Functional Capacity Evaluation: Rationale, Procedure, Utility of the Kinesiophysical Approach

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The return to work process of an injured worker is dependent upon matching the physical abilities of the worker with physical demands of work tasks. Functional work movements and tasks are complex. Machines, equipment and isolated musculoskeletal testing have not produced data that is broad enough to project multi-faceted work ability. Functional capacity evaluations, which are sets of dynamic work tests, have seen a growing acceptance because of their whole-worker approach. The basic items of functional evaluations (lifting, carrying, bending, reaching, climbing) are compiled into a comprehensive test which results in information about the whole of work and overall ability of the worker. Projections into an eight-hour day and comparison to physical demands of the job are included in outcome of a functional capacity evaluation. The Kinesiophysical design approach also produces information on safety, compliance, movement characteristics and physical reasons behind work limitations. Utility of functional evaluation is exemplified when employers, and physicians use it as a basis for safe work return of the employee.

KEY WORDS: functional capacity evaluation; kinesiophysical approach.

INTRODUCTION

Historically, work was a form of “survival of the fittest.” Those that could do work—did it; those that could not quit, got fired, or became injured. All three of those outcomes effectively removed a worker from a job that did not match his/her skills.

With the reform of workers compensation laws to a no-fault insurance system, two new concepts were introduced. First, an injured worker could be compensated for injury or lost time through a fixed payment schedule. Second, the workers could remain compensated until adequate medical care restored them to work status. Although a fair and workable idea, this system became a threatening financial burden on employers in the 1970s and 1980s. It was not medical technology that was lack-

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ing; it was not lack of work that stopped the system; it was the inability to objectively and adequately express an injured worker's work ability that became the process-stopper.

Medical doctors diagnose conditions, and then designate contraindications and limitations. However, this does not translate into positive functional terms. For example, knowing a warehouse worker has undergone successful rotator cuff surgery is important but not enough. Even knowing the shoulder range of motion and strength is 90% of normal is not enough. In order to complete a successful return to work, the warehouse employer needs to know how much the worker can lift, how often, and how high.

This gap in information fueled the activity behind development of an improved method of collecting work-relevant return-to-work data. An estimated Functional Capacity format was designed by insurance companies and Workers' Compensation systems (Fig. 1). It emphasized the need for assessment of actual work-related items such as lifting, carrying, bending, stooping, squatting, sitting, and standing, etc. This list of items was derived from the study of work which showed that most jobs comprise a combination of this list of items. Therefore, work requirements can now be defined in functional terms and it is the list of those tasks which have been used as a basis for Functional Capacity Evaluation (FCE).

**DIRECTIONAL FORCES**

The movement toward describing function is bolstered by a strong rise in ergonomic awareness. The same of ergonomics stresses the match between the worker and the work(site). It counters the concept that the worker must adapt to the work environment and states conversely that work–worksite must be designed to fit the worker. This enhances both productivity and safety. OSHA in its “Ergonomics Program Management Guidelines For Meatpacking Plants”(1) emphasizes the employer responsibility to meet the workers needs in prevention methods to match the work to workers. If injury does occur, OSHA recommends appropriate medical care to reduce symptoms and then provision of appropriate job modification matching the workers' abilities.

A new Civil Rights (1992) law also forces the concept of matching the work to the worker. The Americans with Disabilities Act ensures that job placement must not be discriminatory(2–3). An injured/disabled person should be initially placed or internally transferred by methods which promote function and de-emphasize dysfunction. For a qualified disabled person, modifications also are required to make the job match the worker. Therefore, the Americans with Disabilities Act (ADA) has re-emphasized the need to functionally evaluate workers capabilities, define the required functions of the work and ensure there is compatibility.

Therefore, both law(4) and professional interest are now converging on the same point. *Functional capacity evaluation combined with functional job definition becomes a logical powerful force in work injury management.* This article addresses the rationale, procedure, and utility of this worker evaluation.