**Whole-body vibration for tractor drivers**

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**Keywords*:*** Body index, effect vibration on health, tractor driver vibrations, vibration

**Abstract.** This Among the main health risks for operators in the agricultural sector, exposure to mechanical vibrations is certainly one of the most difficult factors to quantify, in relation to the continuous and heterogeneous use of agricultural machinery during the agricultural year.

According to data provided by the European Agency for Safety and Health at Work (EU-OSHA), 24% of workers in the European Union are exposed to mechanical vibration. At national level, 21% of Italian workers are exposed to the risk of this physical agent.

In the light of this data and in order to avoid the consequences of exposure to vibrations on workers' health, it is therefore necessary to carry out a risk analysis in the workplace and, where necessary, to take appropriate preventive measures.

The aim of the following work was, therefore, to measure vibration exposure and disturbances that can be transmitted while driving agricultural tractors. In particular, the vibrations transmitted to the seat at the lumbar spine, lumbosacral spine and cervical-dorsal junction were assessed.

The results showed that the vibrations were evenly distributed over the entire spinal column without statistically significant differences depending on the areas sampled. In some cases, higher accelerations were observed in the cervical-dorsal area, probably due to the vibrations transmitted by the steering wheel.

The analysis of whole-body vibration transmission in relation to the different fat mass (BMI) of the operators involved in the tests showed no significant differences.

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