

## POST OPERATIVE PROTOCOL FOR CRANIAL CRUCIATE REPAIRS

### DAY 1 – DAY 10 POST-OP

- ❖ Icing 2 – 3 times a day for 15 minutes per session.
- ❖ Passive Range of Motion (PROM) 2 – 3 times a day. All within the dog's pain tolerance.  
Stifle (knee): flexion and extension within the available range and slowly increasing as tolerated. Aim the 'heel' to the rear end.  
Tarsus (ankle): flex this joint by pushing up on the paw, allow the knee to flex as well.  
Hip: extension (no rotations). Slowly extend the hip backwards, keep the knee comfortably straight and only go as far as tolerated by your dog.
  - ❖ Do 3 sets of 10 repetitions at each joint per session.
  - ❖ A rehab therapist can perform this and/or train the owner in proper technique.
- ❖ Joint Compressions performed by the therapist or properly taught to the owner to perform at home: With the knee and ankle at 90 degrees, place one hand above the knee and the other hand below the ankle. Push the two together (there is no stifle joint movement with this.) This will replicate weight bearing in the early stages and will help to reduce joint swelling.
- ❖ Short leash walks for 'toileting' only & leash for going up and down stairs slowly.
- ❖ Confinement to a crate while owner is away or if the dog is hyperexcitable as necessary.
- ❖ Disallow jumping, running or playing for at least 8 weeks (check with your vet).
- ❖ Note: if the floors in your house are slippery (i.e. linoleum or hardwood), put down some non-slip throw rugs or mats for at least 8 weeks. Caution on stairs (may need a towel sling).
- ❖ Laser may be used by your therapist on the incision and surrounding tissue (laser parameters set to a pain relief and anti-inflammatory setting.) After day 2.
- ❖ Ultrasound adjacent to the surgical site (on low dosage and a pulsed setting) After day 2.
- ❖ Electrical Muscle Stimulation (EMS): Applied by the therapist for a co-contraction of the Quadriceps and Hamstrings for 10 minutes. Applied to the Gluteals for 10 minutes. Ideally 3 times a week, but still of value at once to twice a week. After day 2.
- ❖ Your therapist should check the spine and pelvis for signs of joint dysfunctions and treat as necessary.

### 10 DAYS TO 4 WEEKS

- ❖ PROM twice daily (as above)
- ❖ Leash walks 5 minutes at first, gradually building to 15 minutes. Walks on flat land only, no hills and no difficult terrain (i.e. deep snow, mud or sand). Monitor the dog for signs of fatigue, quality of movement and/or pain. Take your dog to urinate on the neighbor's lawn near a good 'smelly' bush or tree.
- ❖ Laser, Ultrasound or pulsed electromagnetic field (PEMF) may be used by your therapist, applied on low settings (pulsed for ultrasound) directed towards the stimulation of healing and enhancement of blood flow.
- ❖ Sitting practice: Ask the dog to sit and encourage it to tuck its surgical leg under itself normally by tapping on that foot. Give a treat when the dog makes the effort to sit straight and square. Alternately practice sitting while on a stool to encourage proper form.

- ❖ Initiate Weight Bearing:
  - Have the dog take treats from the opposite hip (to cause weight shifting and spinal bend.)
  - Lifting the unaffected hind limb off the ground
  - Put a baby bootie on the ‘good’ hind paw and have the dog walk for short periods.
  - Loosely Lift the front limb on the same side as the surgical leg and the opposite hind limb
  - Lifting the front legs and chest slightly off the ground (keeping stationary). Having the front legs up on one or two steps may help this activity.
  - Support the dogs’ torso and rock the dog backwards and forwards or side to side to stimulate weight bearing. (Do not make the dog jump for balance ever!)
- ❖ May start Under Water Treadmill or swimming at this stage (when incision healed).

#### 4 – 6 WEEKS

- ❖ Continue PROM 1 – 2 times a day and the weight bearing exercises as required.
- ❖ Increase daily leash walks to 15 – 20 minutes still on flat land or very low inclines.
- ❖ Laser or Ultrasound as required to help reduce swelling.
- ❖ EMS to Quads, Hams and Glutes, co-contractions or alternating or individual 1 – 2 times per week or daily if you have one and have been shown correct usage.

#### 6 – 7 WEEKS

- ❖ PROM / Modalities as required.
- ❖ Leash walks 15 – 20 minutes (watch for fatigue, limping or hyperexcitability). Can do low to moderate grade inclines. Keep the declines as low-grade as possible.
- ❖ Initiate one leg standing for short intervals (5 – 10 repetitions of 10-second holds).
  - ❖ Lifting the upper body and front legs slightly off the ground and also holding the unaffected hind limb off the ground.
- ❖ Stepping Exercises. Set a simple obstacle course for your dog to walk through. Space various ‘poles’ at different distances. (i.e. use foam noodles, brooms, mops etc)

#### 7 – 8 WEEKS

- ❖ PROM as required.
- ❖ EMS as required
- ❖ Leash walks should incorporate some forms of flat land and moderate to steep inclines and declines as tolerated.
- ❖ Dogs will often feel better before they are actually healed enough to perform their usual activities so it is crucial at this point not to give in to letting your dog off leash just yet.
- ❖ 1 leg standing while creating a gentle rocking or swaying movement in the torso, or doing PROM in the unaffected hind limb. (This will stimulate balance.) Do not sway or cause a movement that is so much that the dog must hop to keep balance.
- ❖ Nearer the end of the 8 weeks try jumping to a destination (i.e. up onto the couch or bed, or over a small obstacle). \* Do not allow jumping up and down on the hind limbs (i.e. landing on the hind legs)

#### 8 WEEKS – 3 MONTHS

- ❖ Leash walking should be maintained until 3 months post op. When off leash activity is allowed, start with 5 minutes at the end of a leash walk and progress from here.
- ❖ Your dog may be forever restricted from chasing balls, Frisbees etc that could damage the cruciate repair or the opposite hind leg. This will depend on muscle support.