

TRUCK RIDE QUALITY

- DRIVERS EXPOSURE TO TRANSIENT SHOCK AND TO DAILY A(8)-VIBRATION IN SWEDEN, FINLAND, NORWAY AND SCOTLAND



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Abstract

Many truck drivers are exposed to high stress from human whole-body vibration (WBV), thus suffering risk for stress-related heart diseases and for musculoskeletal problems in the neck, shoulders and back. Furthermore they are at high risk of being involved in road crashes. In the ROADEX IV project, sampling has been made of WBV-exposure of truck drivers on 3700 km typical truck transport routes in four EU Northern Periphery areas. The scope was to demonstrate assessment of daily vibration exposure A(8)-value, as well as of spinal compression stress S_{ed} in drivers exposed to transient shock at bumps, and compare results with the Action Value in EU Health & Safety Directive 2002/44/EC. Results from Finland, Scotland and Sweden confirm that the EU Action Value $A(8) = 0.5 \text{ m/s}^2$ is exceeded. After normalization to all-year-conditions, also data from E6 in northern Norway exceeds the Action Value. Thus hauliers with employees working under conditions similar to the tested are obliged by law to make proper assessment of the risks from high vibration exposure, including elevated crash risk due to lateral buffeting on icy winter roads.

Keywords: Pavement edge slump, heavy goods vehicle, high centre-of-gravity, roll vibration, lateral force, slippery ice, skid crash, low back pain, sick leave, change of occupation, early retirement.