

# Guidelines for signalling and prevention of occupational diseases

## two examples: lumbar herniated disc disease and stress related disorders



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### 1 Objective

The development of evidence informed occupational disease guidelines to identify and counteract lumbar herniated disc disease (LHDD) and stress related disorders (SRD).

### 2 Methods

To support Dutch occupational physicians in signalling and preventing ODs, transparent and evidence-based clinical decision criteria were developed for LHDD and SRD. Systematic reviews and meta-analyses with grading of the evidence were used.

### 3 Lumbar Herniated Disc Disease

In total 22 LHDD studies were included in the systematic review. Bending & twisting of the trunk and lifting & bending of the trunk were the highest work-related risk factors for LHDD with relative risks of 2.4 (95%CI: 1.67-3.55) and 2.8 (95%CI: 2.18-3.69), respectively. (Table 1).

### 4 Stress Related Disorders

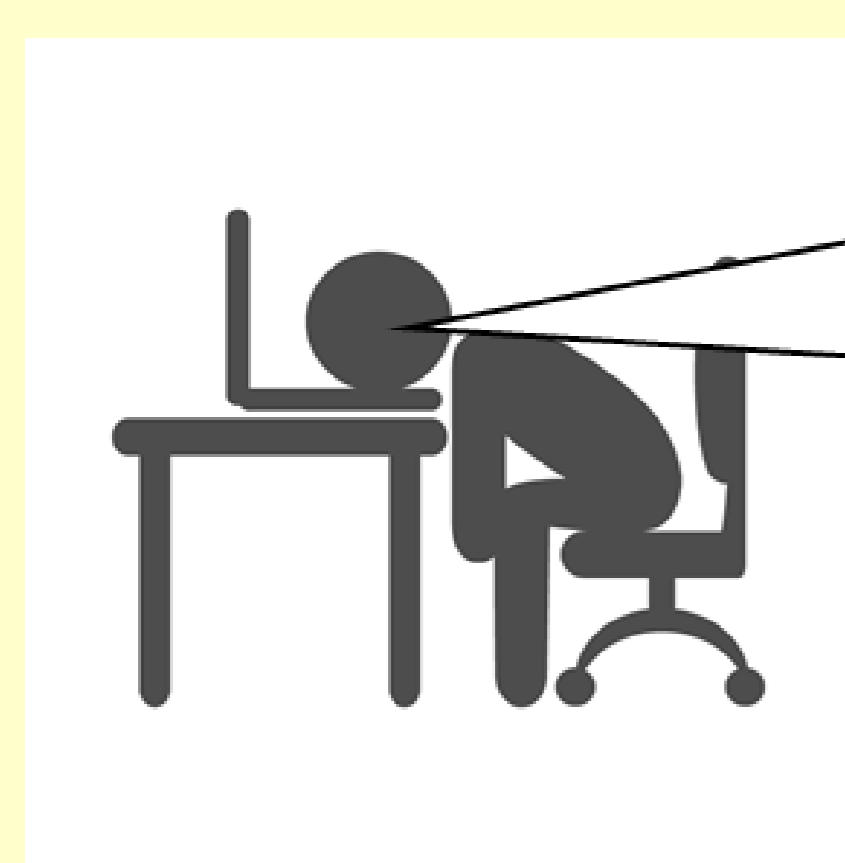
In total 12 SRD studies were included in the systematic review. Effort-reward imbalance and low procedural justice were the highest work-related risk factors for SRD with relative risks of 2.0 (95%CI: 1.81-2.22) and 1.8 (95%CI: 1.60-1.98), respectively. (Table 2).

Table 1. Risk factors meta-analyses lumbar herniated disc

Lumbar herniated disc disease	OR	95%CI
Physical workload	2.03	1.48-2.79
Lifting & carrying	1.41	0.93-2.14
Bending & twisting trunk	2.43	1.67-3.55
Lifting & bending trunk	2.84	2.18-3.69

Table 2. Risk factors meta-analyses stress related disorders

Stress related disorders	OR	95%CI
Effort-reward imbalance	2.00	1.81-2.22
High psychological job demands	1.49	1.36-1.62
Low decision authority	1.34	1.20-1.49
Low co-worker support	1.29	1.17-1.41
Low supervisor support	1.27	1.16-1.38
Low procedural justice	1.78	1.60-1.98
Low relational justice	1.49	1.34-1.65
High emotional demands	1.62	1.36-1.93



Is it work-related, doc?

### 5 Conclusions

Several disease-specific work-related risk factors for LHDD and SRD have been established confirming the multifactorial aetiology. The clinically assessed threshold limit of the risk factors are the starting point for the selection of preventive interventions to reduce these occupational diseases.

### 6 Exposure threshold limits in practice

An example of a threshold limit for a risk factor of LHDD is daily bending of the trunk more than 20 degrees for at least one hour a day. An example for SRD is a combination of high time pressure and low decision authority, e.g. after a reorganisation.



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