

4th International Conference and Exhibition on **Occupational Health & Safety**

August 24-25, 2015 Toronto, Canada

Heart rate response during FCE testing: A comparison of injured individuals who provided safe maximum vs. sub maximum performance during carry and push/pull

Marie Vazquez Morgan and **Steve Allison**
LSU Health Shreveport, USA

Introduction: Functional capacity evaluations (FCEs) are a comprehensive set of performance based tests, commonly used to evaluate and determine a worker's capacity to perform the physical demands that may be required in his or her job. The purpose of this study is to assess if physiological response differences are found in workers' compensation individuals whom performed either safe-maximally or sub-maximally during FCE testing in order to establish guidelines for this population in reference to carry and push pull.

Methods: Participants consisted of 204 male and female individuals between the ages of 19-80 receiving workers' compensation benefits following a work-related injury or illness. This study was retrospective in design. The following variables, based on the existing data, were evaluated: baseline pain level, gender, age, resting heart rate (RHR), body mass index, and percent heart rate increase for each functional test.

Results: Averages among variables such as % HR increase for the Carry and Push Pull components, age, baseline pain, BMI, and RHR were compared between the safe maximal and sub maximal groups. 132 males and 64 females were used in the safe maximal group, with an average age of 46.7. Other average values were as follows: % HR increase Carry - 42.5%; % HR increase Push Pull - 40.3%; Baseline Pain - 4.3/10; BMI - 31.4; Resting HR - 75.8 bpm. 7 females and 3 males were used in the sub maximal group, with an average age of 46. Other average values were as follows: % HR increase Carry - 40.1%; % HR increase Push Pull - 37.8%; Baseline Pain - 5.5/10; Resting HR - 80.8 bpm.

Conclusion: Differences in HR increase between the two groups were shown; however, these could not be determined statistically significant due to the group sample sizes.

mvazqu@lsuhsc.edu

Notes: