



## *What Risk Factors are measured by Wellnomics Risk Management?*

### *Wellnomics® White Paper*

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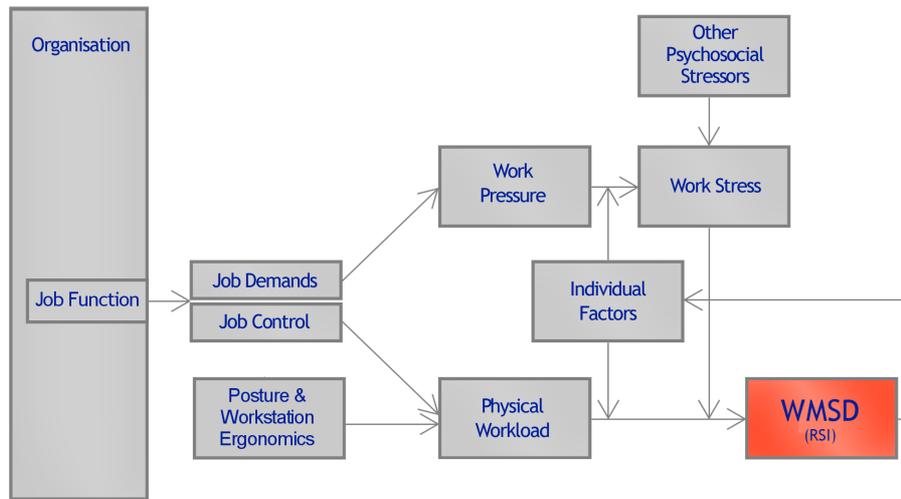
The Wellnomics Risk Management product assesses up to 50 risk factors, depending upon how many modules are implemented. These risk factors have all been identified by a panel of international experts at the Netherlands TNO Research Institute as being associated with the development of musculoskeletal disorders in office workers.

The risk factors are divided into seven risk categories, and grouped into three modules

Module	Risk Categories	Number of Risk Factors	Risk Factors
Module 1 (Computer Use Risk Reporting)	Computer Use and Breaks	7	High computer use High mouse use High keyboard use High peak computer use High work/rest ratio Insufficient rest breaks Insufficient Micropauses
	Speed & Intensity	5	High typing speed High level of mouse clicks High use of mouse drag High level of mouse movements (direction changes/min) High level of precise mouse work
	Compliance	12	Poor Micropause Compliance Poor WorkPace Break Compliance WorkPace being put on Standby too often Ignoring too many Daily Limit warnings Ignoring too many Dutch regulation break warnings Ignoring too many Dutch regulation Daily Limit warnings Ineffective Settings: Micropauses turned off Ineffective Settings: Micropause Duration too long Ineffective Settings: WorkPace Breaks turned off Ineffective Settings: WorkPace Break Duration too short Ineffective Settings: WorkPace Break Interval too long Ineffective Settings: WorkPace Daily Limit turned off

Module	Risk Categories	Number of Risk Factors	Risk Factors
Module 2	Posture and Workstation	11	<ul style="list-style-type: none"> <li>Neck flexion</li> <li>Neck extension</li> <li>Neck rotation</li> <li>Anterior position of the head (leaning forward, head sticking out)</li> <li>Shoulder elevation</li> <li>Upper arm elevation</li> <li>Upper arm rotation</li> <li>Insufficient forearm support</li> <li>Wrist ulnar abduction</li> <li>Wrist extension</li> <li>Wrist flexion</li> </ul>
	Discomfort	12	<ul style="list-style-type: none"> <li>Current symptoms or discomfort</li> <li>Past history of symptoms or discomfort</li> <li>Eyestrain</li> <li>Level of discomfort in: <ul style="list-style-type: none"> <li>Neck</li> <li>Upper back</li> <li>Lower back</li> <li>Left shoulder and upper arm</li> <li>Right shoulder and upper arm</li> <li>Left forearm</li> <li>Right forearm</li> <li>Left hand and wrist</li> <li>Right hand and wrist</li> </ul> </li> </ul>
Module 2 (Optional)	Psychosocial Factors (work stressors)	8	<ul style="list-style-type: none"> <li>High mental load</li> <li>High work demands</li> <li>Low job control</li> <li>Low social support from colleagues</li> <li>Low sense of community</li> <li>Lack of feedback at work</li> <li>Lack of sufficient leadership</li> <li>High work stress</li> </ul>
	Individual Factors	6	<ul style="list-style-type: none"> <li>Increased risk due to female gender</li> <li>High sensitivity to stress or commitment</li> <li>High tendency to continue working</li> <li>Low physical activity</li> <li>Low physical fitness</li> <li>Low muscle strength</li> </ul>

All risk factors are weighted using a risk model developed by TNO to calculate overall risk levels for each office worker and identify those staff most at risk of musculoskeletal health problems.



*Health risks model for office workers developed by TNO Research Institute*

For more information on each risk factor, including its criteria and management advice on how to address each risk factor, see the Wellnomics Ergonomics Reference Guide<sup>1</sup>.

For the research behind these risk factors see *Wellnomics white paper - Reference Literature for Wellnomics Risk Management*.

<sup>1</sup> Available both as a printed document and also in the Wellnomics Risk Management online help.