

Advantages of haptic feedback in virtual reality supported balance training: a pilot study

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ABSTRACT

Repetitive and goal based task supported with virtual reality technology have proven successful in balance training of stroke population. However, adding a haptic experience can besides increasing the difficulty level of the task enable postural responses assessment. We demonstrated in a single subject with stroke that haptic feedback can be used not only for interaction with virtual environment, but also for the assessment of postural responses. After the virtual reality and standing frame supported balance training the subject was introduced to the haptic floor. The acceleration of the standing frame/body provided sufficient information to identify the direction of the postural response that could be critical for fall. The outcomes were comparable with neurologically intact population and could be applied for objective postural response evaluation.

Full papers will be published in the Conference Proceedings and will be available to delegates at the conference on Sept. 10.

Full papers will be released on-line in the ICDVRAT archive on March 15.