



Canine Rehab Shop™  
All Things Rehab

## Cranial Cruciate Rehabilitation Guidelines

### Description:

Used for conservative management of cranial cruciate ligament disease.

### Goal:

Acute: decrease pain and inflammation

Subacute: initiate dynamic stabilization of the stifle joint

Chronic: determine highest level of pain-free function. May not have full return to previous level of function.

### Activity Restrictions:

Acute & Subacute

- Avoid all off leash activities
- Avoid jumping
- Avoid sit to stands as an exercise (produces thrust)
- Avoid gastrocnemius stretches (produces thrust)

### Treatment Frequency:

Two times per week for acute phase; one time per week for subacute and chronic phase.

### Predictors for improved outcome:

1. Grade I (pain with no instability) or II (pain with mild to moderate instability)
2. Small to medium size
3. No other concurrent stifle derangements, i.e. patella luxation

## Acute:

- If grade II with excessive mobility and/or pivot shift OR grade III, recommend molding for custom stifle orthotic
- If owner is unable to purchase orthotic, recommend Kinesiotaping (look for videos at [www.caninerehabshop.com](http://www.caninerehabshop.com) in late 2018)

### Treatment:

1. Electrical stimulation TL junction: 5Hz, 160 pulse width, burst mode, 30 minutes, to mild twitch
2. Laser 2-6 J/cm<sup>2</sup> directly over painful joints, dose is acuity dependent
3. Grade I-II joint mobilizations to decrease pain, 1 minute
4. Grade I-II joint compressions to effusive joint x 25
5. Petrissage to Gastrocnemius, quadriceps muscle group and hamstring muscle group
6. Vibration mat, 30Hz, 30 minutes
7. PEMF bed, 30 Hz, 30 minutes
8. Dry cold compression to stifle joint, 20 minutes
9. Low load prolonged stretch of Sartorius, Iliopsoas bilaterally; add any compensatory muscles
10. No home exercise plan

## Subacute:

- Fit for customized orthotic as needed
- If owner is unable to purchase orthotic, recommend Kinesiotaping (look for videos at [www.caninerehabshop.com](http://www.caninerehabshop.com) in late 2018)

### Treatment:

1. Electrical stimulation TL junction: 5Hz, 160 pulse width, burst mode, 30 minutes, to mild twitch
2. Laser 5-6 J/cm<sup>2</sup> directly over painful joints
3. Grade III and IV joint mobilizations as needed for stifle capsular restrictions; flexion restriction requires caudal glide of tibia on femur, extension restriction requires cranial glide of same
4. Pain-free PROM x 25
5. Petrissage to Gastrocnemius, quadriceps muscle group and hamstring muscle group
6. Vibration mat, 30Hz, 30 minutes
7. PEMF bed, 30 Hz, 30 minutes
8. Low load prolonged stretch of Sartorius, Iliopsoas bilaterally; add any compensatory muscles
9. In late subacute phase, when patient has at least 2 weeks of land exercise for dynamic stabilization of the stifle joint, may initiate UWT Protocol INCLUDE EXERCISE BAND WRAP DURING UWT TREATMENT
10. Home Exercise Plan: front paws on balance disc with cranial and caudal perturbations, hold 30 seconds, repeat x 5; front paws on box + side stepping x 25 each direction; walking with exercise band wrap, 15 minutes daily, increase by 5 minutes weekly up to a total of 30 minutes.

## Chronic:

- Modify customized orthotic as needed
- Kinesiotape no longer required at acute phase

## Treatment:

1. Laser 8 J/cm<sup>2</sup> directly over stifle joint, even if pain-free
2. As needed, Grade III and IV joint mobilizations for stifle capsular restrictions; flexion restriction requires caudal glide of tibia on femur, extension restriction requires cranial glide of same
3. AROM stifle joint: Cavaletti work, sit to stand
4. Vibration mat, 30Hz, 30 minutes
5. Active stretches of Sartorius and Iliopsoas bilaterally, i.e. front paws on high box, hold 30 seconds, repeat x 5; as tolerated, move to front paws on peanut, hold 30 seconds, repeat x 5
6. Continue UWT protocol, unless patient has difficulty with hamstring muscle contractions, may remove exercise band and change to elevated treadmill
7. Home Exercise Plan: front paws on box, hold 30 seconds, repeat x 5; front paws on peanut, if able to hold begin pushing forward and backward; continue with exercise band walks 30 minutes daily; if goals require, begin to add walking on unstable surfaces and longer distances.

## Follow up:

- At completion on chronic phase of recovery, recommend four weeks without rehabilitation, continue home program. During this no-rehab phase, owner will determine if function remains stable to improving. If function declines without rehabilitation, the point at which decline was noted becomes the length of time between rehabilitation visits. Follow up treatments are determined based on clinical signs of chronicity. If patient's function remains stable to improving, recommend quarterly follow ups to maintain highest level of pain-free function.