

# Fit for Duties

## Ensuring a Safe and Sustained Return to Work

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### ABSTRACT

Functional Evaluations developed rapidly in the late 1970's and early 1980's from vocational rehabilitation, occupational and physical therapy, and occupational and rehabilitation medicine disciplines. Development of functional evaluation tests, tools, software and hardware rapidly expanded in response to the need for case management of disability, outcome measurement of rehabilitation and prevention of (re-) injury. Physicians, insurance companies, the legal profession, case managers and employers rely heavily on the results of functional abilities determination to make decisions regarding injury compensation and return to work. To ensure this service decreases risk and increases employee sustainability, the Return to Work or Fit for Duties evaluation needs to accurately reflect the physical demands of the job.

The Return-to-Work or Fit-For-Duties Evaluation is a type of assessment designed to identify whether an individual has the physical ability to perform part or all of his or her usual job tasks at some point in time following an injury. The Fit-For-Duties Evaluation is usually performed following a rehabilitation program or work absence, but may also be performed immediately following an injury. Fit-For-Duties Evaluations determine an injured employee's functional requirements with respect to his or her job-specific, pre-injury job duties, or functional capacity with respect to generic job duties. This same evaluation may also be used as a placement tool in qualifying an individual for modified or transitional duties.



### Capacity versus Requirement Testing

When discussing Fit-For-Duties, most of us are familiar with the term "Functional Capacity Evaluation" or **FCE** in the determination of return to work, but few are familiar with "Functional Requirement Evaluation" or **FRE**. FCE is really a tool used to determine the abilities of an individual in relation to the general field of work through the testing of an individual's capacity. In this testing process, the individual is lifting and performing functions to maximum capacity and NOT to actual work requirements. The FRE is a process that adheres specifically to the requirements of the job demands. The FRE process terminates the testing at the point of meeting the Job Demands and ensures the client is not over or under tested.

### Importance of Qualified and Updated Job or Physical Demands

The entire continuum of care is driven by the demands of the job and therefore having an updated job or physical demands analysis is a critical component of the success of any return to work process. There are two key items in the determination of physical abilities; the essential duties of the job and secondly the critical demands of the job. For example a secretary may file items all day in a box and then at the end of the day he/she lifts the filled box to the top of a filing cabinet for storage. The essential demands are sitting tolerance and dexterity/handling and so forth, but the critical demand is the last lift at the end of the day – aside from repetition, this is where the body is placed at greatest risk of injury.



### Reasons for Fit-For-Duties Testing may include:

- Return to Work Decisions
- Disability or Impairment Evaluation
- Ability in Non-Work-Related Settings
- Intervention and Treatment Planning
- Case Management and Closure

### Fit-For-Duties Testing is a Resource in:

- Determining if an individual has reached maximal medical improvement (MMI)
- Whether a patient requires further intervention and what is appropriate
- If there is a need for therapy or a change in current therapy approach or direction
- Gaining insight regarding potential work performance and job feasibility
- To identify discrepancies between symptoms and objective findings
- Generating data to serve as basis for job modification and / or work restrictions
- To establish a baseline of performance that can provide a basis for Work Hardening/Work Conditioning

### Common Conditions Identified by Fit-For-Duty Evaluations:

- Lower back injuries
- Shoulder / Elbow injuries
- Knee / Ankle injuries
- Hand / Wrist injuries
- Inguinal hernias
- Cardiovascular issues
- Obesity-related issues
- Neurological diseases
- Complications from Diabetes

### Reliability

If a test or measuring instrument is reliable, it will consistently provide the same measurement of an evaluatee. This is important because the score obtained is supposed to be a good indicator of an evaluatee's true ability. Without reliability a test cannot measure performance against any standard. An example is a hand grip dynamometer that is not calibrated and has electronic interference contaminating the results will give scores with a high error. Comparison of those scores to an established criterion will lead to false conclusions.

### There are generally three different measures of reliability:

(1) *Test-retest reliability* is the relationship between repeated measures. If the test gives statistically similar scores each time a stable function is tested, then the test would have a strong coefficient of stability. However, many evaluatees assessed in the testing process are not medically stable, or do not

apply consistent effort. If after repeated trials, this is the case, then a CV (coefficient of variation) over 12% is deemed to be sub maximal in nature.

(2) *Inter-rater reliability* is the coefficient of variance between two evaluators measuring the same evaluatee. Evaluator bias is a threat to inter-rater reliability and needs to be controlled by use of objective versus subjective measurement protocols. Variance is diminished by standardization, training and automation of measurement. Criterion rating also diminishes evaluator bias as the evaluators use equivalent benchmarks to measure the evaluatee.

(3) *Equivalent form reliability* is the coefficient of equivalency of two alternate forms of the same test. Although this methodology has not been utilized for Functional Evaluations, it holds promise for further measurement of evaluatee consistency.

### Validity

Validity is the most important quality of a test. It determines whether the evaluator is measuring what is intended to be measured. The need for validity arises from the fact that an evaluatee's functional ability at their specific continuous work tasks is not able to be directly measured. The evaluator is not afforded the time or opportunity to perform an assessment in this manner. The Standards for Educational and Psychological Tests, published by the American Psychological Association (the standard to which most human performance testing is held, including employment and exercise science testing) defines validity as "the appropriateness, meaningfulness and usefulness of the specific inferences made from test scores. Test validation is the process of accumulating evidence to support such inferences."

#### Types of Validity:

Construct validity is the process of determining the degree to which the test measures the construct it was designed to measure. Construct evidence is often gathered by also demonstrating that there is no relationship between the construct and theoretically divergent measures. An example of the divergent hypothesis is that strength (measured by an isometric load cell) is a construct inherent in lifting ability, but that it would have no relationship to intelligence.

(1) *Content validity* is evidence that the test samples tasks that represent the domain being evaluated. The focus is on the instruments rather than the measurements.

(2) *Content validity* is important, but does not in itself ensure validity. An example of content validity in functional evaluations is isometric strength testing versus dynamic strength testing. A dynamic strength test that involves lifting a weighted container has greater content relevance to lifting in the workplace than an isometric test that involves pulling on a strain gauge. However, the score from a dynamic strength test still must be demonstrated to be representative of actual lifting ability in the real world of work via criterion related evidence.

(3) *Criterion-related evidence* quantifies the evidence that test scores will relate highly between tests measuring the same characteristic. For example, an evaluatee who performs well on a treadmill test measuring Vo2 max would be expected to perform well on a carrying task requiring aerobic endurance. The evidence for criterion validity is gathered via concurrent validity designs, such as that described above, or by predictive validity designs, such as comparison of test scores to an established criterion of acceptable performance. The predictive validity design for the treadmill test would be to compare scores to a gas exchange measurement. Criterion-referenced tests are constructed that measurements are directly interpretable in terms of specific performance standards. Representative samples of the tasks are organized into a test. Measurements taken are used to make a statement about the performance of the evaluatee relative to that domain. The domain criterion can be used as a cut-off score to make decisions concerning evaluatee capacity to perform the task relative to the criterion. However, in a rehabilitation approach, the criterion can suggest not only how divergent the evaluatee is from satisfactory performance, but also what accommodations, modifications and engineering aides might be useful. MTM or Methods Time

Measurement tests and protocols are based on Industrial Standards and are considered criterion referenced.

(4) *Norm referenced validity* is the process of defining a sample of a population, analyzing the measurement of that sample, establishing the generalization of that sample to the population and to other samples and developing statistics to represent that sample and compare an individual score against that norm reference. For example, a handgrip test score can be described at a 50th percentile compared to a norm group. This is useful in establishing the general ability the evaluatee has, but it is not specific to a work criterion measure.

### Standardization

Standardization involves the establishment of scores against which to compare evaluatee scores. Standardization should diminish evaluator bias. Judgment on evaluatee score should rest primarily with the rating system, rather than on subjective opinion of the evaluator. When evaluator subjective opinion and evaluatee behavior rating are collected, a standardized checklist format is preferable. Methods of achieving standardization have been demonstrated via computer automated data collection from electronic measuring devices and from standard collection software with automatic calculators. Studies have shown that bias reliability is increased, if training is sufficient. Training can be standardized by requirements for general clinical and specialized training certification.



### Utility

The Fit for Duty evaluation needs to be both job relational and an accurate representation of the critical components of the work tasks.

### Practicality

The data and outcomes need to be able to be extrapolated to an average work day such that the employer can make an accurate decision on placement. Furthermore, the evaluation has to be cost competitive to fit the needs of the payor.

### ADA/EEOC

Post-Injury and Fit-For-Duties Testing and the Americans with Disabilities Act Under the **ADA**, employers may require medical examinations of employees, including functional employment testing, where the exams are "job related and consistent with business necessity". Generally, this standard is met when an employer "has a reasonable belief, based on objective evidence, that: (1) an employee's ability to perform essential job functions will be impaired by a medical condition; or (2) an employee will pose a direct threat due to a medical condition." Another issue is when reasonable accommodation is requested but when the disability or need from the referral source is not known. This may also be job-related and consistent with business necessity. In addition, periodic medical examinations and other monitoring under specific circumstances may be job-related and consistent with business necessity in positions affecting public safety. Employers also may require medical or Functional Evaluations when employees seek to return to work following medical leaves and the employers have a reasonable belief that their present ability to perform essential job functions continues to be impaired by the medical condition or that they will pose a direct threat



due to the medical condition. The determination that an employee poses a direct threat must be based on an individualized assessment of the employee's present ability to safely perform the essential functions of the job. ADA Regulations require that this assessment be based on a reasonable medical judgment that relies on the most current medical knowledge and/or best objective evidence.

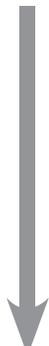
The **EEOC** has acknowledged that, to meet this burden, employers may want to have employees examined by healthcare professionals, chosen by them, who have expertise in the employees' specific conditions and can provide medical information that allows the employers to determine the effects of the conditions on the employees' ability to perform their jobs. The EEOC also has acknowledged that employers may require employees to see a healthcare provider chosen by the employer if the documentation from their treating physicians (or other healthcare professionals) is insufficient to make these determinations. Documentation would be insufficient where, for example: \* the healthcare professional does not have the expertise to give an opinion about the employee's medical condition and the limitations imposed by it; the information does not specify the functional limitations due to the disability; or, other factors indicate that the information provided is not credible or is fraudulent. See the **EEOC's Enforcement Guidance on Disability Related Inquiries and Medical Examinations, Questions 11 and 12** (Issued July 27, 2000). <http://www.eeoc.gov/policy/docs/guidance-inquiries.html> In all of these post-injury situations, functional testing would be the ideal means for assessing the employee's ability to work safely and successfully. The ADA regulations and policy statements confirm the valuable and lawful uses of functional employment testing in most, if not all, post-injury scenarios.



**Protocol Development (development of safe and structured testing)**

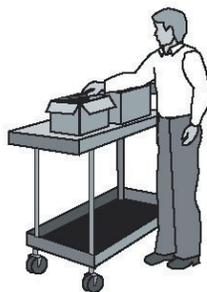
It is imperative that the testing protocol is structured to incorporate a safe progression of testing, i.e. ensuring the evaluatee can couple to the container before he/she lifts it and then confirming he/she has the ability to get into the appropriate posture from a total spine and extremity range of motion before lifting – then lifting statically as a precursor to dynamic and so on.

A standard flow of activities is as follows:



1. Intake Interview
2. Coupling Tests and Protocols (Hand and Pinch)
3. Extremity and Total Spine Range of Motion
4. Static Strength (NIOSH – low/mid/high/push/pull)
5. Dynamic Single Plane Lifting (low/mid/high/overhead)
6. Balance Testing
7. Walk/Stair/Ladder Climbing (Job Dependent)
8. Carry / Lifting Over Distance
9. Dexterity / Handling
10. Sustained Posture Analysis (Job Dependent)
11. Cardio Assessment (Step or Treadmill Test)
12. Simulated Work Tasks

A continual graduation from very controlled environment testing (i.e. hand grip) to more variable environment testing (i.e. carry and walk where body mechanics and loading of the joints etc.) come into play in the protocol development.



Case Study

**ChevronTexaco Utilizes Medical Fit-For-Duties Program to Reduce Back Injuries for Truck Drivers**



When an examination of aggregate health risk appraisal data from ChevronTexaco's truck driver workforce revealed approximately 50 percent of the truck drivers who completed the appraisal were found to be at risk for a back injury, the company decided to take action. Lost time records revealed the truck drivers with a higher risk of back injury had 65 percent more lost workdays attributed to cumulative trauma injuries compared with acute trauma injuries.

A study, published in the February issue of the *Journal of Occupational and Environmental Medicine* detailed a fitness-for-duty program targeted at employees of the Chevron Products Co.'s Marketing Operations business, which employs 600 workers in terminals in 40 cities across the country. From 1997 through March 2000, approximately 44 percent of the OSHA recordables at the terminals were back/shoulder/neck injuries. That data includes not only the truck drivers, but also supervisors, office assistants and mechanics who also work at the terminals. Almost all, 81 percent, of the back/shoulder/neck injuries were categorized as cumulative trauma injuries versus 19 percent classified as acute trauma injuries.

From 1997 through 2000, the Marketing Operations business reported 1,287 lost workdays attributed to cumulative trauma injuries and 777 lost work days because of acute trauma injuries among truck drivers. The truck driver workforce had 65 percent more lost workdays attributed to cumulative trauma injuries than there were for acute trauma injuries. In the first year of the program, 109 Fit-for-Duty evaluations were completed by trained clinicians, and 88 percent of candidates were found "able to work without restrictions," 6 percent were found "able to work with caution," and 6 percent were found "medical intervention and/or release recommended." The program consists of three components: physical examination Fit-for-Duty evaluations; education on safe body mechanics and safe lifting techniques; and physical fitness.



*"A goal of the program is to provide a proactive program aimed at reducing the incidence and lost workdays of musculoskeletal injuries in the truck driver workforce,"*  
 Sara R. Kashima, MS, ChevronTexaco's Health and Medical Services Department.

**Physical Demand Characteristics of Work**

All work placements, although job specific, are also classified based on the industry standard Physical Demand Characteristics of Work table.

<b>Physical Demand Characteristics of Work</b> (Dictionary of Occupational Titles - Volume II , Fourth Edition, Revised 1991)			
<b>Physical Demand Level</b>	<b>OCCASIONAL</b> 0-33% of the workday	<b>FREQUENT</b> 34-66% of the workday	<b>CONSTANT</b> 67-100% of the workday
<b>Sedentary</b>	1 - 10 lbs.	Negligible	Negligible
<b>Light</b>	11 - 20 lbs.	1 - 10 lbs.	Negligible
<b>Medium</b>	21 - 50 lbs.	11 - 25 lbs.	1 - 10 lbs.
<b>Heavy</b>	51 - 100 lbs.	26 - 50 lbs.	11 - 20 lbs.
<b>Very Heavy</b>	Over 100 lbs.	Over 50 lbs.	Over 20 lbs.

**General Patterns of Activity Descriptors****(S) Sedentary Work**

Exerting up to 10 lb of force occasionally and/or a negligible amount of force frequently to lift, carry, push, pull, or otherwise move objects, including the human body. Sedentary work involves sitting most of the time, but may involve walking or standing for brief periods of time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

**(L) Light Work**

Exerting up to 20 lb of force occasionally, and/or up to 10 lb of force frequently, and/or a negligible amount of force constantly to move objects., Physical demand requirements are in excess of those for sedentary work. Even though the weight lifted may be only negligible, a job should be rated light work: (1) when it requires walking or standing to a significant degree; or (2) when it requires sitting most of the time but entails pushing and/or pulling of arm or leg controls; and/or (3) when the job requires working at a production rate pace entailing the constant pushing and/or pulling of materials even though the weight of those materials is negligible. Note: The constant stress and strain of maintaining a production rate pace, especially in an industrial setting, is physically exhausting.

**(M) Medium Work**

Exerting 20 to 50 lb of force occasionally, and/or 10 to 25 lb of force frequently, and/or greater than negligible up to 10 lb of force constantly to move objects. Physical demand requirements are in excess of those for light (L) work.

**(H) Heavy Work**

Exerting 50 to 100 lb of force occasionally, and/or 25 to 50 lb of force frequently, and/or 10 to 20 lb of force constantly to move objects, physical demand requirements are in excess of those for medium (M) work.

**(VH) Very Heavy Work**

Exerting over 100 lb of force occasionally, and over 50 lb of force frequently, and over 20 lb of force constantly to move objects, physical demand requirements are in excess of those for heavy (H) work.

**In Conclusion**

It has been well documented that a properly designed Fit for Duties Evaluation program can provide significant savings for employers. But as with all programs, it needs to be a well thought out program and protocol that takes into account the ADA and EEOC requirements for being truly job relational and consistent across the employee base. Ultimately the best return on investment would be with your highest risk jobs that are accounting for most

of your loss time and cost. Spend your time detailing out and updating your job descriptions for these jobs and then approach a professional to design and implement your program accordingly.

*The information noted above is a summary of one of the components of Fit2WRK by USPh. This integrated model is available through USPh in close to 400 facilities and 44 states nationally. For additional information on how the Fit2WRK Model could help your organization, visit; [www.Fit2WRK.com](http://www.Fit2WRK.com) or call 1-877-Fit-2WRK.*

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