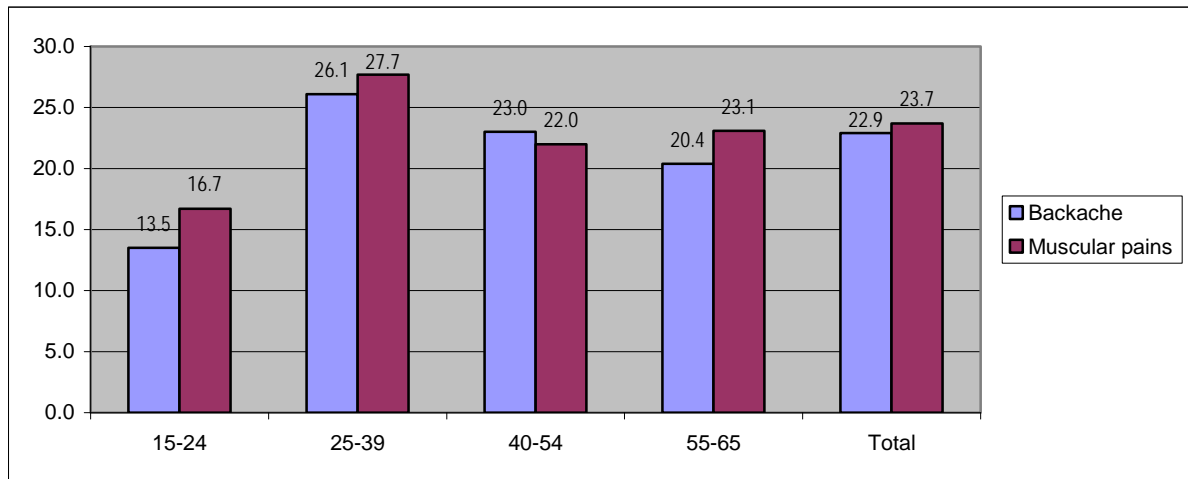
Figure 5: Proportion of various age categories in the total number of occupational musculoskeletal diseases (in %) in the Czech Republic in 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

According to the ESWC, workers aged 25 to 39 reported the highest prevalence of MSDs in the Czech Republic in 2005: 26.1% of them suffered from backache while 27.7% reported muscular pains. The figures are relatively similar for workers in the 40-54 and 55-65 age groups, where youngest workers reported prevalence shares below 20%.

Figure 6: Percentage share of workers reporting backache and muscular pains, by age, 2005

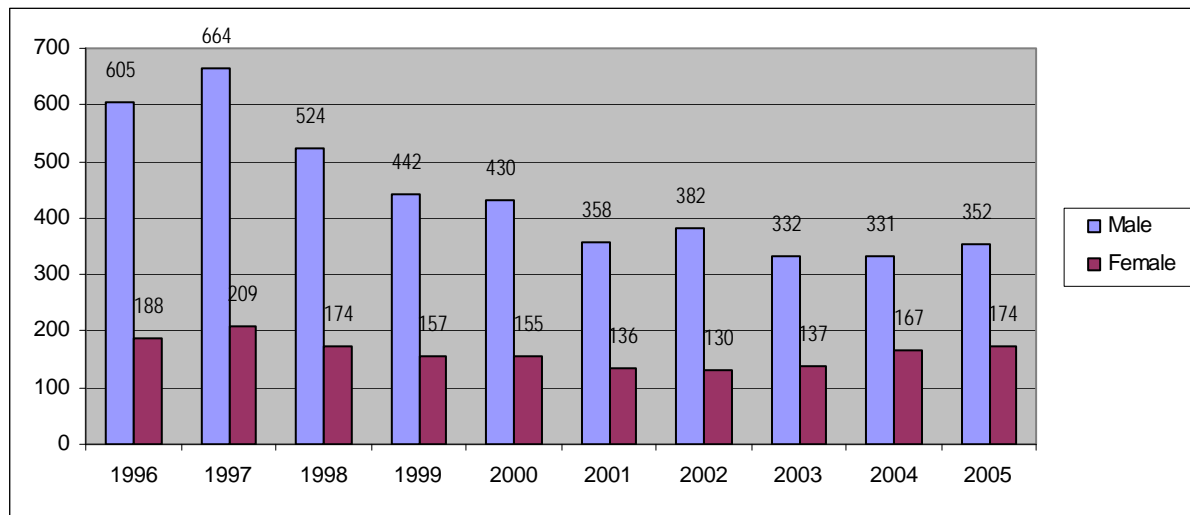


Source: European Survey on Working Conditions, 2005.

3 By gender

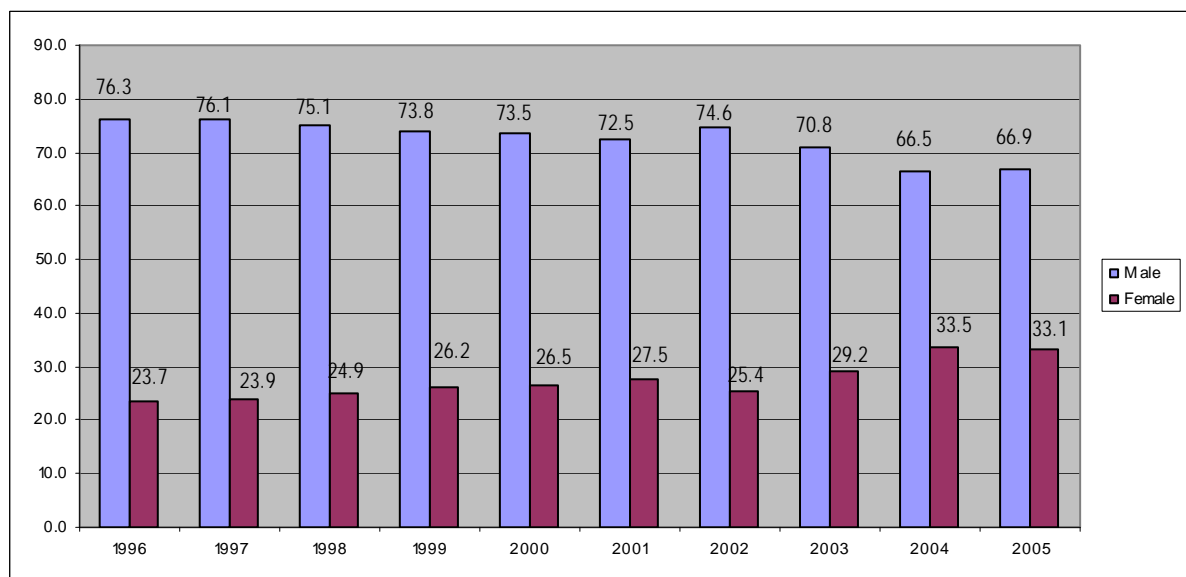
Throughout the whole period under consideration, between 1996 and 2005, more cases of occupational MSDs have been reported for male workers than for women. On average, men have accounted for 73% of all occupational MSDs in the period. However, the proportion of female workers in the total has increased from 24% in 1996 to 33% in 2005.

Figure 7: Number of occupational musculoskeletal disorders in the Czech Republic, by gender, 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

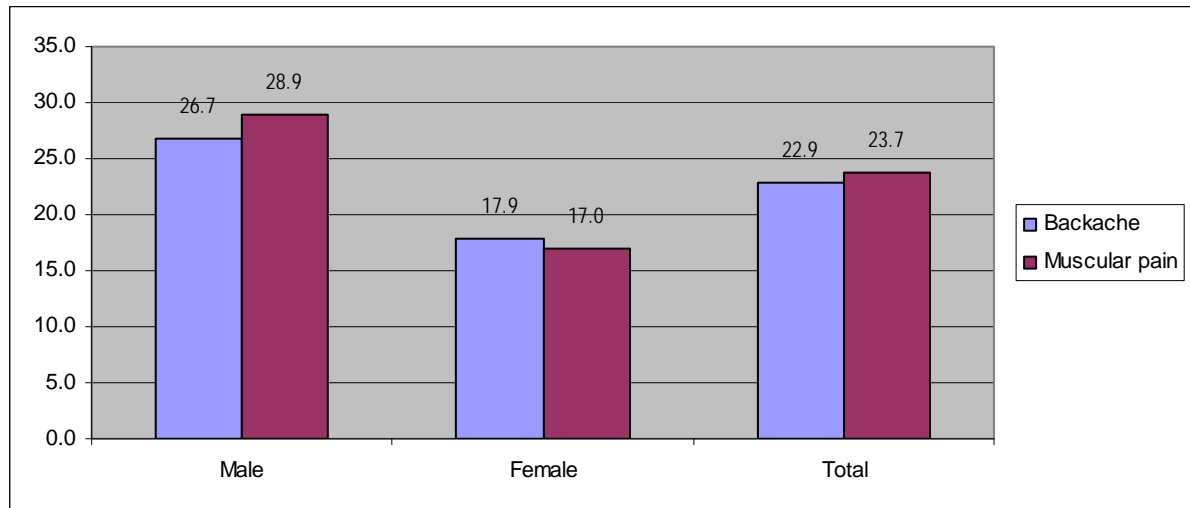
Figure 8: Number of occupational musculoskeletal disorders in the Czech Republic, proportion (in %) by gender, in 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

The ESWC provides similar results to the Czech national information and shows that male workers reported a higher prevalence of MSDs. In this sense, over a quarter of men complained of both backache (26.7%) and muscular pains (28.9%) in 2005. The corresponding figures for women were lower: 17.9% for backache and 17% for muscular pain.

Figure 9: Percentage share of workers reporting backache and muscular pains, by gender, 2005



Source: European Survey on Working Conditions, 2005.

4 By sector

Sector groups (sections in NACE Rev 1.1) used in figures:

- 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.

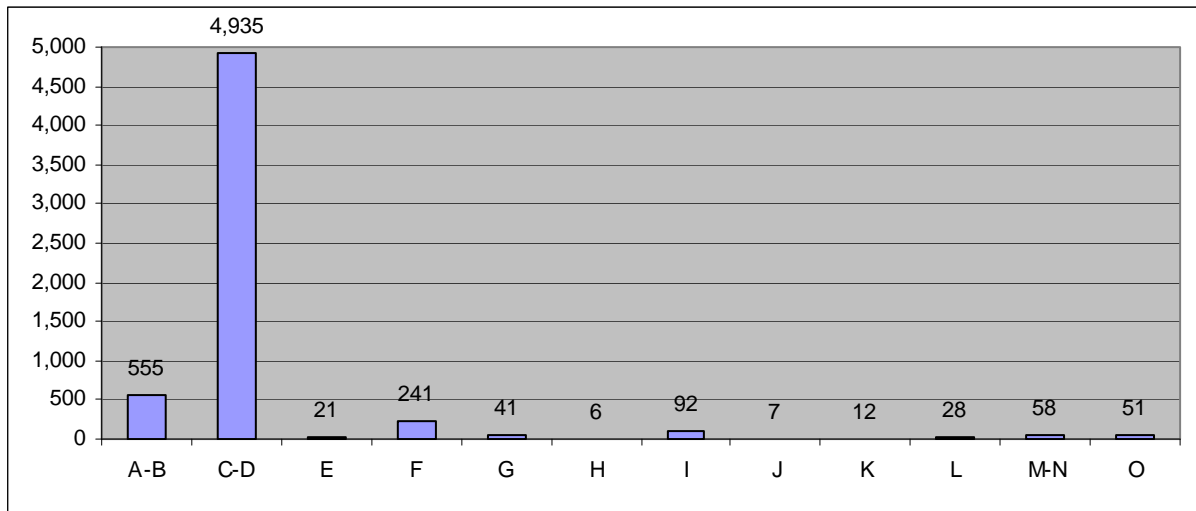
Most cases of occupational MSDs in the Czech Republic have been reported in mining or manufacturing (C-D), which accounts for 82% of the total occupational MSDs in the country between 1996 and 2005. The sector is followed at great distance by agriculture and fisheries (A-B): 9% of the total.

Table 1: Number of occupational musculoskeletal disorders in the Czech Republic, by economic activity sector, 1996-2005

Sector (NACE)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
A-B	79	74	53	53	65	39	37	48	55	52	555
C-D	669	726	593	494	475	405	415	365	392	401	4,935
E	2	4	1	3	2	3	1		2	3	21
F	26	26	24	28	20	26	25	18	20	28	241
G	3	6	1	7	4	4	1	8	3	4	41
H		1	2	1				2			6
I	3	20	10	5	5	3	13	9	8	16	92
J			1			3			3		7
K	2		1	1					2	6	12
L	3	1		2	5	3	5	4	4	1	28
M-N	4	11	5	4	4	3	8	7	3	9	58
O	2	4	7	1	5	5	7	8	6	6	51
Total	793	873	698	599	585	494	512	469	498	526	6,047

Source: Czech National Registry of Occupational Diseases, 1996-2005.

Figure 10: Number of occupational musculoskeletal disorders in the Czech Republic by economic activity sector, total 1996-2005

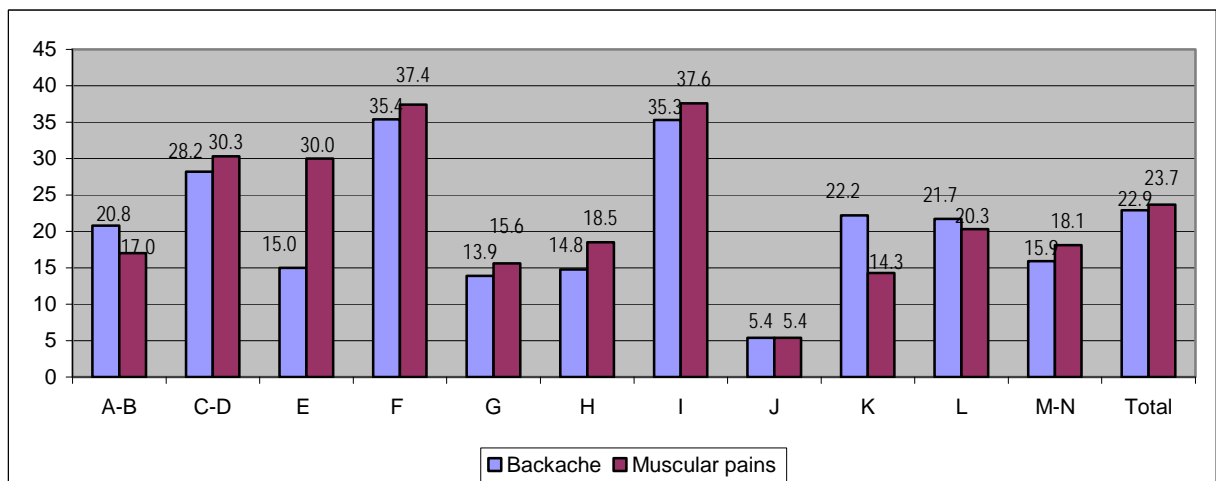


Source: Czech National Registry of Occupational Diseases, 1996-2005.

Concerning available information from the ESWC, those sectors most affected by MSDs in the Czech Republic appear to be construction and transport and communication. In construction 35.4% of workers report suffering from backache while 37.4% complain of muscular pains. Very similar figures are found in transport and communication: 35.3% and 37.6%, respectively. Manufacturing too reports a high incidence of both backache (28.2%) and muscular pains (30.3%), while utilities (electricity, gas and water supplies) witnesses a particularly high incidence of muscular pains: 30%.

The lowest prevalence of MSDs is reported in financial intermediation, with a 5.4% rate both for backache and muscular pains.

Figure 11: Percentage share of workers reporting backache and muscular pains, by activity sector, 2005



Source: European Survey on Working Conditions, 2005.

5 By occupation

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.

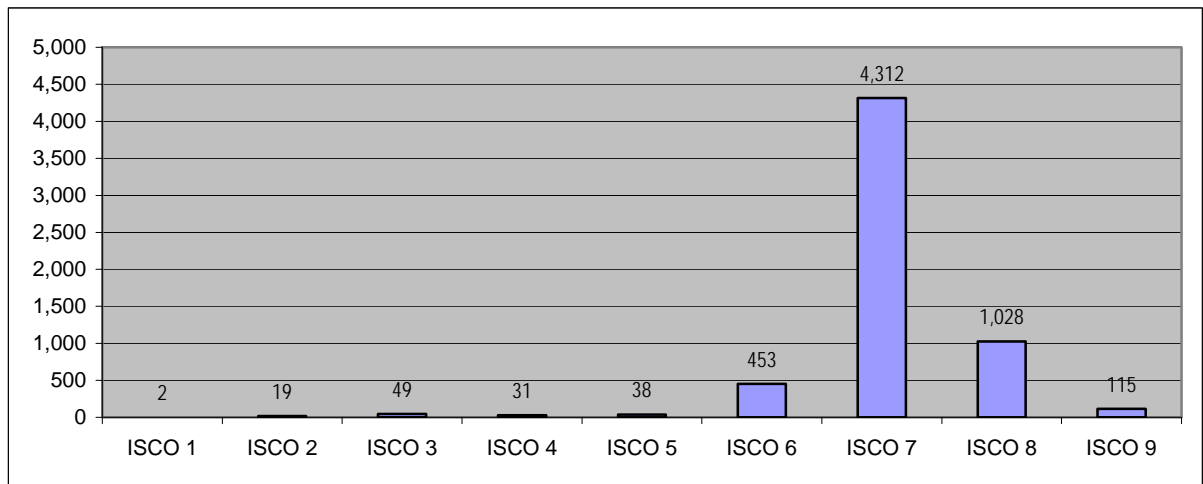
Most cases of occupational MSDs in the country were reported among craft and related trades workers (ISCO 7): 71% of all MSDs cases between 1996 and 2005. They were followed by plant and machine operators and assemblers (ISCO 8) with 17% of all cases. In any case, it has to be stressed that while the share of craft and related trades workers in the total has gradually decreased in time (from 77% in 1996 to 64% in 2005), that of plant and machine operators has risen from 11% in 1996 to 23% in 2005.

Table 2: Number of occupational musculoskeletal disorders in the Czech Republic by occupation, 1996-2005

Occupation	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
ISCO 1	1				1						2
ISCO 2	3	1	1	2	1	4	2	1	2	2	19
ISCO 3	4	10	3	3	7	5	5	6	3	3	49
ISCO 4	4	2	1	1	5	6	7		4	1	31
ISCO 5	1	4	7	5	3	1	2	4	1	10	38
ISCO 6	70	65	46	43	47	32	29	35	42	44	453
ISCO 7	612	624	500	446	404	354	384	327	325	336	4,312
ISCO 8	90	151	124	90	105	85	73	81	109	120	1,028
ISCO 9	8	16	16	9	12	7	10	15	12	10	115
Total	793	873	698	599	585	494	512	469	498	526	6,047

Source: Czech National Registry of Occupational Diseases, 1996-2005.

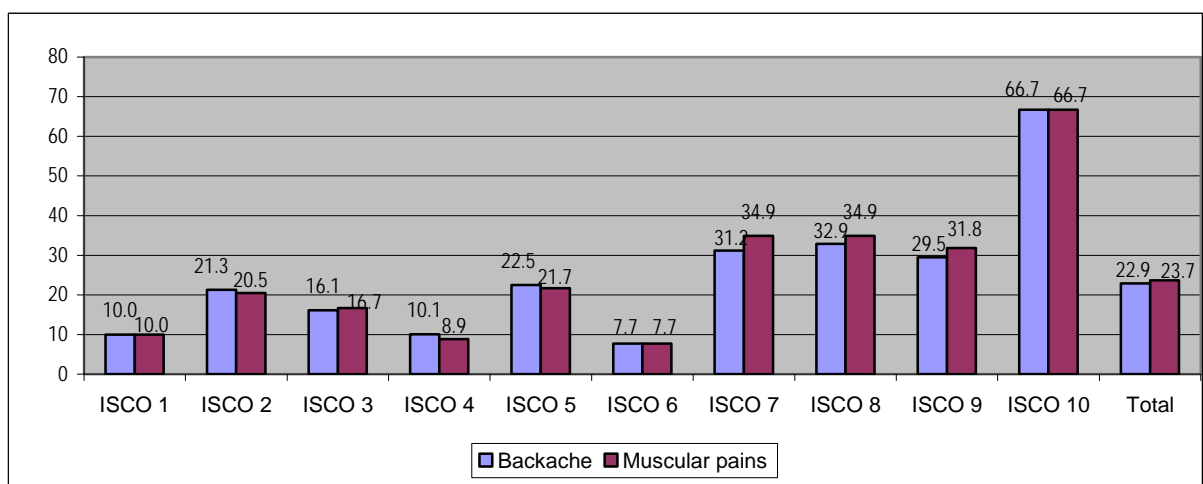
Figure 12: Number of occupational musculoskeletal disorders in the Czech Republic by occupation, total 1996-2005



Source: Czech National Registry of Occupational Diseases, 1996-2005.

As far as the ESWC is concerned, and bearing in mind that the results of workers in armed forces (ISCO 10) need to be interpreted with caution due to the small sample size, the most affected occupational groups were, again, plant and machine operators and assemblers (ISCO 8) and craft and related trades workers (ISCO 7). In both groups there is a 34.9% rate of workers who complain of muscular pains, while the share of workers affected by backache is very similar too: 32.9% among plant and machine operators and assemblers and 31.2% among craft and related trades workers. Those working in elementary occupations too report a higher than average share of both muscular pains (31.8%) and backache (29.5%).

Figure 13: Percentage share of workers reporting backache and muscular pains, by occupation, 2005

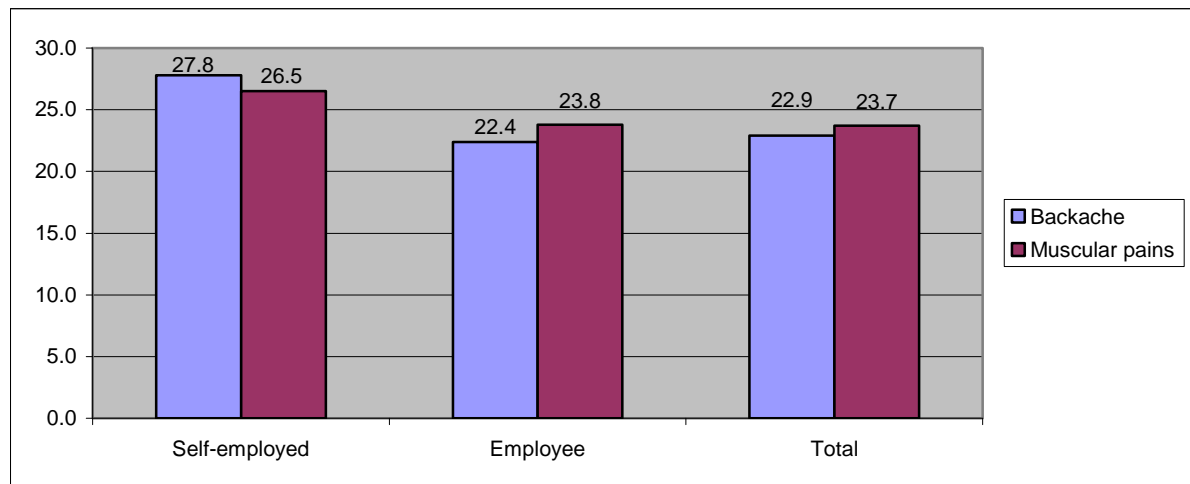


Source: European Survey on Working Conditions, 2005.

6 By employment status

Finally, and regarding employment status, the ESWC shows that self-employed workers in the Czech Republic report a slight higher prevalence of MSDs than employees. In this sense, the share of self-employed workers suffering from backache in 2005 was 27.8% while for muscular pains it was slightly lower: 26.5%. The corresponding figures among employees were 22.4% and 23.8%, respectively.

Figure 14: Percentage share of workers reporting backache and muscular pains, by employment status, 2005



Source: European Survey on Working Conditions, 2005.