Overview:

“Doc, my back hurts”

Non-Pharmacologic Treatment Modalities

Physical Therapy Evaluation and Treatment
“Doc, my back hurts”

- Not an uncommon story:
  - 45 yr. old male with chronic lumbar pain, intermittent radiations to L leg causing disability and poor sleep
  - Pain started with MVA at 20 yo and then became worse over time working in a warehouse doing various jobs
  - Pain makes it difficult to stand or sit for any prolonged periods of time and can’t work more than 3-4 hours a day at light duty
Continued:

- Patient has had multiple imaging studies that show moderate degenerative disc disease at L3-S1 with moderate foraminal narrowing bilaterally and no significant spinal cord impingement

- Has had minimal to moderate relief in the past with combinations of NSAIDs and muscle relaxants, brief periods of time on opioids/Tramadol

- Wants to get his life back, a steady job, and help around the house with chores
“Doc, my back hurts”

- 84% of Adults will have back pain during their lives
- 24% of primary care visits are for back pain
- >100 billion dollars in annual costs in health expenditures, missed work, and personal costs
- Chronic back pain is defined as lasting >12 weeks
Risk Factors for Chronic Back Pain

- Lower level educational attainment
- Lower SES
- Smoking
- Depression
- Sleep disturbances
- Other medical comorbidities
Non-Pharmacologic Modalities: Evidence

Nonpharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline

- Annals of Internal Medicine April 2017

Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review

- AHRQ #209, June 2018
Non-Pharmacologic Modalities

- Exercise
- Psychological Therapies
- Mindfulness-Based Stress Reduction
- Ultrasound
- Low-level Laser
- Traction
- Spinal Manipulation
- Massage
- Yoga
- Acupuncture
Evidence Supports Compared to “Usual Care”

- **Exercise** (studies don’t differentiate well whether from PT evaluation and plan): Slightly to Moderately improved function and pain control - short and long term

- **Psychologic Therapies** (Cognitive Behavioral Therapy, Biofeedback, relaxation training): Slightly improved function and pain control – short and long term

- **Yoga**: Slightly Improvement pain - short and intermediate; Moderate Improvement function - short and intermediate time frame.

- **Mindfulness-Based Stress Reduction**: Slight improvement pain - short and intermediate term only; improvement in function less clear
Evidence Does Not Support Long Term Benefit

- **Ultrasound**: No Benefit
- **Low-Level Laser**: Slight improvement pain and function - short term only
- **Spinal Manipulation**: Slight improvement pain and function - intermediate time frame
- **Massage**: Slight improvement - short term only
- **Traction**: No Benefit
- **Acupuncture**: Slight improvement pain and function – short term only
Full PT Evaluation

History
Story, MOI, occupation/activities Pain (location, level, description), other sx (N/T) Agg, Ease, 24-hr, PMH/PSH/meds/imaging; Red flags, Yellow flags, SINSS, self-report outcome measures

Differential Diagnoses

Tests & Measures
Observation, functional tests, palpation, ROM, MMT, passive accessory joint motion, muscle length, muscle quality, special tests

Intervention
1. Hands-on tx of contributing factors
2. Patient education
3. Matching Home Exercise Program

RE-ASSESS

1. Confirm Primary Differential Dx

2. Find Contributing Factors
   - Strength, motor control
   - Joint hyper or hypomobility
   - Muscle length/trigger points
   - Other factors such as inflammation, chronic pain overlay, nerve injury
PTs can contribute to the solution for chronic pain syndrome

- PTs have 3 years of graduate doctoral training, steeped in pain science, pain evaluation, and pain management
- Use evidenced-based tests and measures to determine the causes of pain
- Assess intensity, quality, temporal, and physical characteristics
- Also evaluate for risk factors for pain and future pain issues
- Evals typically 45-60 min

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Risk Factors for Chronic Pain

- Disease history
- Cognitive and psychological factors
- Beliefs
- Sedentary lifestyle

[Diagram showing Venn diagram with overlapping circles labeled Psychological, Social, and Biological]
PT Interventions

- Therapeutic exercise
- Manual therapy
- Stress management
- Sleep hygiene
- Pain neuroscience education (& other psychological informed patient education)

PT is effective in both treating pain and preventing chronic pain

- Low back pain systematic review
  - 60 RCTs, exercise therapy, found PT decreased pain, improved function, and helped people return to work

- Pre- and post-surgery systematic review
  - 35 RCTs, 3000 pts undergoing THA, found pre-op exercise and education led to significant reductions in pain, shorter lengths of post-op stay, and improvements in function

- Arthritis
  - Studies show therapeutic exercise programs reduce pain and improve function in people with hip and knee OA
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CHOOSE THE SAFER WAY TO MANAGE PAIN.

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MoveForwardPT.com
References from APTA White Paper 2018

  

Thank you! Happy to be on the team!

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