

Right Piriformis Syndrome

Initial Visit

Subjective:

Patient is a 32-year old female who presents to physical therapy with right buttock, hamstring and calf pain. She has seen her physician and has been diagnosed with a disc herniation at L4-L5. Patient reports her onset of symptoms occurred after a weekend of participating in a competitive volleyball tournament as a setter on the team. She reports that she experiences increased discomfort with prolonged sitting, standing and walking. She also experiences difficulty lifting her 2-year old daughter, sleeping and working full time at her desk job. Patient is currently scheduled to receive the 1st of a series of cortisone injections.

Past Medical History:

Past medical history includes chronic low back pain. She has received physical therapy from another facility but has not found relief from the treatments and the activities suggested by them have increased her symptoms. She has delivered one child vaginally and has had laparoscopic surgery to remove an ovarian cyst.

Objective:

	Left	Right
Adduction Drop Test	+	-
Extension Drop Test	- (snap)	-
SLR	60°	35°
Leg Rotation	8 inches	6 inches
FA IR	29°	43°
FA IR Strength	4- (TFL)	4 (TFL)
FA ER	56°	41°
FA ER Strength	4	3+
Hruska Adduction Lift Test	Not tested due to pain	Not tested due to pain
Standing Reach Test	16 inches	16 inches
Horizontal Abduction	0°	30°
Shoulder Flexion	130°	180°
HG IR	85°	70°
Elevated and ER Ant Ribs	yes	no

Assessment:

Patient was in significant pain during the evaluation. Difficulty was noted with gait and sit to stand transfers. Left AF IR is needed to get patient off of her right hip as well as inhibit her hip flexors and right gastroc. Patient demonstrates left iliofemoral ligament laxity and will therefore require left glute med activity.

Treatment:

1. *90-90 Hip Lift with Balloon (2nd Edition CD: Integration - Supine #3)*
 - Emphasis was placed on left AF IR and right ankle dorsiflexion to inhibit right gastroc and hip flexors.
2. *Right Sidelying Adductor Pull Back (2nd Edition CD: Left Adduction - Sidelying #2)*
 - Emphasis was placed on left AF IR to promote left ischial femoral ligamentous stretching.
3. *Sidelying Posterior Mediastinal Opening with Ipsilateral Iliacus and Psoas Inhibition (3rd Edition CD: Frontal Left Posterior Mediastinum Inhibition)*
 - Emphasis was placed on activation of left gluteus medius secondary to laxed iliofemoral ligament and inhibition of hip flexor activity.
4. PRI Positional Guidelines
 - Emphasis was placed on left AF IR with dynamic sit to stand transfers and positional AF IR with sitting and standing.

Second Visit

Subjective:

Patient reports that she received a cortisone injection to her right piriformis per her physician’s recommendations and this aggravated her symptoms significantly. Her chief complaint today is pain in her right buttock region with radiating symptoms down the back of her right leg. Patient also reports that she is having difficulty feeling her left adductor with her home program.

Objective:

	Left	Right
Adduction Drop Test	+	-
FA IR	27°	31°
FA ER	50°	40°
SLR	40°	40°

Assessment:

Patient is lacking left AF IR and posterior mediastinal opening with thoracic flexion. She still needs inhibition of hip flexors, right gastroc, inferior glute max and right adductor magnus to help promote left AF IR.

Treatment:

1. *Prone Inferior Glute Max, Adductor Magnus and Quadratus Femoris Stretch (3rd Edition CD: Sagittal Hip Flexor Inhibition)*
 - Emphasis was placed on mediastinal flexion and inhibition of her right piriformis.

2. *Seated Adductor Left Pull Back with Right Trunk Rotation*
(2nd Edition CD: *Integration - Seated #19*)
 - Emphasis was placed on left thoracic abduction and mediastinal flexion by having her place her left forearm on her left thigh. Instructed the patient to dorsiflex her right toes to inhibit her right gastroc and to press her left thigh down into towel to activate her left glute med with IR vs. her TFL.

3. *Active Left Ischial Femoral Ligamentous Stretch with Adduction*
(2nd Edition CD: *Left Adduction - Sidelying #7*)
 - Emphasis was placed on right ankle eversion to inhibit right adductor magnus and promotion of left thoracic abduction and activation of left gluteus medius to assist with “feeling” her left adductor.

4. *Continue Sidelying Posterior Mediastinal Opening with Ipsilateral Iliacus and Psoas Inhibition* (3rd Edition CD: *Frontal Left Posterior Mediastinum Inhibition*)

Third Visit

Subjective:

Patient reports that the pain in her right leg is less intense. She states that she has cancelled all future appointments for cortisone injections.

Objective:

	Left	Right
Adduction Drop Test	–	–
FA IR	41°	40°
FA ER	55°	55°
SLR	75°	40°
Hruska Adduction Lift Test	2+	2+

Assessment:

Patient requires integrated activity between her right glute max and left adductor as well as upright frontal plane activation of her left quad with her left adductor and right quad with right abductor. The patient was started on an upright program with only 2+/5 Adduction Drop Test scores secondary to inhibition of her piriformis, hamstring, calf, and adductor magnus and for promotion of proprioceptive left AF IR.

Treatment:

1. *Standing Supported Left AF IR* (3rd Edition CD: *Left Squat #1*)
 - Emphasis was placed on inhibition of her right adductor magnus, hamstring, and piriformis and also to promote frontal plane control.

2. *Standing Supported Right Squat with Left Hip Approximation (3rd Edition CD: Right Squat #1)*
 - Emphasis was placed on integration of right glute max and right quad with left AF IR and FA IR control.

3. *Continue Seated Adductor Left Pull Back with Right Trunk Rotation (2nd Edition CD: Integration - Seated #19)*
 - Emphasis was placed on left medial hamstring and left glute med with integration from her right quad.

Fourth Visit

Subjective:

Patient reports that she has minimal pain and some days she has no pain. She hasn't experienced any radiating pain down the back of her right leg. She reports having one day of increased pain after shopping all day but found relief with her home program.

Objective:

	Left	Right
Adduction Drop Test	–	–
FA IR	41°	40°
FA ER	57°	58°
SLR	80°	55°
Hruska Adduction Lift Test	3	3
Passive Abduction Test	–	+
Standing Reach Test	10 inches	10 inches

Assessment:

Patient requires advancement of left squat activity to promote upright left AF IR with mediastinum/thoracic flexion. Also discussed with patient the need for proper footwear and she plans on purchasing a new pair of shoes.

Treatment:

1. *Standing Un-Resisted Wall Ischial Femoral Ligamentous Stretch (3rd Edition CD: Transverse Left Posterior Capsule Inhibition)*
 - Emphasis was placed on paravertebral inhibition and mediastinal opening.

2. *Standing Supported Left Squat Lateral Dips (3rd Edition CD: Left Squat #3)*
 - Emphasis was placed on frontal plane control and inhibition of right adductor magnus.

3. *Standing Supported Left Squat with Right Glute Max (3rd Edition CD: Left Squat #7)*
 - Emphasis was placed on left AF IR and FA IR control with FA ER control on the right.

4. Continue *Seated Adductor Left Pull Back with Right Trunk Rotation* (2nd Edition CD: *Integration-Seated #19*)
 - Emphasis was placed on strengthening the right quad and inhibition of her right calf.

Fifth Visit

Subjective:

Patient reports no pain during normal activities of living but slight pain with higher level activities. Patient purchased new shoes and states that these have helped as well.

Objective:

	Left	Right
Adduction Drop Test	–	–
FA IR	40°	40°
FA ER	59°	58°
SLR	85°	85°
Hruska Adduction Lift Test	4	4
Hruska Abduction Lift Test	5	4-
Standing Reach Test	0 inches	0 inches
Passive Abduction Test	–	+

Assessment:

Patient needs more right abduction with right glute max in the sagittal plane.

Treatment:

1. *Standing Supported Right Squat with Left Glute Med and Right Trunk Rotation* (3rd Edition CD: *Right Squat #4*)
 - Emphasis was placed on right quad and right glute max control. The patient needs to learn how to fire her right quad with terminal knee extension vs. her right calf. She also needs to learn how to push off with control of her right glute max and right quad.. Left glute med emphasis secondary to patient’s iliofemoral ligament laxity.
2. *Standing Unsupported Right Squat with Resisted Left Hamstring and Right Trunk Rotation* (3rd Edition CD: *Right Squat #5*)
3. *Continue Standing Supported Left Squat with Right Glute Max* (3rd Edition CD: *Left Squat #7*)

Sixth Visit

Subjective:

Patient reports no pain with activities of daily living. She states that she started running again and did experience mild aggravation. She was able to relieve this by completing her home exercise program.

Objective:

	Left	Right
Adduction Drop Test	–	–
FA IR	41°	43°
FA ER	59°	57°
SLR	85°	85°
Hruska Adduction Lift Test	5	4+
Hruska Abduction Lift Test	5	4+
Standing Reach Test	0	0
Passive Abduction Test	–	–

Assessment:

Patient needs increased pelvic floor stability and strength. She needs to maintain left AF IR to keep her left pelvic floor “open” and her right glute max to “close” her pelvic floor on the right.

Treatment:

1. *Standing Supported Upright Left Squat Lateral Dips (3rd Edition CD: Left Squat #9)*
 - Emphasis was placed on advancement of squat program to promote frontal plane control, left glute med and inhibition of right adductor magnus.
2. *Standing Unsupported Left and Right Lift with Right Trunk Rotation (3rd Edition CD: Left Squat #10 / Right Squat #6)*
 - Emphasis was placed on sagittal plane control with right quad and right glute max.
3. *Retro Walking (2nd Edition CD: Integration-Standing #32)*
 - Emphasis was placed on dynamic standing control with integration of sagittal, frontal and transverse plane. Bilateral hip shifting was emphasized to promote increased pelvic stability.