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(Research Article)
Influence of whole body vibration on mice reproductive power

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Abstract

Vibration is one of the most important physical harmful agents in the workplace that annually a significant proportion of workers in face. Among the most important disorders associated with it are musculoskeletal, vascular, gastrointestinal, physiological and etc. due to the widespread exposure and also the inadequate studies of the effects of vibration on fertility, research is an open field. In this study, 16 adult male mice (NMRI) were divided into case and control groups. The frequency used in this study was 6 Hz and the effective acceleration was 1 m/s^2 r.m.s generated by the vibrator and inverter. The duration of exposure to vibration was 10 days for 2 consecutive weeks and the animals were sacrificed and analysed after 35 days. The results showed that the percentage of progressive sperm (39.1±4.4), immobilized sperm (28.3±8.4) and morphology (74.1±1.1) of the exposed group Whole body decreased significantly compared to the control group ($P<0.05$). However, this difference was not significant for sperm count (4.1±7.1), percentage of non-progressive sperm (31.2±9.6) and viability of sperm (69.2 ± 7) ($P>0.05$). Exposure to whole body vibration has a negative effect on sperm fertility, although further studies are needed.

Keywords: Whole body vibration, Reproductive power, Mice.

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