Functional Restoration Programs (FRPs) & Functional Capacity Evaluations (FCEs)

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Functional Capacity Evaluations

- A comprehensive battery of performance-based tests used to determine an individual's ability for work and performing activities of daily living
- Predicts the potential to sustain these tasks over a defined time frame.
- Systematic method of measuring an individual's ability to perform meaningful tasks on a safe and dependable basis

A rose by any other name…

- Functional Capacity Evaluation (FCE)
- Work Capacity Evaluation (WCE)
- Functional Capacity Assessment (FCA)
- Functional Abilities Evaluation (FAE)
- Physical Work Capacity Evaluation (PWCE)

FCE Protocols

- Matheson
- Blankenship
- BTE
- ERGOS
- Isernhagen
- Key Method
- WorkAbility
- Valpar
- ErgoScience
- WorkSteps

Role of an FCE

- ADLs/Work tasks
- Determination of Work Restrictions
- Functional Goal Setting
- Disability Rating
- Disability Forms
- Job Matching or Job Modifications
- Justifying Almarez-Guzman ratings
- Assist vocational specialists
- When subjective factors don't match objective findings

Is an FCE Objective?

- **FALSE** Beliefs
  - An FCE is a totally objective test process
  - Functional test protocols allow a person's physical abilities to be determined without clinical judgment
  - The FCE evaluator role is more technical than clinical

FCE Duration

- 3-5 hours in a single day
- 6-8 hours over 2 days

Parts of an FCE

- Patient Interview
- Subjective questionnaires (Oswestry, DASH, MTAP)
- Musculoskeletal Evaluation
- Fitness Tests (walk, climb, aerobic endurance)
- Positional Tolerance (sit, stand, stoop)
- Functional Tests (lift, carry, push/pull, grip, fine manipulation, computer use)
- Job Specific Tests

Patient Interview

- Medical History
- Current Complaints
- Psychometric questionnaires
  - Low Back (Oswestry, Dallas Pain Questionnaire, Ransford Pain Drawing, McGill Pain Questionnaire)
  - Upper/Lower Extremity (DASH, LE/UE Functional Index)
  - Multidimensional Task Ability Profile (MTAP)
  - Activities of Daily Living, SF-36
  - Pain Scales (VAS, Pain drawing)
  - Tampa Scale of Kinesiophobia/FABQ

Musculoskeletal Evaluation

- ROM
- Strength
- Posture
- Balance
- Flexibility
- Girth measurements
- Appropriate orthopedic tests

Fitness Tests

- Walking
- Climbing
- Endurance/Aerobic Capacity
  - Treadmill Test
  - Bruce/Balke Protocol
  - Bicycle Ergometry
  - Step test

Positional Tolerances

- Sitting
- Standing
- Bending/Stooping
- Squatting
- Kneeling
- Cervical/Trunk Rotation

Functional Tests

- Lifting
- Carrying
- Pushing/Pulling
- Gripping/Grasping
- Medium Motor skills
- Fine Motor skills
- Reaching
- Repetitive tasks

Job Specific Tests

- Requires job description
- Work postures/positions
- Combined body movements
- Forces that the worker applies in job tasks
- Repetition of the work tasks

Effort Testing

- Effort testing is NOT intended to gauge motivation or intent

- Less than full effort implies that some of the levels performed during testing can be considered a true measurement of the patient's abilities and some can be considered the minimal level of the patient's abilities

Effort Testing

- Coefficient of Variation (CVs)
- Grip Bell Curve Analysis
- Rapid Exchange Grip
- Competitive Test Performance
- Heart Rate Elevation
- Consistent/Inconsistent Behaviors
- Psychophysical/Physiologic/Kinesiophysical

Testing End Points

- Psychophysical Testing
  - Evaluee's opinion determines the test end point
  - Perception of exertion, fear of pain/movement
- Physiologic
  - Blood Pressure
  - Heart Rate: over 85% of predicated age-related maximum
  - Manifestation of clinical signs or symptoms related to injury
- Kinesiophysical or Biomechanical
  - Evaluator terminates a test when maximum is reached
  - Body mechanics, base of support, posture, control/movement patterns, protection of injured area

Effort Testing

- Why would a patient give less than full effort?
  - Fear of Re-injury
  - Fear of increased pain level
  - A belief that they are disabled
  - Desire to express to the evaluator their disability
  - Depressive Disorder
  - Test Anxiety

The list continues…

- Medication side effects
- Patient's misunderstanding of test instructions
- Poor test administration techniques
- Use of poorly calibrated equipment

Reliability of Patient's Report

- Reliability of Pain and Disability Reports
  - Assess dependability of a client's subjective reports of pain and/or disability.
- Does the subjective reporting match what the FCE determined?
- Do the patient's complaints match their diagnosis?

Results/Conclusion

- Address the purpose of the FCE
- Document effort/barriers
- Summary of functional levels
- Physical limitations/restrictions
- Recommendations

U.S. Department of Labor Physical Demand Characteristics of Work

Physical Demand Level	Occasional 0-33% of the workday	Frequent 34%-66% of the workday	Constant 67%-100% of the workday	Typical Energy Required
Sedentary	10 lbs.	Negligible	Negligible	1.5 - 2.1 METS
Light	20 lbs.	10 lbs.	Negligible	2.2 - 3.5 METS
Medium	20 to 50 lbs.	10 to 25 lbs.	10 lbs.	3.6 - 6.3 METS
Heavy	50 to 100 lbs.	25 to 50 lbs.	10 to 20 lbs.	6.4 - 7.5 METS
Very Heavy	Over 100 lbs.	Over 50 lbs.	Over 20 lbs.	Over 7.5 METS

https://www.dol.gov/owcp/dfec/regs/compliance/OWCP-5c.pdf

Frequency of tasks

- Never: 0%
- Rare: 1 % → 5 mins
- Infrequent:2-7% → 10 mins to 34 mins
- Occasional: 8-33% → 39 mins to 2 hours 39 mins
- Frequent: 34-66% → 2 hours 44 mins to 5 hours 17 mins
- Constant: 67-100% → 5 hours 22 mins to 8 hours

Functional Capacity Activity Summary

ACTIVITY	NEVER 0%	INFREQUENT (2-7% of day)	OCCASIONALLY (8-33% of day)	FREQUENTLY (34-66% of day)	CONSTANTLY (67-100% of day)
Repetitive neck motions					
Static neck posturing					
Stooping / Twisting (waist)					
Bending / Twisting (neck)					
Squatting					
Kneeling					
Sitting					
Standing					
Walking					
Climbing stairs					
Climbing ladders					
Walking over uneven ground					
Repetitive use of upper extremity (right)					
Repetitive use of upper extremity (left)					
Grasping/Gripping (right hand)					
Grasping/Gripping (left hand)					
Writing					
Keyboard/Mousing					
Forceful use of upper extremity (right)					
Forceful use of upper extremity (left)					
Fine Manipulation (right hand)					
Fine Manipulation (left hand)					
Pushing & Pulling (right)					
Pushing & Pulling (left)					
Reaching (at waist level)					
Reaching (at shoulder level)					
Reaching (above shoulder level)					
Lifting waist to shoulder					
Lifting waist to floor					
Carrying weight in both hands					
Carrying weight in one hand					

ACTIVITY	NEVER 0%	INFREQUENT (2-7% of day)	OCCASIONALLY (8-33% of day)	FREQUENTLY (34-66% of day)	CONSTANTLY (67-100% of day)
Stooping / Twisting (waist)		X- up to 3 minutes at one time			
Sitting				X- up 45 minutes at a time followed by a 20 minute break to move around and no more than 3 hours total	
Standing				X- up to 30 minutes at one time followed by a 20 minute rest break and no more than 3 hours total.	
Walking			X- up to 30 minutes at one time followed by a 20 minute seated rest break		
Repetitive use of upper extremity (right)					X
Repetitive use of upper extremity (left)					X
Grasping/Gripping (right hand)					X
Grasping/Gripping (left hand)					X
Writing					X
Keyboard/Mousing					X
Fine Manipulation (right hand)				X	
Fine Manipulation (left hand)					X
Pushing & Pulling (right)		25 lbs.	15 lbs.	-0-	-0-
Pushing & Pulling (left)		30 lbs.	20 lbs.	-0-	-0-
Pushing & Pulling (both)		40 lbs.	30 lbs.	-0-	-0-
Reaching (at waist level)					X
Reaching (at shoulder level)			X- up to 3 minutes at one time and no more than 1.5 hours total		
Reaching (above shoulder level)			X- up to 3 minutes at one time and no more than 1.5 hours total		
Lifting waist to shoulder		15 lbs.	10 lbs.	-0-	-0-
Lifting waist to floor		10 lbs.	5 lbs.	-0-	-0-
Carrying weight in both hands		15 lbs.	5-10 lbs.	-0-	-0-
Carrying weight in one hand		Right: 15 lbs. Left: 15 lbs.	Right: 10 lbs. Left: 10 lbs.	-0-	-0-

FCEs & Med-Legal Ratings

- Impairment ratings based on ADLs
- MD gets patients subjective report of ADLs
- Physician compares patient reports to ROM, strength tests
- Possible to have low rating with high disability

Examples

- 55 year old male, no surgical intervention, but has RC tear. Has good ROM that doesn't reflect impairment
- Minor surgery, minimal ROM changes, but FCE shows that shoulder function is ½ of non-dominant side
- Meniscal tear, use of cane. Knee can affect lifting and can refer to lifting impairment
- Thoracic Outlet Syndrome can have low rating, but FCE could show sig. impairment

The FCE Problem

- No gold standard
- Well-known FCE methods have been rigorously studied, but research indicates weaknesses in their reliability and validity.
- Doesn't always correlate to RTW ability
- Patient self-limits test
- Cost

Why ask for an FCE?

- Specific Physical abilities/restrictions (ADLs)
- Return to work ability/limitations
- Physician Voucher and Return to Work forms
- Disability forms
- Support MD findings
- Subjective complaints vs objective findings

Functional Restoration Program

Functional Restoration

- …the process by which the individual is educated and acquires the skills, knowledge and behavioral change necessary to assume primary responsibility to:

  - Better manage pain
  - Increase function in ADLs & return to life activities + work
  - Feel better about life – be happy!
  - Avoid preventable complications
  - Minimize interactions with the medical community

Functional Restoration

- Multidisciplinary/Coordinated Care
- FRPs: Intensive treatment program that best delivers this type of care
- FR has been proven cost-effective in the scientific evidenced based medical literature
- FR Strongly recommended by the CA MTUS, ACOEM

Biopsychosocial Model

- **Recognizes that pain is ultimately the result of:**
  - Pathophysiology
  - Psychological state
  - Childhood and life experiences
  - Education and beliefs
  - Relationship/interactions with the environment
    - workplace, home, disability system, and health care providers

An Overwhelmed Injured Person

What we see

Why is WC such a hassle?

Separated

Losing house

Damn, this hurts!

Fired

On percocet

Money problems

Blues better w/ Percocet

Mortgage due

Injury

Reinjury fear

Abused as child

They're going to fire me.

Rude boss

Depressed

What if this doesn't get better?

Injured uncle never worked again

How will kids get to school?

They think I'm faking!

What the injured person may feel

Dynamics of Delayed Recovery

- The person becomes a high user of medical services, readily submitting to medications, passive treatments and interventions offered
- Increase in medical services with a decline in function physically and mentally
- Individuals seek medical diagnosis / verification as a explanation of their distress
- Disability becomes a lifestyle

Delayed Recovery

- Distress, depression, anxiety
- Excessive pain behaviors / Functional decline
- High pain ratings / Drug dependency
- Disability out of proportion to impairment
- Fear avoidance / Maladaptive beliefs
- Focus on litigation
- Overwhelming focus on symptoms
- Job dissatisfaction / Prolonged work absence
- Psychosocial risk factors (childhood abuse)

FRP Musts

- Appropriate selection process of candidates in the MDE
- Solid FRP team working together
- Weekly team conference
  - Assess progress
  - Determine appropriateness for continued FRP weekly team reports
- Willingness to discharge a patient early from the FRP
- Program tailored to the individual
- Close communication with all stake holders
- Skilled and experienced multidisciplinary team

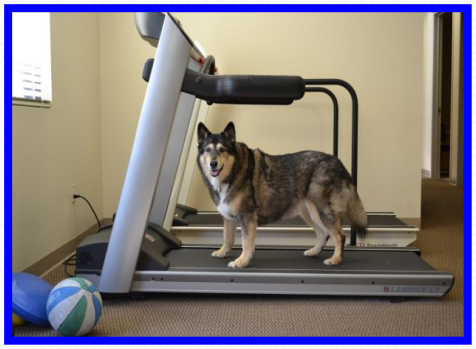
Treatment Goals

- Provide each patient with education and a range of tools that can help them confidently and more effectively manage pain
- Increase the person's sense of emotional well-being with a goal of emotional stability.
- Improve social relationships and return to self-sufficiency and a normal lifestyle
- Establish achievable goals that enable increased productivity and return to work

Treatment Goals

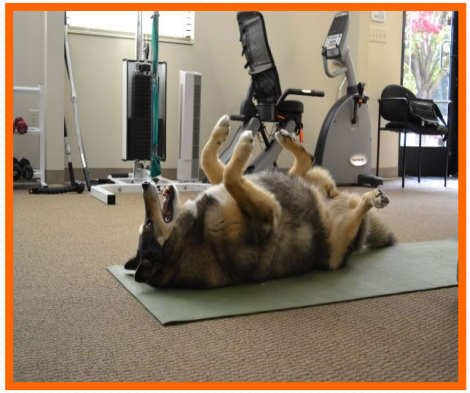
Having a useful, happy, functional and productive life with RTW despite having a chronic pain problem

Functional Restoration Programs



Physical Restorative Therapies

Cognitive Behavioral Therapy



Wellness

Medication Optimization/MD Care

	Monday	Tuesday	Wednesday	Thursday	Friday
9:00-10:00	Gym	Gym	Gym	Gym	Wellness-Tai-Chi
10:00- 11:00	Psychology Lecture	Wellness-Mindfulness	Medical Lecture	Wellness-Mindfulness	Psychology Lecture
11:00- 12:00	Gym	Psychology Lecture	Gym	Psychology Lecture	Gym
12:00- 1:00	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:00-2:00	Psychology Lecture	Fitness/Nutrition Lecture	Wellness-Yoga	Psychology Lecture	Gym
2:00- 3:00	Wellness-Yoga	Gym	Crafts and Community	Gym	Psychology Lecture

FRP Structure

- Group classes of 4-8 people
- Full time (5-6 hours/day)
- Length 4-6 weeks
- Aftercare Program

Physical Therapy in FRP

- 2 hours a day, 5 days a week
- Education
- Exercise program
- Functional Activities
- Normalizing compensatory movement patterns
- Decreasing reliance on assistive device when appropriate
- Brain Re-Training
- Active Pain Management Skills
- Posture/Body Mechanics Training

Education in PT

- Anatomy/Physiology/Diagnosis
- Pain versus damage
- Changes in the nervous system & brain
- Addressing avoidance
- Normalization of symptoms

Psychology in FRP

- **Psychosocial factors are the strongest predictive factors for recovery and return to work.**

- Cognitive Behavioral Therapy (CBT)
- Interventions to change perception or emotional response to pain
- Acceptance / Reduce negative thought patterns
- Reduce anger and entitlement issues

Psychological Treatment

Interventions to shift perception or emotional response to pain:

- Increase self-efficacy
- Reduce negative thought patterns
- Cognitive restructuring
- Relaxation training & mindfulness
- Pacing
- Increase patient's communication with support system
- Emotion regulation
- Acceptance of pain
- Re-establishing a more balanced life (values assessment & goal setting)

PT & Psych together

- You can't leave your mind at the door
- Treatment synergy
- Fear, Anxiety, Pacing
- Negative thinking styles
- Personality Disorders

Wellness

- Diaphragmatic Breathing
- Mindfulness Based Stress Reduction (MBSR)
- Guided Imagery
- Progressive Muscle Relaxation
- Affirmations
- Yoga
- Tai Chi/Qigong
- Feldenkrais Awareness Through Movement

Complex Regional Pain Syndrome (CRPS)

- Education
- Aerobic conditioning
- Strength Training
- Functional activities
- Desensitization
- Contrast Baths
- Paraffin
- Electrical Stimulation
- Active pain management skills: pacing, relaxation skills
- Stress loading
- Graded motor imagery
- Right/Left Discrimination
- Mirror box

Thoracic Outlet Syndrome

- Education on diagnosis and normalization of symptoms
- Edgelow techniques
- Nerve gliding/flossing
- Compensatory Movement Patterns
- Graded activity
- Relaxation Skills
- Pacing

Who?

- Signs of Delayed Recovery
- Desire to increase physical level
- Psychological factors affecting recovery
- When your judgment tells you that the best treatment you can offer is not resulting in a good outcome

When?

- Sooner than you think
- Appropriate treatment has not been enough
- PT, Psych, Work Conditioning DENIED
- Limbo Zone
- Trial of work failed

Why Use FRP?

- FRP strongly supported by ACOEM, CA MTUS
- For the complex patient, typical care does not work
- Give the patient the opportunity to get their life back
- Many people do actually get better!

FRPs aren't magic

- Not a quick fix
- Long history of poor coping
- High recidivism rate
- Not the right type of care for everyone

What Can You Do?

- Look for Delayed Recovery
- Recognize when it is time to stop typical care
- Educate your patient on the next steps
- **Ask for a Multidisciplinary Evaluation (MDE)**

THE END

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