

Table e-2. Description of the studies included in the meta-analysis and the result of the meta-analysis for both low and high risk of bias studies and for only the low risk of bias studies

Risk factor category	<ul style="list-style-type: none"> <li>•Definition of exposure</li> <li>•Measurement</li> </ul>	High exposure	Low exposure, reference group	OR (both low and high L&H, only low L)	95%CI
<b>Physically demanding work (10 studies)</b>				L&H: 2.03 <b>L: 1.95</b>	1.48-2.79 <b>1.39-2.74</b>
11	<ul style="list-style-type: none"> <li>• Physical effort</li> <li>• Self-report</li> </ul>	'Hard'	'Sedentary or minimal'	1.26	0.69-2.28
14	<ul style="list-style-type: none"> <li>• Sum index of occupational stress</li> <li>• Self-report</li> </ul>	Sum score=>2	Sum score=0	2.41	1.79-3.25
17	<ul style="list-style-type: none"> <li>• A cumulative sum index for the number years of exposure to five workload factors</li> <li>• Interviews</li> </ul>	'More than 10 years in heavy physical work in general'	'Zero years of heavy physical work in general'	1.71	1.18-2.47
18	<ul style="list-style-type: none"> <li>• Physical strenuousness of work</li> <li>• Interviews</li> </ul>	'Exposed to strenuous physical work'	'No exposure to professional car driving or strenuous physical work'	2.30	1.44-3.67
23	<ul style="list-style-type: none"> <li>• Physical work-related overuse</li> </ul>	'Workers exposed to moderately strenuous tasks at	'Workers not exposed to repetitive motion, overexertion,	0.70	0.43-1.13

	<ul style="list-style-type: none"> <li>• Self-reports</li> </ul>	the work place'	heavy physical work, etcetera'		
27	<ul style="list-style-type: none"> <li>• Intensity of physical labour at work</li> <li>• Self-report</li> </ul>	'Hard'	'Sitting, easy or moderate'	2.94	1.58-5.49
28	<ul style="list-style-type: none"> <li>• Occupational groups (a priori assessment)</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	'More than 10 years of occupation with medium or high physical workload'	'Always occupations with low physical workload'	1.19	0.70-2.01
29	<ul style="list-style-type: none"> <li>• Cumulative lumbar load up to 10 years prior to diagnosis or interview date</li> <li>• Interviews, Job survey by an expert, and Biomechanical modelling</li> </ul>	Men: $\geq 21.51 \cdot 10^6 \text{Nh}$ Women: $> 2.77 \cdot 10^6 \text{Nh}$	Men: $< 5.0 \cdot 10^6 \text{Nh}$ Women: 0 Nh	2.68	2.04-3.54
30	<ul style="list-style-type: none"> <li>• Physical work, strenuous enough to result in sweating</li> <li>• Self-report</li> </ul>	'Often'	'Seldom/never'	3.74	1.78-7.84
34	<ul style="list-style-type: none"> <li>• Lumbar load</li> <li>• Self-report</li> </ul>	'Level III (moderate) represents mainly bending over and twisting and whole-body vibrating at work and level IV (severe) represents mainly heavy lifting and heavy labour work'	'Level I (slight) represents no fixed occupation and little physical labour and level II (mild) represents mainly sitting at work'	4.63	2.69-7.97
<b>Bending and twisting trunk (4 studies)</b>				L&H: 2.43	1.67-3.55

				<b>L: 2.48</b>	<b>1.49-4.13</b>
11	<ul style="list-style-type: none"> <li>• Job content</li> <li>• Self-report</li> </ul>	'Bending and postural twisting work load'	'Sitting or standing'	2.41	1.47-3.95
17	<ul style="list-style-type: none"> <li>• Bending (at least 1 hour per work day)</li> <li>• Interviews</li> </ul>	'More than 10 years'	'Zero years'	1.53	1.06-2.20
28	<ul style="list-style-type: none"> <li>• Extreme (&gt;90° trunk flexion) forward bending (h)</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	>1500 h	0 h	4.66	2.43-8.96
29	<ul style="list-style-type: none"> <li>• Cumulative lumbar load through intensive-load postures</li> <li>• Interviews, Job survey by an expert, and Biomechanical modelling</li> </ul>	Men: >4.85*10 <sup>6</sup> Nh Women: >2.77*10 <sup>6</sup> Nh	Men: 0 Nh Women: 0 Nh	2.56	1.99-3.31
<b>Lifting and carrying (5 studies)</b>				<b>L&amp;H: 1.41</b> <b>L: 1.70</b>	<b>0.93-2.14</b> <b>1.04-2.78</b>
11	<ul style="list-style-type: none"> <li>• Job content</li> <li>• Self-report</li> </ul>	'Lifting or carrying heavy objects'	'Sitting or standing'	0.95	0.54-1.67
17	<ul style="list-style-type: none"> <li>• Number of years handling of heavy objects (20 kg on average at least 10 times per work day)</li> </ul>	'More than 10 years'	'Zero years'	1.31	0.87-1.98

	<ul style="list-style-type: none"> <li>• Interviews</li> </ul>				
20	<ul style="list-style-type: none"> <li>• Type of job a person held for at least a year when there symptoms arose</li> <li>• Interview</li> </ul>	'Any lifting'	'No lifting'	1.09	0.60-1.98
28	<ul style="list-style-type: none"> <li>• Cumulated lifting/carrying (kg<sup>2</sup>*h)</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	>10 000 kg <sup>2</sup> *h	0 kg <sup>2</sup> *h	1.33	0.76-2.34
29	<ul style="list-style-type: none"> <li>• Cumulative lumbar load through manual materials handling and/or intensive-load postures</li> <li>• Interviews, Job survey by an expert, and Biomechanical modelling</li> </ul>	Men: ≥8.98*10 <sup>6</sup> Nh Women: ≥9.06*10 <sup>6</sup> Nh	Men: <2.34*10 <sup>6</sup> Nh Women: 0 Nh	2.53	1.94-3.30
<b>Lifting &amp; Bending trunk (2 studies)</b>				<b>L: 2.84</b>	<b>2.18-3.69</b>
28	<ul style="list-style-type: none"> <li>• Lifting/carrying combined with extreme forward bending</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	Lifting/carrying >150 000 kg <sup>2</sup> *h and extreme forward bending >1500 h	No lifting/carrying; no extreme forward bending	2.43	0.89-6.63

29	<ul style="list-style-type: none"> <li>Cumulative lumbar load through manual materials handling and/or intensive-load postures</li> <li>Interviews, Job survey by an expert, and Biomechanical modelling</li> </ul>	Men: $>21.51 \cdot 10^6 \text{Nh}$ Women: $\geq 14.47 \cdot 10^6 \text{Nh}$	Men: $<5.0 \cdot 10^6 \text{Nh}$ Women: 0 Nh	2.87	2.18-3.77
<b>Professional driving (6 studies)</b>				L&H: 1.46 <b>L: 1.23</b>	0.90-2.35 <b>0.57-2.64</b>
11	<ul style="list-style-type: none"> <li>Job content</li> <li>Self-report</li> </ul>	'Causal exposure to vibration'	'Sitting or standing'	1.85	0.87-3.94
14	<ul style="list-style-type: none"> <li>Work-related driving</li> <li>Self-report</li> </ul>	'Professional work-related driving motor vehicles'	'No work-related driving motor vehicles'	0.96	0.57-1.62
18	<ul style="list-style-type: none"> <li>The history of professional car driving</li> <li>Questionnaire</li> </ul>	'Exposed to driving, no strenuous physical work'	'No exposure to professional car driving or strenuous physical work'	0.33	0.04-2.46
20	<ul style="list-style-type: none"> <li>Type of job a person held for at least a year when there symptoms arose</li> <li>Interview</li> </ul>	'Job as truck driver'	'Not a job as truck driver'	4.59	1.48-14.28
24	<ul style="list-style-type: none"> <li>Exposure to WBV in their latest job</li> <li>Current rms A(8) (<math>\text{ms}^{-2}</math>) derived from driving times and imputed vibration</li> </ul>	$\geq 0.5$	$< 0.5$	1.03	0.65-1.61

	magnitudes of vehicles.				
28	<ul style="list-style-type: none"> <li>• Exposure to whole body vibration, weighting type of terrain</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	>1800h	0 h	2.29	1.10-4.75
<b>Sitting (2 studies)</b>				L&H: 1.08 <b>L: 0.70</b>	0.49-2.38 <b>0.37-1.30</b>
21	<ul style="list-style-type: none"> <li>• The time they sat on their job</li> <li>• Interview</li> </ul>	Half or more of the time sitting	Less than half the time sitting	1.57	1.01-2.44
28	<ul style="list-style-type: none"> <li>• Cumulative sedentary work (h)</li> <li>• Self-report, Expert opinion, and Biomechanical modelling</li> </ul>	>30.000	≤10.000	0.70	0.37-1.30