Functional Rehabilitation, Screening and Education
IHS ECHO August 3, 2016

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Functional Rehabilitation, Screening and Education

• I have nothing to disclose.
LEARNING OBJECTIVES

1. Explain when and who to refer to Physical Therapy.
2. Employ one screening tool for Residual Disability – Patient Self-Assessment.
3. Recognize the importance of re-assuring patients and encouraging them to continue to stay active and summarize some home exercises and guidelines to give patients with low back pain.
Low Back Pain

• 1/4 of adults in the U.S. report low back pain in the past 3 months and about 1/2 reporting back pain during a given year.

• Chronic LBP > longer than 3 months

• Longer chronicity = more disability

• Younger adults - chronic back pain is associated with disability, unemployment, lost productivity

• Older adults - functional limitations
Low Back Pain and Exercise

• The most effective strategy for improving back pain is an individually designed exercise program that included home-based supervision and a relatively intensive exercise regimen.

Low Back Pain and Exercise

- Exercise is an integral part of managing chronic back pain but to be effective requires that patients actively participate in the management process.
- A variety of exercise programs including yoga as well as aerobic and strengthening exercises result in both clinically and statistically significant.


Low Back Pain - Walking

- Review article found only low to moderate evidence supporting walking as an effective intervention for low back pain.
- Paucity of research
- Further research on the role of walking as a primary intervention for managing chronic low back pain is needed.

Pain Generators/ Impairments treated by Therapy /Exercise

Chronic joint/ disc mechanical stress, Chronic soft tissue inflammation/ edema/ overuse, Spinal cord/ nerve compression, inflammation; Ischemia
Decreased spinal/ peripheral joint strength, mobility, stabilization
Gait abnormality/ Decreased proprioception and balance
Postural stress (hypermobility, whiplash syndromes)
Faulty biomechanics/Ergonomics/ Shoulder and pelvic girdle muscle imbalances

Medical/
Surgical Interventions

Patient's total pain

Impairments treated by PT Functional Rehab
The Art of Referring for Physical Therapy

Therapy encourages:
• Independence
• Education for self-care
• Promotes wellness-oriented lifestyles
• Helps prevent recurrence

Prescription must include:
• 1. Patient Name
• 2. Date
• 3. Diagnosis
• 4. Referring Provider Signature
The Art of Referring for Physical Therapy

Might also include:

• Precautions or restrictions
• Specific Treatments requested
• Specific Goals of Treatment - preferably not be “pain free”.
• Any findings on exam or anything referring physician and patient agree is limiting and PT can help them do better.
The Art of Referring for Physical Therapy – What Treatment?

- Exercise – Strength/Mobility/Cardio
- Mobilizations/Manipulations
- Myofascial Release
- Trigger Point Dry Needling
- Traction
- Neuromuscular Re-ed/Biofeedback
- Motor Control – Spinal Stabilization
- Ergonomics, Body/lifting mechanics
- Breathing/Relaxation/Pacing
- Balance, gait/A.D. training
- Home TENS trial – electrical stimulation
The Art of Referring for Physical Therapy

For exercise to be effective, it requires that patients actively participate in the process.

Therapy has better outcomes:
1. Pt has specific functional impairments/goals
2. Pt knows why they are being sent
3. Referring physician provides re-assurance

When PT is not an option: Advise the patient to stay active, rest with support as often as needed, walk, and do gentle exercises.

If they prefer exercising in a social setting:
Community Centers, Walking with a friend, classes, exercise and yoga classes on TV YouTube.
The Art of Referring for Physical Therapy - Goals

• Functional Goals, objective, time-limited, relevant
• Required by Medicare
• Outcomes: Oswestry for LBP, Neck Disability Index, etc.
• Value based goals = sustained changes in behavior.
• Referring provider essential to a successful outcome.
Functional Rehabilitation, Screening – Who needs Therapy?

• Screening Tools – patient self-reported functional impairments.
• Your Exam Findings
• Your Observations of Patient’s Posture and movement.
Self-Assessment Functional Screen

Benefits

- 10-item questionnaire serves as a COMMUNICATION TOOL:
  - Easily given to patient while waiting for their appointment.
  - Results entered into patient’s record by medical OR non-medical staff prior to being seen.

- Assists medical provider in identifying and assessing:
  - Presence of major functional deficits-
    - Preventing safe, independent mobility and independent ADL/IADL.
    - Which may indicate increasing severity of disease/pathology state, new diagnosis or condition, or decreasing ability to cope with present and stable condition.
  - Pain and functional improvement following spinal medical/surgical interventions
  - Indication for PT referral (Two or more YES answers to Screen questions).

- Provides patient opportunity to self-assess their own functional level, then discuss these changes with their medical provider to better understand:
  - The consequences of their conditions.
  - Their willingness to change behavior and readiness for participation in functional rehab program.
  - Information regarding medical/ surgical vs PT functional rehab treatment options.
Self- Assessment Functional Screen
Margy Maira PhD PT   Gretchen Swanson MPH PT DPT (1/2016)

Completed by (Circle One):        Patient   or   Family Member/Caregiver
Patient’s Name_________________________ Date Completed________________

Please circle   YES or  NO  to the following statements:

1. I have pain greater than 3/10 high (on a scale of 1 to 10 high)  YES   NO
   most of my day.
2. I have difficulty walking.  YES   NO
3. I have difficulty sleeping.  YES   NO
4. I need assistance to bath, dress, and groom myself.  YES   NO
5. I have a fear of falling or have recently fallen.  YES   NO
6. I am not able to live at home by myself due to my physical
   limitations.  YES   NO
7. I am not able to work or am working with limitations.  YES   NO
8. I have noticed a decrease in my fitness level or activity level over the
   past 6 months.  YES   NO
9. I am no longer able to perform pleasurable activities or hobbies.  YES   NO
10. I have had other episodes of pain in my body in addition to my back
    or neck pain that have never completely resolved.  YES   NO
Self-Assessment Functional Screen
Summary Recommendations

- Can be completed by patient/caregiver for **ALL** patients:
  - At defined intervals.
  - When presence of signs and symptoms of functional loss.
  - When patients report chronic pain and unsatisfactory functional levels.
  - Prior to and following medical/surgical interventions for assessment of pain and functional improvement from these interventions.
  - To help medical providers determine indication for PT functional rehab consultation and/or treatment to help prevent functional loss and risks of permanent but preventable physical disability.

- Finally, the authors of this self-assessment tool give permission for providers to use within their clinical practice as desired.
SCREENING FOR FALL RISK

History of a previous fall, a fall indoors, or unable to get up after a fall.

Unstable in gait, tandem, turning body, turning head, Romberg – eyes closed, standing up from a chair.

Slow Gait - walks 20 feet >5.3 seconds.

Timed up and go (TUG), stand up from a chair, walk 3 meters, return to chair (>12 seconds, ↑ Fall risk

Single Leg Balance < 10 seconds
SCREENING FOR FALL RISK – 20 FOOT WALK TEST

• Pt stands at end of hall (20’ distance); use a stopwatch. “When I say start, walk as quickly as you can to marked point at end of hallway’. < 5.3 seconds = fall risk

Gait speed was associated with survival in older adults. Studenski, et al. Jama 2011

Gait as predictor of falls in older adults, Verghese J, J Gerontol 2009. > 3.3 feet per second; 28% increase fall risk, > 2.3 feet/second; 54% increased fall risk.
SCREENING - Observations

So, when I touch this muscle that recreates your severe pain?

• During the exam tests palpation and observation of posture and movement, communicate with pt about your observations.
EXAM OBSERVATIONS - POSTURE

- Lumbar – flexed, lordotic, anterior pelvis, lean
- Pelvic – iliac crest even, rotated
- Shoulder/scapula height uneven
- Thorax – increased kyphosis
- Head – forward
- Neck – extended, flattened, sidebent, hypertrophy of the SCM
- Humerus – anterior, rotated, superior
EXAM OBSERVATIONS- MOVEMENT

• What bends, what doesn’t.
  Scoliosis, abnormal alignment/movement
• Bias - e.g.pt prefers to stay bent over.
• Kinesiophobia – pt afraid to move in one direction.
EXAM OBSERVATIONS

• Single Leg Stance
  balance
  hip strength
  ankle/knee

• Sit to Stand Test
  balance
  LE strength

• Supine to Sit Test
  Mechanics/Pain
EDUCATION: YOUR DISC DESSICATION IS NOT CAUSING YOUR GLUTEAL PAIN

• MRI does not point to painful structures.

• Demystify imaging and focus on function and treatable findings vs. "degenerative disc disease, lumbar spondylosis, osteophyte formation, disc bulge, etc."
EDUCATE AND RE-ASSURE

• 126 patients in the ED or Urgent Care
• Primary Complaint: H.A.
• Most Common Cause: MVA/whiplash
• Design: RCT
• Treatment: group viewed a cervical strain psychoeducational video via TV on a portable cart.

• Educational video used in the emergency department provides effective treatment for whiplash injuries.

• Oliviera A. Spine, 2006. *Education in E.D. for Whiplash Patients*
Educational Video 12 minute

1) Description of the physiology of a cervical strain
2) possible symptoms - first 48 hours
3) medical treatment first 48 hours: ice, rest, soft collar (PRN) and medications
4) possible symptoms after the first 48 hours, Tx: heat, maintaining preinjury activity gradually
5) recovery time period
6) animated diagram demonstrating what causes continued muscle pain;
7) interview with a recovered cervical strain patient;
8) explanation of muscle tension and its physical and emotional triggers
9) muscle tension awareness and reduction techniques: reentering the environment – driving, guarding, immobilization, and exertion can all create tension, exacerbating muscle pain

10) home cervical stretching exercises.
11) breathing relaxation: visual display, which acts to alter the physical
   • Reactions that cause muscle tension.
12) emphasis on diagnosis as muscular.

Therefore, it is necessary to follow-up with health professionals trained in dealing with muscle pain disorders.
EDUCATE & REASSURE

• PATIENTS viewing the video had dramatically lower pain ratings at a 1-month follow (6.09 [10.6] vs. 21.23 [17.4], P < 0.001) and this pattern held for the 3- and 6-month follow-up period.

• RESULTS: 4% of video patients were using narcotics at 6 month post ED visit compared with 36% of controls.

• The brief psycho-educational video had a profound effect on subsequent pain and medical utilization.
Exercises - Healing Movement

• See Handouts for LBP exercises
• Moving Frequently will decrease muscle tension
• Muscle Ischemia causes nociceptive pain.
• Supported rest.

• Walking
• Using a Fitbit
• Getting involved in a family or group for support.
• Walking and resting at the mall or park benches (neurogenic claudication).
Thank You!
References: Self-Assessment Functional Screen

Below is a partial list of several evidenced-based self-assessments targeting specific functional status aspects of a patient’s total health and well-being:


• GP’s Assessment of Patients’ Readiness to Change Diet, Activity and Smoking: Verheijden, Marieke W PhD. [www.ncbi.nlm.nih.gov/pmc/articles/PMC1472749/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1472749/)

• Multidisciplinary biopsychosocial rehabilitation for chronic low back pain, Editorial Group: Cochrane Back and Neck Group; Published Online: 2 SEP 2014, DOI 10.1002/14651858.CD000963.pub


• STEADI-self assessment questionnaire: [www.edc.gov/steadi](http://www.edc.gov/steadi) Centers for Disease Control and Prevention

Additional References:

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6. I am not able to live at home by myself due to my physical limitations.  YES  NO
7. I am not able to work or am working with limitations.  YES  NO
8. I have noticed a decrease in my fitness level or activity level over the past 6 months.  YES  NO
9. I am no longer able to perform pleasurable activities or hobbies.  YES  NO
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Exercise Program For: Date: 8/1/2016

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AROM lumbar ext standing

- Stand with feet shoulder distance apart. Pull belly in.
- Place hands on hips as shown.
- Arch backwards.
- Return to start position and repeat.

**Special Instructions:**
Perform at rate of one arch per second.
Perform 1 set of 20 Repetitions, twice a day.
Perform 1 repetition every 4 Seconds.

AROM lumbar sidebend standing

- Stand with feet shoulder distance apart, arms at side.
- Bend trunk sideways to left, reaching hand toward knee.
- Return to upright position and repeat to right.
Perform 2 sets of 20 Repetitions, twice a day.

AROM hip fix (lumbar eccentric) stand high level

- Pull the belly in toward the spine. Slowly bend forward, bending only at the hip joint.
- Allow arms to hang in front as you bend.
- Return to standing position by straightening at the hip joint.
- Repeat.
Perform 2 sets of 20 Repetitions, twice a day.

Stretch lumbar fix sit

- Sit in chair with knees apart. Pull belly in toward the spine.
- Slowly bend forward and reach between legs.
- Hold stretch and return to sitting position and repeat.
Perform 1 set of 4 Repetitions, twice a day.
Hold exercise for 20 Seconds.

Stretch hamstring bil (stand 90)

- Stand in front of table with feet shoulder distance apart.
- Place hands on table.
- Bend at hips and tighten the muscles in fronts of thighs, keeping the knees straight.
- Keep low back straight.
Perform 1 set of 3 Repetitions, twice a day.
Hold exercise for 20 Seconds.

AROM lumbar fix/ext supine (pelvic see-saw)

- Lie on back with knees bent.
- Arch low back.
- Slowly flatten the lumbar one segment at a time from hips upward.
- At the end the hips should slightly raise off table.
- Hold hips up for 5 seconds, then reverse sequence.
Perform 5 sets of 1 Minute, once a day.
Rest 1 Minute between sets.
Perform 1 repetition every 4 Seconds.

Issued By: LESLEY

Signature: ____________________

These exercises are to be used only under the direction of a licensed, qualified professional.

UNMH

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AROM lumbar neutral spine supine

- Lie on back with knees bent.
- Exhale as you pull belly in toward spine and allow the low back to come toward the mat. Release as you inhale. Repeat.

Perform 5 sets of 1 Minute, once a day.
Perform 1 repetition every 4 Seconds.

Stretch Piriformis supine w/hip fix

- Lie on back.
- Lift involved leg to chest and grasp knee with opposite hand.
- Grasp lower calf with your other hand.
- Gently pull your leg across chest to opposite shoulder while rotating leg inward until a stretch is felt deep in the buttocks.

Perform 1 set of 4 Repetitions, twice a day.
Hold exercise for 20 Seconds.

Stretch hip flexors supine

- Lie on uninvolved side.
- Extend involved leg backwards and slowly lower until a gentle stretch is felt in outer side of thigh.
- Keep leg straight and rotated outward.

Perform 1 set of 4 Repetitions, twice a day.
Hold exercise for 20 Seconds.

Stretch IT band sidelying

- Lie on uninvolved side.
- Extend involved leg backwards and slowly lower until a gentle stretch is felt in outer side of thigh.
- Keep leg straight and rotated outward.

Perform 1 set of 4 Repetitions, twice a day.
Hold exercise for 20 Seconds.

Stretch hamstrings supine active

- Lie on back holding knee from behind, as shown.
- Gently straighten leg.
- Repeat with other leg.

Perform 1 set of 2 Repetitions, twice a day.
Hold exercise for 30 Seconds.

Stretch hip/knee figure 4

- Lie on back, knees bent.
- Move left ankle over right knee.
- Gently lift right knee up to chest until stretch is felt.
- Repeat with other leg.

Perform 1 set of 2 Repetitions, twice a day.
Hold exercise for 30 Seconds.