

EPI Rehab

“Own-Design” Functional Capacity Evaluation Addressing FCE Inaccuracies and Use of Oversight Review

The Science of Determining Full Time Work: Regarding Functional Capacity Evaluation

The purpose of the FCE is to determine the capacity in which an injured or disabled individual can return to work, activities or daily living, or general tasks. Because there is no industry standard of how an FCE should be performed to evaluate the endurance or stamina to work, many clinics create their “own-design” of FCE or adopt a model from commercial FCE software. Current best evidence suggests that the FCE should include a patient’s physiological response to tasks in order to accurately determine the patient’s tolerance for full time work. The authors determined that a review of FCE reports from practitioners was necessary to validate if testing protocols included the science of work physiology to reach conclusions about a patient’s ability to return to full time work.

Research Methods, Professions Conducting FCEs, Research Conclusions

- Methods - 151 FCE reports were analyzed to determine the inclusion of work physiology science and in particular the heart rate reserve formula
- Professions Conducting FCEs - 54% PTs; 22% OTs; 14% PT/OT; 10% Other
- Findings:
 1. 45% reported heart rate response associated with tasks during FCE
 2. 0% reported heart rate recovery to resting
 3. 0% Applied the scientifically appropriate heart rate reserve formula

While almost half of the reports analyzed did include patient’s heart rate after performing a task, none of them reported heart rate responses past the first minute of the task being completed or incorporated the heart rate reserve formula. The heart rate response, recovery to resting, and heart rate reserve formula are important components to a valid FCE which can determine endurance. A background in work and exercise physiology is a prerequisite for understanding how to interpret heart rate responses during work. The analyzed reports were prepared by graduate physical therapists and/or occupational therapists. However, none of the FCE practitioners evaluated had been credentialed in exercise and/or work physiology.

This research is important to identify and correct the flaws and errors which are used to assess return to work tolerance. The incorrect or lacking application of work physiology science reveal lack of credibility and validity of many FCEs. The thorough review and research is intended to improve standards of FCE methodologies regarding heart rate responses. The inclusion of work physiology science during FCEs improves the reliability and validity of the examiners opinions.

Take Away Message

A functional capacity evaluation that does not include heart rate reserve formula model relies on an inaccurate determination of work capacity. The users of FCE tests should be knowledgeable and not simply rely on FCE providers' opinions. User's should confirm the findings of an FCE with a second opinion FCE oversight review.