



UNIVERSITY OF
NEW ENGLAND

INNOVATION FOR A HEALTHIER PLANET

**MOBILIZATIONS AND STRENGTHENING FOR
RADIATING HIP AND ANTERIOR KNEE PAIN: A CASE
REPORT**

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BACKGROUND & PURPOSE

- Most common joint disorder in the United States is osteoarthritis (OA)¹
- Hip instability is commonly defined as hip joint unsteadiness that may cause pain.²
- Limited literature on hip strengthening and mobilizations on positive outcomes with hip instability.
- Case report purpose was to utilize hip strengthening and mobilizations interventions on a patient with hip instability and knee OA.

CASE DESCRIPTION: HISTORY & SYSTEMS REVIEW

History

- 71-year-old Caucasian male
- Emergency Cauda Equina Surgery
- Lumbar Decompression L4-L5

Systems	Findings
Cardiovascular/ Pulmonary	Not impaired
Musculoskeletal	Low Back Pain with Passive Right Hip Extension
Neuromuscular	Reflex/Sensory Integrity: L3 and S1, 1+ (Diminished) Bilateral
Integumentary	Not Impaired
Communication	Not impaired
Affect, Cognition, Language, Learning Style	Not impaired Preferred Language: English Learning Style: Verbal, Tactile, and Visual

CASE DESCRIPTION: TESTS & MEASURES

Examination Measure	Initial Evaluation Results
Posture	Hips anterior to plumb line
Lower Extremity Myotomes	L2 Hip Flexion: Left 5/5 Right 5/5 L3 Knee Extension: Left 5/5 Right 5/5 L4 Ankle Inversion: Left 5/5 Right +4/5 L5 Great Toe Extension: Left 5/5 Right +4/5 S1-2 Ankle Plantar Flexion: Left 5/5 Right +4/5
Reflex	L3 Patellar Tendon: Bilateral 1+ Diminished S1 Achilles Tendon: Bilateral 1+ Diminished
Range of Motion	Hip Extension: Left PROM 10 degrees, Right PROM 10 degrees Internal rotation: Left Within normal limits, Right PROM 10 degrees
Special Tests	Straight Leg Raise: Negative Well Leg Raise: Negative Flex Internal rotation Adduction Test: Negative

- Posture, Lower Extremity Strength, Reflexes, Range of Motion, Special Tests were Unchanged at 4 weeks

INTERVENTIONS & POC

Week 1-2

- Lateral Hip Distractions, Femoral Nerve Glides and Hip strengthening/stretching

Week 3-4

- Lateral Hip Distractions, Soft Tissue Massage, Lumbar Traction, Closed-chain/Open-chain Lower Extremity Strengthening

Week 5-6

- Posterior Hip Mobilizations, Femoral Nerve Glides, Closed/Open-chain Lower Extremity Strengthening

Ongoing

- Posterior Hip Mobilizations, Femoral Nerve Glides, Closed/Open-chain Lower Extremity Strengthening, Emphasis on Hip Flexor Strengthening

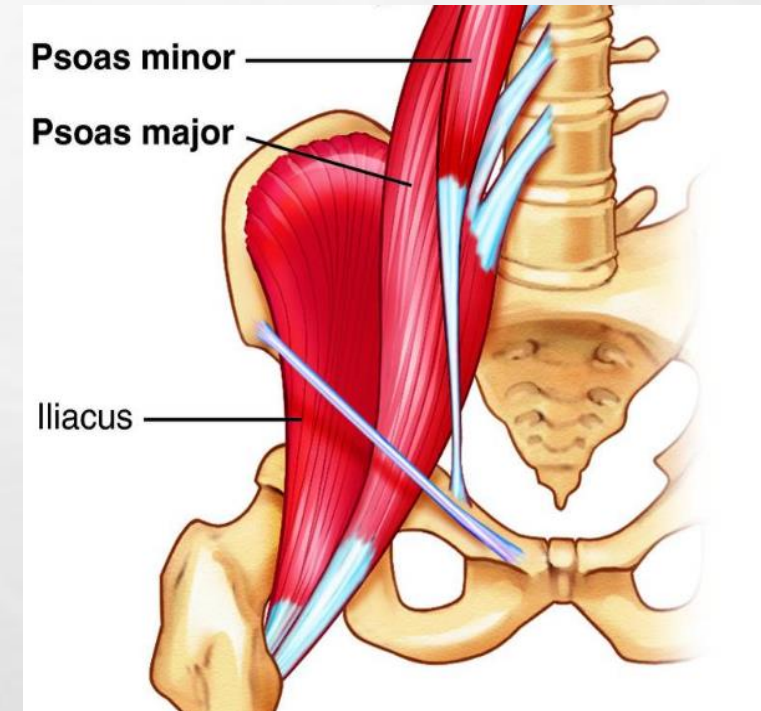


Photo Courtesy of: hoodriverchiropractic.com

OUTCOMES

Functional Outcome Measure	Initial Evaluation	Outcomes
Lower Extremity Functional Scale	Total points: 47	Total points: 53
Single Limb Stance Test	Left Leg, Eyes Open, Firm: Good (10 seconds) Right Leg, Eyes Open, Firm: Fair (7 seconds)	Left Leg, Eyes Open, Firm Good (10 seconds) Right Leg, Eyes Open, Firm: Fair (10 seconds)

DISCUSSION, CONCLUSION & FUTURE DIRECTIONS

- Relatively small improvements and reduction in pain
- Educated on posture and proper body mechanics
- Utilizing hip strengthening and mobilization interventions for treatment of hip instability and knee OA may have positive outcomes but requires further investigation.^{3,4}
- Future research should focus on lower extremity strengthening and manual therapy for knee OA and hip instability.

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