

Iliopsoas Strain Rehabilitation Protocol

The Problem

The iliopsoas muscle is the muscle that flexes the hip. It is injured when the hip hyperextends, such as when a leg slips out behind the dog, or when a dog has a sudden burst of activity that can suddenly overstretch the muscle (i.e. jumping or suddenly taking off running). The iliopsoas is comprised of the psoas major (and minor), which come from underneath the lumbar spine vertebra, and the iliacus, which comes from the undersurface of the pelvis. Together they insert just below the hip onto the femur (thigh bone). A strain involves micro or macro tearing of the muscle and/or tendon fibres.

Treatment - Acute Phase (Week 1 – or maybe 2)

1. Pain Management: A SHORT-term administration of a non-steroidal anti-inflammatory is acceptable. However, NSAIDs should be discontinued after 1 – 2 days. Inflammation is NEEDED to signal the body to heal. If pain management is needed beyond that time, then a pain drug (i.e. Tramadol, Amantadine, Gabapentin, etc) could be used. A supplement such as MSM could be incorporated as well.
2. Prevent Re-Injury: As your dog is healing, it is important to prevent further damage by disallowing off leash running, playing with other dogs, playing fetch, sprinting, or allowing burst activities (i.e. chasing a rodent or bird) or jumping onto the couch, bed or back of a vehicle.
 - a. Leash walks only until told otherwise. ☺
3. Modalities: Physical therapy treatments such as laser, ultrasound, pulsed electromagnetic field, or shockwave could be utilized to help with healing. Additionally, acupuncture or manual therapies (myofascial release, frictions, massage, or mobilizations to the lumbar spine or pelvis) may also be utilized to treat your dog.

4. Easy Therapeutic Exercises
 - a. Leash Walks. The dog should not look worse at the end of the walk. Distance or time is dependent upon the quality of post-walk movement.
 - b. Stepping OVER obstacles: Set up a row of items for your dog to walk over. Go back and forth over the obstacles slowly for a minute or so, or until the quality of your dog's movement looks poor (i.e. he/she tries to jump or 'two-foot' over the pole.)
 - c. 3-Leg stands: With the dog in standing, lift the unaffected rear leg off the ground and have the dog balance for 5, 10, 15, or more seconds (as able). Repeat 5 – 10 times, two or more times a day.
 - d. Sit to Stand Exercise: Simply work on sit to stands as an exercise as a way to use muscles in a non-challenging way.
 - e. Backing Up: Encourage your dog to back up (leading movement with rear legs). If your dog does not know this as a command, then lure him or her into a narrow space and then walk toward them and ask or motion for them to back up. Repeat a few times per session.

Treatment – Sub-Acute Phase (Greater than 1 week past surgery)

1. Pain Management, Re-Injury Preventions & Physical Therapy Strategies should be continued as appropriate.
2. Therapeutic Exercises: (At this stage you want to encourage a low load of normal stresses to the affected tissues in order for proper healing and fiber alignment to occur.)
 - a. Continue with leash walks, and exercises from the Acute Phase as deemed appropriate by your rehabilitation therapist.
 - b. Stepping over obstacles (as in the previous stage) but now step over wider obstacles (those which require a longer stride length). Repeat this exercise for a couple of minutes per session.
 - c. Hill walking / Stair walking: Up hill/stairs walking will help to actively stretch the iliopsoas and down hill / stairs walking works the iliopsoas in the opposite way. Add some of these every day or whenever out for a walk.

- d. Loving on the Stairs Stretch: With rear feet on the ground, encourage the dog to put its front feet up on a higher step or stair (higher step or stair for bigger dogs, one step or stair for a smaller one). Keep the dog in position by giving treats or affection. Hold the position for 30 seconds or up to 2 minutes. Repeat several times a day.



- e. Eccentric / Concentric Iliopsoas Activation: Place your dog's rear feet up on a stool or step, and use one arm in front of those legs to get him / her to hold the position. Next lure your dog to take a treat out forwards and down by the ground in order to get a stretch of the iliopsoas muscle. Then lure the dog to follow a treat from under its chest and then back out forwards again. Perform 10 times. Repeat two or more times a day.



- f. Underwater Treadmill: This tool could be utilized as a way to safely engage in cardiovascular exercise and apply a low load of stress to the iliopsoas muscle. Time, distance, speed, and water height should all be determined by the quality of the gait when in the water. Once, twice or even three times a week could be beneficial.

Treatment – Chronic Phase (When lameness has subsided)

1. Continuation of therapies or exercises from the previous two phases as deemed appropriate by your dog's therapist.
2. Therapeutic Exercise: (At this stage, you want to challenge the muscle in ways that put the greatest amount of stress on it. These exercises should only be attempted when lameness has subsided and there is minimal to no tenderness on palpation of the muscle.)

ALL EXERCISES BELOW SHOULD BE PRACTICED AFTER AN ADEQUATE WARM UP OF 5 – 10 MINUTES TO ENSURE PROPER MUSCLE WARMTH AND EXTENSIBILITY.

- a. Short distance retrieves: In an area with good footing, do some retrieves by throwing a 'non-bouncing' object a few feet in distance away. Try 3 – 5 of these per session, starting at once a day. Gradually build up distance, sets or daily repetitions.
- b. Destination jumping: Practice jumping onto a low platform, low bed, or low couch. Start with one to three repetitions a day.
- c. Tug of war: If your dog plays tug, then play tug. The strong muscle contractions involved in this activity can be helpful to strengthen the injured muscle.
- d. Begin allowing some return to normal activity:
 - i. Practice of one or two pieces of agility equipment (ideally jumps or contact equipment), in a flowing course. If adding equipment is successful, you can introduce weave poles or tighter turns in 2 – 3 weeks.
 - ii. Off-leash running (after a warm up of on leash activity).
- e. Dogs should not be deemed healed until they have been successful in this stage for 3 – 4 weeks.