

FUNCTIONAL CAPACITY EVALUATIONS (FCE)

Occupational Health Physiotherapist

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Occupational Health Physiotherapists

- Provide advice and recommendation on employee's ability to remain / safely return to work
- Assess individual's physical capacity using variety of tools
 - Functional testing – allows performance to be measured in an objective standardised way
- Used in Occupational Health – not standard practice
- ACPOHE Toolkit – ACPOHE Fitness for Work Assessment Group
 - 18 functional test – assess range of impairments and injuries

Purpose of functional testing is to provide objective information for an employer or potential employer regarding the ability of an individual employee to undertake the demands of the job

- **Majority of OH Physiotherapists work within clinical setting – 30 – 60 minutes timeframe**
- **Requirements – time, cost and usefulness**
- **Assessing physical capability (Gouttebauge, 2010)**
 - **Medical condition**
 - **Restricted activities – lifting, gripping, bending, etc**
 - **Functional test**

Undertaking Functional Testing

No single instrument can predict fitness to return to work – use of both performance and non-performance measures recommended to improve predictive outcome (Kujjer, 2012)

- Screening questionnaire
- Interview
- Musculoskeletal examination
- Physiological measures
- Functional measures

Occupational Health Physiotherapy Assessment

- Biopsychosocial model
- Multi-dimensional aspects of pain and work loss
- Attitudes, beliefs and behaviour
- Pain education
- Physical health, resilience and fitness

Guides rehabilitation for functional restoration and return to work

- **Biological – pain**
- **Physiological – BP, HR, breathing**
- **Biomechanical – signs of muscle fatigue or weakness**
- **Psychophysical – chronic pain behaviours that affect performance**

Job Demands Analysis

Gas Servicing Engineer with LBP

Installation of white goods such as washing machines, boilers, etc. Job requires ability to manually handle high loads up to 50kgs including several postural requirements to install the white goods.

- Activities affected by health condition
- Physical tasks required
- Functional tests to measure ability

Functional Activity causing LBP	Work Activities	Functional Testing
Standing	e.g. working on boilers, pipefitting, soldering, walking in/out/around customer houses	Standing tolerance
Bending/Stopping	e.g. working in confined spaces, accessing airing cupboards, or bending to fit low pipework	Back Performance Test
Lifting	removing old floor mounted boilers or fitting new tanks/boilers lifting items from floor level	Lifting Low – floor to waist lift
Carrying	Carrying toolbox from van, and repairs from van, removing old items from customers' houses and installing new items	Carrying test

Job requirements can also be assessed in relation to the Dictionary of Occupational Titles (DOT) descriptions

Functional Measurement Tests

Test	Star Rating	Reliability	Validity	Normative Data	Practicality	Cost <£100
Chester Step test	4	Yes	Yes	Yes	10 min	Moderate
6 Min Walk Test	5	Yes	Yes	Yes	<10 min	Minimal
Maximum Grip Strength	4	Yes	Yes	Yes	<10 min	High
Back Performance Scale	4	Yes	Yes	N/A	<10 min	Minimal
One-Legged Stance	5	Yes	Yes	Yes	2mins	Minimal
MTAP	4	Yes	Yes	Yes	<10 min	High
Timed Sit/ Stand	5	Yes	Yes	Yes	<10 min	Minimal
Single Leg Loading	3	Yes	No	No	<10 min	Minimal
Lifting Low	5	Yes	Yes	Yes	<10 min	Low
Lifting High	4	Yes	Yes	Yes	<10 min	High
Carrying	5	Yes	Yes	Yes	<10 min	Low
Static Overhead Work	5	Yes	Yes	Yes	<10 min	Low
Static Bent Work	5	Yes	Yes	Yes	<10 min	Minimal
Repetitive Bending	4	Yes	No	Yes	<10 min	Minimal
Repetitive Side Reaching	4	Yes	No	Yes	<10 min	Minimal
Finger Grip Strength	4	Yes	Yes	Yes	<10 min	High
Perdue Peg Board	4	Yes	Yes	Yes	<10 min	High
Minnesota Manual Dexterity	3	Yes	Yes	Yes	>10 min	High

Standardised observation criteria for lifting and carrying

	Light	Medium to heavy	Maximum
Muscles recruitment	Only prime movers (quadriceps, trunk stabilisers, biceps, handgrip)	Beginning to pronounce recruitment of accessory muscles (neck flexors, upper trapezius, deltoids, rhomboids)	Bulging of accessory muscles (neck flexors, upper trapezius, deltoids, rhomboids)
Base of support	Natural stance (hip wide)	Stable to wider base	Very solid base
Posture	Upright posture	Beginning to increased counter balancing	Marked counter balance
Control and safety	Easy movement patterns	Smooth movements to using a slight impetus	Still safe but unable to maintain control if any more weight is added
Pace	Fast movement possible	A little to clearly slower, cautious	Very slow, no longer controlled with faster movement
Circulation, breathing	Minimal increase in heart rate	Slight to greater increase in heart rate and respiration	Substantial increase in heart rate and respiration



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