

## Appendix

Potential confounding factors, which were associated with low back, neck, or shoulder pain with a p value of 0.25 or less and with exclusion of mutually dependent confounding factors, SMASH, 1994–97 (n=1357)

Low back pain	Neck pain	Shoulder pain
<i>General</i>		
Age	Age	Age
Years of employment	Years of employment	Years of employment
Working hours per week	Working hours per week	Working hours per week
	Education*	Education*
General health†	General health†	General health†
Physical condition†	Physical condition†	Physical condition†
Length	Length	Length
Body mass index	Body mass index	Body mass index
Comorbidity: neck or shoulder pain‡	Comorbidity: low back or shoulder pain‡	Comorbidity: low back or neck pain‡
Previous low back pain§	Previous neck pain§	Previous shoulder pain§
<i>Observed physical workload</i>		
The number of lifts of 25kg during an 8 hour working day	The working time with repeated movements $\geq 4$ times/minute	The working time with repeated movements $\geq 4$ times/minute
The number of lifts of 10kg during an 8 hour working day	The working time with the neck in flexion $\geq 45^\circ$	The number of lifts of 10kg during an 8 hour working day
The working time with the	The working time with the	The working time with the

Low back pain	Neck pain	Shoulder pain
trunk in flexion $\geq 30^\circ$	neck in rotation $\geq 45^\circ$	neck in rotation $\geq 45^\circ$
The working time with the trunk in flexion $\geq 90^\circ$	The working time with the neck in flexion $\geq 20^\circ$	The working time with the neck in flexion $\geq 20^\circ$
The working time with the trunk in rotation $\geq 30^\circ$	The working time with upper arm elevation $\geq 60^\circ$	The working time with upper arm elevation $\geq 30^\circ$
	The working time sitting	
<i>Self-reported physical workload</i>		
Driving a vehicle¶	Driving a vehicle¶	Driving a vehicle¶
Frequent flexion or rotation of the upper part of the body¶	Frequent flexion or rotation of the upper part of the body¶	Frequent flexion or rotation of the upper part of the body¶
Working with vibrating tools¶	Working with vibrating tools¶	Working with vibrating tools¶
Activities in the same posture for a long time¶	Activities in the same posture for a long time¶	
Moving loads $\geq 5\text{kg}$ ¶		Working with the arms above shoulder level¶
Moving loads $\geq 25\text{kg}$ ¶		Pinching with hands¶
		Sitting§
<i>Self-reported psychosocial workload</i>		
Quantitative job demands	Quantitative job demands	Quantitative job demands
Supervisor support	Supervisor support	Supervisor support
Co-worker support	Co-worker support	Co-worker support
Decision authority	Decision authority	Decision authority

Low back pain	Neck pain	Shoulder pain
Conflicting demands**	Conflicting demands**	Conflicting demands**
Job security**	Job security**	Job security**
Job satisfaction¶	Job satisfaction¶	
<i>Self-reported physical load during leisure time</i>		
Frequent flexion or rotation of the upper part of the body¶	Frequent flexion or rotation of the upper part of the body¶	Repeated movements with hands and/or arms¶
Lifting loads $\geq 5\text{kg}$ ¶	Video display terminal work¶	Video display terminal work¶
Lifting loads $\geq 25\text{kg}$ ¶	Working with vibrating tools¶	Working with vibrating tools¶
Driving a vehicle¶	Driving a vehicle¶	
Activities in the same posture for a long time¶	Activities in the same posture for a long time¶	
	Force exertion with hand and/or arms¶	Force exertion with hand and/or arms¶
	Working with the arms above shoulder level¶	Working with the arms above shoulder level¶
Frequency of heavy physical activities during the past 4 months††	Reaching¶	Frequency of heavy physical activities during the past 4 months††
Average number of hours of sports participation per week during the past year	Average number of hours of sports participation per week during the past year	Average number of hours of sports participation per week during the past year

Low back pain	Neck pain	Shoulder pain
Number of years of sports participation in the past	Number of years of sports participation in the past	Number of years of sports participation in the past
<i>Coping style and exposure to life events</i>		
Active problem solving	Active problem solving	Active problem solving
Avoidance behaviour	Avoidance behaviour	Avoidance behaviour
Social support seeking	Social support seeking	Social support seeking
Number of life events during the past year‡‡	Number of life events during the past year‡‡	Number of life events during the past year‡‡

\*No education or primary school, lower secondary or vocational school, intermediate secondary or vocational school, higher secondary or vocational school, or university.

†Good, fairly, moderate, poor.

‡Regular, or prolonged pain in the past 12 months during follow up.

§Ever, or never.

¶Seldom/never, sometimes, quite often, or very often.

\*\*Agree, or disagree.

††More than three times/week, 1–2 times/week, 1–3 times/month, or less than once/month.

‡‡No, one, or more than one.