Physical Therapy for the Lower Extremity: What You and Your Patient Should Expect from Rehab

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Disclosures

• I have nothing to disclose.
Goals

• Importance of expectation
• What to expect from Rehab
• Common interventions in Physical Therapy
• Top Sports Cases
  – Anterior knee pain
  – Ankle injury

Why is Expectation Important?

• Factors relating to patient expectations are associated with both clinical outcomes, satisfaction with treatment, and influence of behavior.¹
• Health care expectations can be positive or negative
• Most commonly defined as the general belief a clinical outcome will occur.¹
Relationship Between Expectation and Musculoskeletal Pain

- Clinical studies have demonstrated an association between predicted expectation and outcomes related to the management of musculoskeletal pain conditions for:
  - total joint arthroplasty
  - chronic pain
  - neck pain
  - shoulder pain
  - low back pain

- These studies demonstrate that outcomes don’t depend solely on the type of treatment provided, but also on individual attitudes and beliefs regarding the treatment.

So What Should the MD Expect?

- Good initial evaluation
  - Detailed subjective
  - Key physical exam components that are hands on and objectively measured
  - A timely report back

- Treatments that address key areas
  - Improving mobility of injured area and surround areas
  - Movement retraining
  - Strength and flexibility training

- Outcome measures that are functional for the individual with normative data.
What Your Patient Should Expect?

• Listening to “their” story, how they were injured, what their limitations are, what they can still do and what they want to get back to…EXPECTATIONS.

• Hands on Evaluation, even over or at areas of pain. They should not expect to be pushed into pain.

• Functional assessment, how do they walk/move? How is their balance? What is their range?

• Goals that take into account what the patient wants!

What Your Patient Should Expect?

• Treatments addressing all of the deficits found, this includes:
  – Soft tissue mobility, joint mobility
  – Strength and power training
  – Movement retraining
  – Functional training
  – Sport specific training

• Education and homework designed specifically for them
Common Treatments in Rehab

• Joint mobilization
• Soft tissue mobilization
• Strength training
• Proprioceptive training
• Functional/Movement training

Joint Mobility

• What is it?
  – A skilled passive movement of the articular surfaces to decrease pain and increased joint movement
• Why do it?
  – Attempting to:
    – Turn off nociceptors and decrease pain through Pain Gate Theory
    – Improve joint hypomobility of capsular origin
Soft Tissue Mobility

- What is it and why do it?
  - Skilled hand movement intended to produce any or all of the following effects:
    - Improve tissue extensibility
    - Increase range of motion of the joint complex
    - Mobilize or manipulate soft tissues and joints
    - Induce relaxation
    - Change muscle function
    - Modulate pain
    - Reduce soft tissue swelling, inflammation or movement restriction

Instrument Assisted Soft Tissue Mobility

- What is it and why do it?
  - Skilled treatment using a tool to detect and treat fascial restrictions, encourage rapid localization and effectively treat areas exhibiting soft tissue fibrosis, chronic inflammation or degeneration.
    - Can be performed with handheld tool or cups to perform Myofascial Decompression.
    - These instruments break down fascial restrictions and scar tissue
    - Promotes fully functional tissue.
Strength Training

• What is it?
  – Isolated strength training for injured muscles or general major muscle exercise programs.

• Why do it?
  – Addresses injuries to the musculoskeletal system that results in skeletal muscle hypotrophy and weakness, loss of aerobic capacity and fatigability.

Proprioceptive Training

• What is it?
  – A special type of training targeting the sensations of the deep organs and of the relationship between muscles and joints.\textsuperscript{11}

• Why do it?
  – Loss of proprioception occurs with injuries to ligaments, tendons, or joints, and also with immobilization.\textsuperscript{12}
Functional/Movement Training

• What is it?
  – Movements based on real-world situational biomechanics. Involves multi-planar, multi-joint movements which place demand on the body’s musculature and innervation.

• Why do it?
  – Rehab must take into account and reproduce the activities and movements required when the patient returns to all their previous activities.¹¹
  – Optimize movement efficiency

Stages of Rehab

• Stage 1
  – Protection, Mobilization, Walking
  – Typically lasts 4-6 days
  – Goals in this phase are to:
    – Limit tissue damage
    – Pain relief
    – Control inflammatory response to injury
    – Protection of injured area
Stages of Rehab

• Stage 2
  – Open/closed kinetic chain exercises and Proprioceptive training
  – Lasts from day 5 to 8-10 weeks
  – Goals of this phase:
    – Joint range of motion and muscle conditioning
    – Early motion promotes optimal alignment of collagen fibers
    – Promotes tissue mobility

• Stage 3
  – Sport specific drills and reconditioning
  – Lasts from about day 21 to 6-12 months
  – Goals for this phase:
    – The start of conditioning process needed to return to full function.
    – Identify and correct risk factors
    – Reduce the possibility of re-injury
Stages of Rehab

• Stage 4
  – Maintenance and prevention of re-injury
  – Relevant for athletes
  – Goals in this phase:
    – Transition of strengthening exercises to sport specific activity
    – Return to Sport

Top Sports Cases– How it Really Works

• Anterior Knee Pain
  – Initial Phase:
    – Restore motion and reduce swelling
    – Soft tissue mobilization and patellofemoral joint mobilization as required effleurage
    – Remote strengthening, glutes and core
    – Gentle Stretching
    – Taping
Top Sports Cases– How it Really Works

• Anterior Knee Pain
  – Intermediate Phase:
    – Local strengthening:
      – Quadriceps and hamstrings to address any atrophy
    – Advance core and gluteal strengthening
    – Soft tissue to maintain mobility of joint and remodeling soft tissue; deep tissue and MFD
    – Proprioceptive training to enhance neuromuscular control
    – Functional training
      – Squat progression
      – Gait training

• Anterior Knee Pain
  – Advanced Stage
    – Initiate conditioning program
    – Advanced strengthening and movement training to remodel and create resiliency in new tissue and address mechanical/positional faults
      – Plyometric training
      – Agility training
    – Soft tissue and joint mobilization to maintain proper functioning.
    – Sport specific training
Top Sports Cases – How it Really Works

• Ankle Sprain
  – Initial Phase:
    – Restore motion and reduce swelling at ankle
      – Soft tissue mobilization, effleurage
      – ROM
    – Remote strengthening, glutes and core
      – Glutes are secondary supporter of ankle position
    – Gentle Stretching
    – Taping
    – Brace wear

• Ankle Sprain
  – Intermediate Phase:
    – Local strengthening to Ankle stabilizers to address any atrophy
    – Advance core and gluteal strengthening
    – Soft tissue to maintain mobility of joint and remodeling soft tissue; deep tissue and MFD for limited tissues
    – Joint mobilization to improve dorsiflexion and dynamic balance
    – Proprioceptive training to enhance neuromuscular control
    – Functional training
      – Squat progression addressing WB issues
      – Gait training
Top Sports Cases – How it Really Works

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How to Set-up Success

• Find a physical therapist you trust and understand how they treat.
• Communicate with the physical therapist
• Prepare for Physical Therapy
  – Help set expectations for those who have never been to Physical Therapy before
  – Help reset expectations for patients who have been disappointed with Physical Therapy before.
• This way, you and the patient Expect the Expected.
References