Human Aspects Of Occupational Vibration

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Occupational risk factors are elements of a job task that have been correlated to incidence of LBP. These risk factors include aspects of physical/repetitive activities (lifting, pushing, pulling) and the postures and motions (static postures, bending, twisting) associated with manual material handling (Eriksen et al., 2004). Physical activity (lifting, pushing, or pulling) applies loads and moments on the spine that can lead to development of LBP (Rubin, 2007). While vibration has characteristics of frequency and amplitude, the application of the vibration to the human body has two more characteristics. The direction of the vibration’s force to the body needs to be considered. WBV can be applied vertically, horizontally anterior/posterior, horizontally lateral, and any combination thereof. The human body comprises a dynamic structure that is living, intelligent, and complex. Consequently, it is not unreasonable to consider that exposing the body to an array of vibration environments would result in outcomes that are not necessarily simple or easily predictable. There have been attempts to summarize the effects of occupational vibration exposures by simply recommending the avoidance of certain frequencies of vibration or by providing a graphical method, i.e., a single curve displaying all human responses to all frequencies. However, such efforts have not withstood the scrutiny of scientific research and analysis. Health effects of vibration: the known and the unknown. In: Proceedings of the First American Conference on Human Vibration.