
Elbow Region (Distal Humerus to Carpus)

Rehabilitation Following Elbow/Radius and Ulnar Surgery or Trauma

Recovery following elbow surgery may take 10-12 weeks or more. For the first 10 weeks, your dog should be confined to the house, in a crate or small area that allows it to turn around and lay down comfortably, and restricted to brief leash walks to allow it to urinate and defecate several times a day. Your dog should not run, jump or have unobserved exercise during this initial ten week period. Please follow the steps listed below.

Week 1*

- Apply an ice pack to the elbow for 10-15 minutes, four times a day, for the first 24 to 36 hours following surgery or trauma. (An ice slurry can be made by mixing two parts isopropyl alcohol to one part water in a zip lock bag and freezing. Keep the slurry in the freezer except when it is in use.) Place a towel between the skin and ice pack for comfort.
- When the swelling and redness have resolved, begin to apply a warm compress (a damp towel warmed in water) to the elbow for 10-15 minutes, three times a day, before performing 10 slow repetitions of gentle *elbow flexion/extension* and *pronation/supination (inward/outward rotation)* through a full range of motion. **(Figures 7-10 and Videos 5-6)**
- After the third day, begin slow leash walks of less than 10 minutes in duration, three times a day. Use the short leash walks outdoors to allow your dog to urinate and defecate.

Weeks 2 and 3*

- Apply the warm compress and continue a full range of motion of the elbow as described above {*elbow flexion/extension and pronation/supination (inward/outward rotation)*}
- Range of motion maneuvers may be discontinued when your dog begins bearing weight on the limb when walking.
- Increase the duration of the slow leash walks to 10-20 minutes, three times a day.
- At the end of week two, your dog should be reexamined by your veterinarian for suture removal if present and evaluation of limb usage (range of motion, limb size and weight bearing).

Weeks 4* and 5

- Increase the duration of the slow leash walks to 20-30 minutes, 2 to 3 times a day.
- Have your dog *circle* clockwise and then counterclockwise or walk a *slalom course*, 2 to 3 times a day. **(Figures 32-33 and Videos 22-23)**
- Have your dog do the therapeutic exercise *elevated stepping*, 2-3 times daily. **(Figures 37 and Video 27)**

Weeks 6-10

- At the end of week six, your dog should be reexamined by your veterinarian for evaluation of limb usage (range of motion, limb size and weight bearing).
- Increase the duration of the slow leash walks to 30-40 minutes a day. The pace should be slow enough to ensure full weight bearing on the affected limb.
- Have your dog slowly walk down a moderate *hill* of at least 25 yards (meters) in length. Repeat 2-5 times, 2-3 times daily. **(Figure 34 and Video 24)**
- Have your dog do the *crawl* exercise, 2-3 times daily. **(Figure 39 and Video 29)**

Weeks 10-12

- Have your dog do the therapeutic exercise *digging* and continue *crawl* (as described above) 2-3 times daily. **(Figure 36 and video 26)**
- Healing should be complete and your dog should return to full activity by the 12th week.

Remember: If indicated, weight loss will hasten recovery.

***NSAIDs and adjunctive analgesics** are often necessary to provide pain management for the first four weeks following surgery to increase patient comfort and compliance during the therapeutic exercises (discontinue if vomiting occurs).

Elbow

Elbow Flexion/Extension- (Figures 7 and 8 and Video 5) These maneuvers are designed to stretch the flexor and extensor muscles of the elbow and maintain or improve the range of motion of the elbow joint.

To perform elbow flexion and extension, the dog is positioned lying on its side with the affected limb up. Stabilize the elbow with one hand placed behind the upper limb while the limb below the elbow is moved forward toward the head and backward toward the rear limb, trying to reach the full extent of the joint's range of motion. The goal is slow, controlled movement with slight pressure at the end of the full extent of joint movement. This is performed 3-5 times initially, 2-3 times daily. The limb is held at the end positions for 2-3 seconds.



Figure 7



Figure 8



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __3-5__ TIMES, __2-3__ TIMES DAILY.

HOLD AT END POSITIONS __2-3__ SECONDS

Fore Limb

Pronation/Supination- inward/outward rotation- (Figures 9 and 10 and Video 6) These maneuvers are designed to stretch the pronator and supinator muscles of the forelimb that lie below the elbow and above the carpus (wrist) and to maintain or improve the range of motion of the forelimb.

Gently turn the forelimb and paw downward and outward for pronation and upward and inward for supination of the limb, trying to reach the full extent of the limb's range of motion. The goal is slow, controlled movement with pressure at the end of the full extent of joint movement. This exercise is repeated 3-5 times initially, 2-3 times daily. The limb is held at the end positions for 2-3 seconds.



Figure 9



Figure 10



Video 6

Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __3-5__ TIMES, __2-3__ TIMES DAILY.

HOLD AT END POSITIONS __2-3__ SECONDS

Circles- (Figures 32 and Videos 22) Walk the dog in a circle (cones or obstacles can be used to outline your course). Start with 10-15' diameter circles and progress toward 3-5' diameter circles depending on the size of the dog. Smaller dogs can do smaller circles and larger dog can do larger circles. Begin with repeating circles 1-5 times, once to twice daily. The number of circles and the number of sessions can be increased as the dog gains strength and improves balance.



Figure 32



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

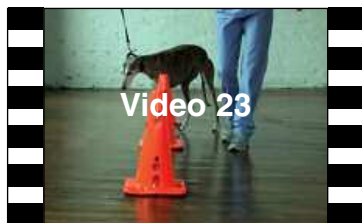
INSTRUCTIONS

REPEAT __1-5__ TIMES, __1-2__ TIMES DAILY.

Slalom Course (Figures 33 Video 23) Walk the dog through a slalom course of 3-5 cones or obstacles such that the space between each obstacle delineates a distance of 1-2 times the body length of the dog. Begin by repeating the maneuver 1-5 times, once to twice daily. The number of maneuvers and the number of sessions can be increased as the dog gains strength and improves balance.



Figure 33



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __1-5__ TIMES, __1-2__ TIMES DAILY.

Front Limb

Elevated Stepping- (Figure 37 and Video 27) This maneuver improves weight bearing, spinal mobility, range of motion, proprioception and leg strength.

Using Cavalletti poles, pvc tubing, or broom/mop handles, begin with a spacing of 2 to 3 times the body length. The poles can initially be placed flat on the ground and raised as the dog gains strength. Alternatively, the dog can walk in tall grass, sand, snow, or shallow water. Start with 1-3 minutes, twice daily. The duration and number of sessions can be increased as the dog gains strength. This is a moderately difficult exercise that requires a reasonable degree of weight bearing, strength and balance.



Figure 37



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __1-3__ MINUTES, __2-3__ TIMES DAILY.

4. Basic Exercises for Strengthening- These exercises are used to improve limb and core body strength. They are often used in conjunction with proprioceptive, weight bearing and range of motion maneuvers. Many are begun at a later phase in the rehabilitation program as they require the dog to have regained a reasonable degree of weight bearing and balance. Care should be taken and many of these maneuvers should be avoided in dogs with joint instability and in dogs that underwent certain fracture repairs.

Front Limb

Down Hill Walking- (Figure 34 and Video 24)
Walking a dog down a hill improves front limb weight bearing and leg strength. It also improves spinal flexion and abdominal strength.

The dog is leashed walked down a moderate to steep hill (depending on the dog's strength and conditioning) of at least 25 yards (meters) in length. Repeat 2-5 times, 2-3 times daily. The length of the hill walking and number of sessions can be increased as the dog gains strength and improves weight bearing and balance. This is a moderately difficult exercise that requires a reasonable degree of weight bearing, strength and balance.



Figure 34



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __2-5__ TIMES, __2-3__ TIMES DAILY.

Front Limb

Crawl- (Figure 39 and Video 29) This maneuver improves spinal and limb range of motion as well as leg strength.

Use a treat to entice the dog to crawl under a bed or a series of chairs. Begin with short distances and increase the distance the dog is asked to crawl as the dog gains strength. Start with 2-4 crawls, 2-3 times a day.

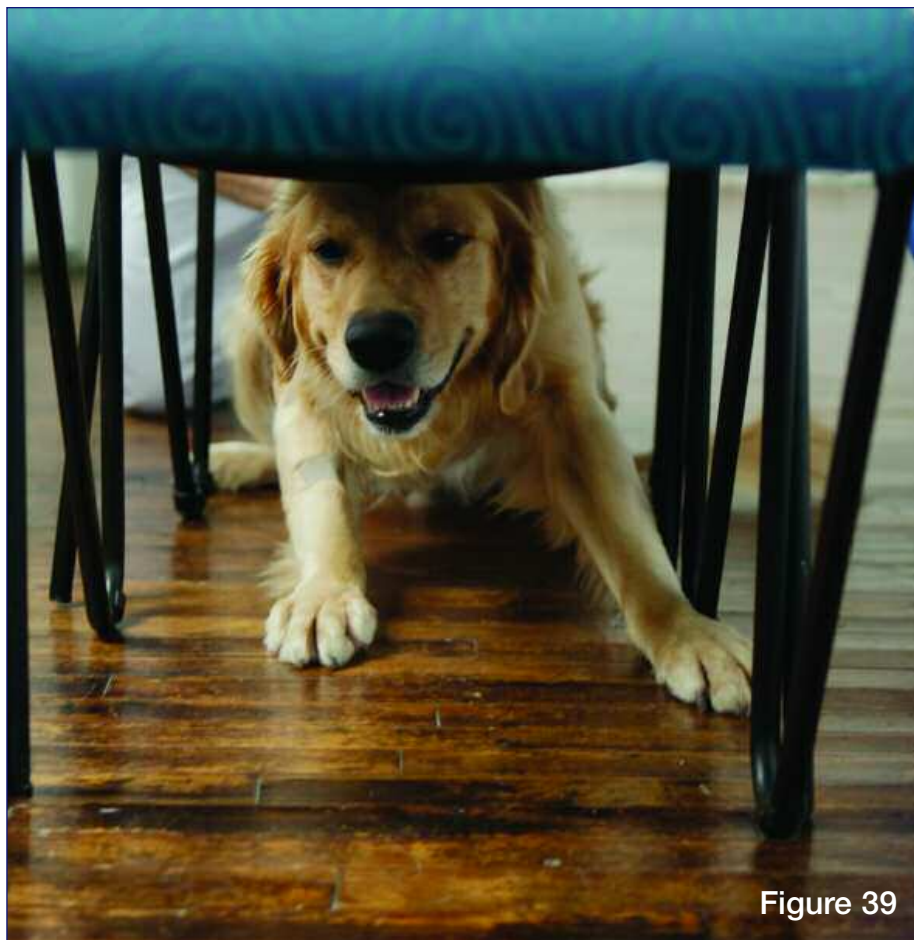
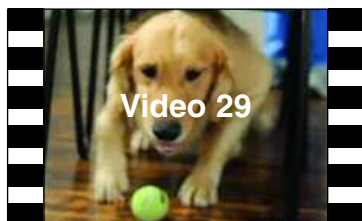


Figure 39



Video 29

Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __2-4__ TIMES, __2-3__ TIMES DAILY.

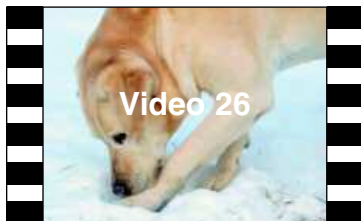
Front Limb

Digging- (*Figure 36 and Video 26*) This maneuver improves front limb leg strength.

Bury a treat in sand, dirt or snow and allow the dog to dig it up. Repeat 2-5 times, 2-3 times daily. The duration and number of sessions can be increased as the dog gains strength.



Figure 36



Videos are available at www.bluespringsanimalhospital.com/library/videos

Please call Blue Springs Animal Hospital & Pet Resort at 816-229-1544 with any questions or concerns.

INSTRUCTIONS

REPEAT __2-5__ TIMES, __2-3__ TIMES DAILY.