LOW BACK PAIN DUE TO WHOLE-BODY VIBRATION IN PROFESSIONAL DRIVERS

ZERBEUSS, E., HULSOF, C., FRINNS-ERIESEN, M.
Corona Institute - Amsterdam - Netherlands

[Introduction]

Long term occupational exposure to whole-body vibration (WBV) is associated with an increased risk of Low Back Pain (LBP). The aim of this study was to investigate the prevalence of LBP in various groups of Dutch professional drivers. This cross sectional survey represents the baseline investigation of a prospective cohort study of dose-response relationships for musculoskeletal symptoms in WBV-exposed drivers recruited in a four year research project funded by the EU commission (VIBERKS).

Subjects and Methods

The study population included 574 male professional drivers employed in agriculture, manufacturing industries, construction, community and transport. Personal, occupational and health histories were collected by means of a standardized questionnaire within the VIBERKS project. Vibration measurements were performed on representative samples of the machines and vehicles m350) used by the driver groups. In accordance with the EU Directive on Physical Agents and the ISO standard 2631-1, daily vibration exposure was assessed in terms of 8-hour energy-equivalent frequency weighted acceleration, A(8) in m/s² per m/s².

Results

The response rate was 62%. Of the professional drivers, 31.1% reported LBP in the last 7 days, and 66.9% reported LBP in the last 12 months. The average daily exposure duration was 7.9 ± 2.7 h per working day. Average lifetime duration of exposure to WBV was 18.0 ± 12.4 years. Daily vibration exposure, A(8), ranged from 0.09 to 2.43 m/s² with an average of 1.25 m/s². In the professional drivers, the occurrence of 12-month LBP, high LBP intensity, and LBP disability significantly increased with increasing vibration exposure.

Conclusion

Based on preliminary results, this study confirms that professional driving in industry is associated with a high prevalence of work-related LBP.

Acknowledgement

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IS NOISE INDUCED HEARING LOSS STILL A PROBLEM IN THE DANISH WORKFORCE?

PLIBAK, T., KOCH, L., KOFOED-NIELSEN, B., BONDE, J.P., KOLSTAD, H.A.
Aarhus University Hospital - Aarhus - Denmark

[Introduction]

Documentalization of the extent of noise-induced hearing loss in the working population is limited. This study reports on the prevalence of noise-induced hearing loss in a population sample of workers in Denmark.

Methods

We recruited 788 workers from 11 trades with expected high noise exposure levels. For reference, financial employees and a sample of residents were investigated according to the same protocol. Full-shift A-weighted equivalent sound levels were recorded and pure tone audiometric examinations were conducted at the worksites in soundproof booths. Data were analyzed with multivariate regression techniques and adjusted for environmental noise exposure, age, sex and ear disease.

Results

An overall two-fold increased risk of hearing handicap (hearing threshold above 20 dB averaged across 2, 3, or 4 kHz for either ear) was observed in the noise-exposed workers (odds ratio CI 1.99, 95% confidence interval 1.02 4.43). Workers exposed for more than 25 years to an exposure level above 85 dB(A) had a three-fold increased risk. Workers starting in noisy work during the last 10-15 years or workers below 30 years of age showed a reduced risk of hearing handicap.

Discussion

Noise-induced hearing loss remains prevalent in several trades, but preventive measures implemented during the past 10-15 years to reduce noise exposure may have been fruitless. Systematic surveillance of noise and hearing levels in appropriate populations should still be included in an efficient hearing conservation program.

SLEEP QUALITY AND SUBJECTIVE HEALTH PARAMETERS IN FLEET TRUCK DRIVERS

VERREMBEL, R., VAN RISSENGEHM, M., PEYVER, D., BRABOK, L.
Department of Public Health, Ghent University - Ghent - Belgium
Department of Internal Medicine, University Hospital, Ghent - Ghent - Belgium

[Introduction]

Objective

To assess the sleep quality and to explore its association with subjective health parameters in a population of Flemish truck drivers.

Methods

In this cross-sectional study, 474 drivers filled in a self-administered questionnaire that included 3 sleep questionnaires: PSQI (Pittsburgh Sleep Quality Questionnaire), ESS (Epworth Sleepiness Scale) and BQ (Berlin Questionnaire). General health was evaluated on a 5-point scale and dichotomised in good and poor health.

Results

Mean age of the drivers was 42.7±10.2 years, 75.5% had more than 10 years experience as a trucker. Their mean monthly professional driving distance was 10494±5739km.

The mean PSQI score was 5.0±2.60, mean ESS score was 6.7±4.17. The BQ indicated that 14.5% had a higher risk of sleep apnoea. Regarding PSQI and ESS, the percentage of drivers reporting good health was significantly higher (Mann-Whitney U, p<0.001) in the group at risk of sleep apnoea (6.6%) compared to the group not at risk (90.4%).

Sleep score result was significantly higher or worse (Mann-Whitney U, p<0.05) in the group that reports suffering from musculoskeletal diseases (PSQI/ESS/BQ), injury by accident (PSQI/BQ), cardiovascular diseases (ESS/BQ), respiratory diseases (PSQI/ESS/BQ), psychiatric problems (PSQI/ESS/BQ), neurological diseases (PSQI/BQ), diseases of the digestive tract (PSQI/ESS), diseases of urinary or genital organs (ESS), dermatological problems (ESS/BQ) and urological disorders (ESS/BQ).

Conclusion

Poor sleep quality as expressed by sleeping scales is associated with poor health. In evaluating and improving health of truck drivers, focus on sleeping problems should be increased. In this, PSQI, ESS and BQ can be a very helpful instrument in detecting sleep disorders.