Active Isolated Stretching

Rules for Active Isolated Stretching (AIS) –

- 10 Repetitions
- Hold stretch for 2-seconds
- Breathe every rep
- Assist with rope (2lbs. pressure)
- Distal to proximal
- Glute Activation****

Principle and Technique

- Over pressure on the rope
- Not continuous movement
- Holding breath
- Holding too long
- Forget glute activation
- No system
- Knee bent

Common Errors

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**Soleus** – with the knee bent at least 45 degrees, keep the heel down and pull the forefoot toward the knee. You should feel a stretch low in the calf and Achilles. This can be done using your hands or with a rope.

![Soleus Stretch Example](image1.png)

**Gastrocnemius (calf)** – sit with the knees straight and gently pull the forefoot back to the knee. You should feel a stretch in the back of the calf. To make this exercise more challenging, lie back with the leg vertical and then pull the forefoot to the knee (picture #2)

![Gastrocnemius Stretch Example](image2.png)
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**Adductors** – start out with the legs out straight and then slowly swing the leg out to the side assisting with the rope. Keep leg very close to the ground. Notice the way the rope is wrapped around the inside of the leg to the outside.

![Adductor Stretch Example](image1)

**Abductors** – Bring the leg up to 90 degrees and then across the body. Notice the way the rope is wrapped around the outside of the foot and around to the inside. Cross the downward leg over midline.

![Abductor Stretch Example](image2)
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**Distal Hamstrings** – Begin with the hip and knee both flexed to 90 degrees. Extend the knee as much as possible using the rope to assist. Maintain the thigh in a vertical position.

**Proximal Hamstrings** – keep the leg straight and aim the knee toward the same side shoulder.

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**Medial Hamstrings** – Start by wrapping the rope around the inside of the foot and then bring it around the Achilles tendon to the outside of the leg. Keep the leg straight and aim the knee toward the chin.

**Lateral Hamstrings** – Start by wrapping the rope around the outside of the foot and then bring it around the Achilles tendon to the inside of the leg. Keep the leg straight and aim the knee for the opposite shoulder.
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**X Wrap Technique** – cross the rope around the front of the foot at the shoelaces.

**Rectus Femoris** – lie directly on your side with the spine and head in alignment. Bring the bottom hip to 90 degrees of flexion and hold with the bottom arm. Use the X-wrap technique described above. Reach the heel toward the buttock using the rope for assistance.
Active Isolated Stretching

**Iliopsoas** – use the X Wrap technique around the foot. Lie on your side with spine and neck in alignment, and down hip flexed to 90 degrees. Reach back with the top leg, assisting with the rope. Be sure to emphasize firing the glutes to extend the hip, and not the lower back.

![Iliopsoas Stretch](image)

**Iliopsoas (prone)** – use the X Wrap Technique around the foot. Flex the knee to 90+ degrees and lift the thigh off the floor using the rope for assistance. Brace the abdominals and fire the glutes to lift the hip. Do not arch through the lower back. Straight leg side, keep foot dorsiflexed and toes into the ground to relax the lower back.

![Iliopsoas (prone) Stretch](image)
Active Isolated Stretching

**Hip External Rotation** – start with the rope wrapped around the outside of the foot and then around the Achilles tendon to the inside of the leg. Hold the leg vertical, and turn the foot outward. Use the Right hand to assist at the Right knee, and the rope to add gentle over pressure.

![Hip External Rotation Image]

**Hip Internal Rotation** – start with the rope wrapped around the inside of the foot, and then around the Achilles tendon to the outside of the leg. Hold the leg vertical, and turn the foot inward. Use the Right hand to assist at the Right knee, and the rope to add gentle over pressure.

![Hip Internal Rotation Image]
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**Hip Internal Rotation** – start with the rope wrapped around the inside of the foot, and then around the Achilles tendon to the outside of the leg. Hold the thigh vertical with the knee flexed 90 degrees. Use the Right hand to stabilize the Right knee, and the rope to add gentle over pressure.

![Hip Internal Rotation](image1)

**Flexor Hallicus Longus (great toe dorsiflexion)** – gently pull the great toe back toward the shin. You should feel the stretch through the bottom of the foot.

![Flexor Hallicus Longus](image2)
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**Piriformis** – start by wrapping the rope around the outside of the foot, and then behind the Achilles tendon to the inside of the lower leg. The ‘down’ leg is positioned across the midline. Raise the leg to 90 degrees, and then bring the leg across the body. Keep the pelvis flat on the floor.

![Piriformis Stretching](image1)

**Piriformis (Femoral Insertion)** – start with the legs extended and the ‘down’ leg positioned slightly across the midline. Flex the hip and knee, and then gently pull the knee and ankle toward the opposite shoulder.

![Piriformis (Femoral Insertion) Stretching](image2)

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Piriformis (Sacral Insertion) – start by abducting the leg to the side, and then flex the hip and knee up. Gently pull the knee and ankle toward the opposite shoulder. The ‘down’ leg is positioned slightly across the midline.
Active Isolated Stretching

**Spinal Flossing** – gently pull one hand down the back, and then switch directions and pull the opposite arm up the back. Maintain a tall posture with the head and neck in a neutral position.

![Spinal Flossing Image]

**Rotator Cuff** – hold the shoulder out at 90 degrees of abduction with the elbow bent 90 degrees. Picture #1 – External Rotation – hold the rope in your hand and bring the other end down under the upper arm. Gently pull the hand back behind the elbow. Picture #2 – Internal Rotation – hold the rope hooked around the thumb, and bring the rope up over the upper arm. Gently pull the hand back behind the elbow. Maintain a tall posture throughout both exercises.

![Rotator Cuff Image]

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