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## **CRUCIATE SURGERY AFTER CARE**

### **Preparing the House:**

It is important to have a plan on how and where you are going to restrict or confine your dog during this crucial post-operative period. Quality rest is as important as having a good therapy plan. Many owners incorporate one to the following:

- Dog crate
- Gated-off area, i.e., kitchen
- Room confinement

### **No Jumping:**

It is extremely important not to allow your dog to jump. Overextension of the stifle (“knee”) could compromise the repair and slow healing time. Remember:

- \*NO JUMPING on/off bed
- \*NO JUMPING on/off couch
- \*NO JUMPING up on you

### **No Stairs:**

Stairs, like jumping, will overstress the joint and inhibit repair. In the beginning stages, directly after surgery and until your veterinarian says it is okay, it is imperative that you do what you can to prevent your pet from going up and down stairs. However, if you have no way of avoiding stairs to get your dog into and out of the house, or your dog is too big to carry, you need to take the following precautions:

- Restrict: Make sure to have your leash attached before you open the door
- Support: Use a towel as belly support or commercially available harness or belly support
- Limit: Block off all stairs that your dog could potentially have access to

### **No Horsing Around:**

As much as you would like to play with your dog or have him play with other friends, this is not a good idea until your veterinarian gives you the green light to do so.

### **Walking Surfaces:**

Wood floors, tile, linoleum, etc. can all be very slippery to your recovering pet. Consider putting down some throw rugs with rubber backing or yoga mats to make it easier for your dog.

## **Week 1 Recovering**

### **1) Massage:**

Do for 5-10 minutes, 3-4 times/day

This is best done with your pet lying on his side on a comfortable surface. Start by gently rubbing the affected limb from the toes up the leg. If your pet is reluctant to have this done, try using less pressure or try again when he is calmer. Do not force any therapy.

How To Perform Massage:

With your dog lying on its side, begin by gently stroking your dog to initiate relaxation. Applying medium pressure, run your hand over your dog's entire body, starting at the neck, moving down to the tail and down each limb for a total of four times. This should be done at the beginning and end of each session. Once your dog is relaxed, you can begin active massage/rubbing. Maintain the same depth of pressure throughout your movements. This active massage should always begin at the toes and work up the limbs.

### **2) Passive Range of Motion (PROM)**

Do 10 repetitions, 3-4 times/day

The goal of PROM is to manually simulate the normal motions of each joint. This is best done after massage and with your pet laying on his side. Starting with the hip, gently extend and flex. Continue onto the knee and ankle. Be sure to support the leg carefully with your other hand while performing these movements. Do not force PROM. If your pet seems uncomfortable, stop and try again at another time.

How To Perform Passive Range Of Motion:

It is extremely important to make sure that your dog is comfortable and relaxed prior to this exercise. Although PROM can be performed while your dog is standing, it is generally more relaxing and beneficial to have your dog lying on its side. It is very important to be gentle and not create any pain or discomfort. Support the limb both above and below the knee joint. Move the limb below the joint in a smooth and controlled fashion, while keeping above the joint steady. Gently move back and forth throughout the joint's full range of motion. Try to perform 20 repetitions if your dog will allow you, otherwise, perform the movements as best you can over a five-minute time period.

How To Perform Stretching:

Like passive range of motion exercises, it is best to perform proper stretching while your dog is lying on its side. Effort should be made to have your dog as relaxed as possible during stretching. Make sure to properly support the leg above and below the knee. Gently manipulate the knee to the COMFORTABLE end of its normal range of motion in flexion. At the end you are going to apply JUST A TOUCH more pressure and HOLD this position for 15 seconds. Then allow the limb to return to a neutral position for 15 seconds. Repeat for a total of 10 times. Do this for both flexion and extension.

### **3) Short and Slow Controlled Leash Walks:**

Do for 5 minutes, 3-4 times/day

At first, these walks should be for elimination purposes only. The slower your dog walks, the more likely they will place the repaired leg down while walking. If needed, use a support harness or towel under the belly to support your dog's hind end.

How To Perform Slow Controlled Leash Walks:

Initially, the walks will be for elimination only. As time progresses, so will the duration of the necessary walks. It is very important to praise your dog when it is using the limb while walking. This will encourage your dog to use it normally. It is best to use a traditional leash instead of a retractable. Your dog should not be more than an arms-length away.

#### 4) **Cold Therapy :**

Do for 10-15 minutes after exercise Refer to page 21 Following the above therapy exercises it is important to apply cold therapy to the affected knee. You can use commercial gel ice packs or frozen vegetables.

### **Week Two**

#### 1) **Moist Heat:**

Do for 10 minutes prior to exercise

For this therapy, a commercial moist heat product is advised. Moist heat has been shown to penetrate tissue better than dry heat. Several types of moist heat are available in most drug stores, i.e., gel, beads, rice, etc. Another way to provide moist heat is to take a washcloth and wet it with warm water. The heat should be warm enough to the touch but not so hot that it burns you when you are applying it to your dog's joint.

How To Perform Moist Heat Therapy:

It is best to utilize moist heating prior to performing range of motion, stretching, and exercise to ensure full benefits. There are a number of commercial heating packs available today, such as those filled with corn, rice, etc. Many of these can be used as both hot and cold therapy aids. Like cold therapy, it is easiest to perform the heat therapy while your dog is lying down and relaxing.

#### 2) **Massage:**

Do for 10 minutes, 3-4 times/day

#### 3) **Passive Range of Motion (PROM):**

Do 15 repetitions, 3-4 times a day

#### 4) **Short And Slow Controlled Leash Walks:**

Do for 5-10 minutes, 3-4 times a day

### **Week 3**

#### 1) **Moist Heat:**

Do for 10 minutes prior to exercise

#### 2) **Massage:**

Do for 10 minutes, 2-3 times/day

#### 3) **PROM, As Needed:**

If your dog is getting out for his walks and is using his leg, you can discontinue PROM.

#### 4) **Slow And Controlled Leash Walks:**

Do for 15-20 minutes, 3-4 times/day

### **5) Sit-To-Stand Exercises:**

Do 5-7 repetitions, 3-4 times/day

We call these “puppy squats.” Basically, you want to get your dog to sit down and immediately stand back up. This encourages extension/flexion of all joints in the rear legs and also works the muscles surrounding the stifle (knee).

Do this at a time when your dog is most likely to oblige, like when it is feeding time. If you have to use treats to get your dog to do this make sure they are low fat and low calorie or only give tiny pieces.

How To perform Sit-To-Stand:

Ask your dog to sit in order to evaluate his form. Prior to and after surgery, many dogs will often sit with one leg out or lean to one side. They do this because they are experiencing discomfort or, for some dogs, that is just the way they have always sat.

Proper sitting should be “Square” with both legs flexed and equally positioned under the dog’s body.

Proper standing from the sit position should involve an equal push from both hind legs.

Do not expect perfection the first time or even after the tenth time. Consistent repetition and practice, along with encouragement for proper form are the keys to success.

Tip #1: Make sure you have good treats and remember it is not quantity, but quality that matters. Your dog will get the same joy out of a treat from you no matter the size. Tiny pieces are just as good, and are healthier for your dog.

Tip #2: Ask your dog to sit, wait 2-3 seconds and step back then ask him to come to you and sit again. Repeat. This is best performed outside, or in a room with rugs.

Tip #3: If your dog sits with improper form you can perform this exercise with your dog standing alongside a wall, with the affected limb on the inside. Remember that proper form is the most important aspect of this exercise. Therefore, if your dog only makes it down half way before compromising good form, then this is your starting point. Have your dog start to sit and then when you see the form change, have him stand immediately. Eventually, you will get your dog to sit squarely all the way down.

## **Week 4**

### **1) Moist Heat, As Needed**

This does not need to be done 3-4 times/day anymore, if your dog seems to enjoy the heat, apply it 1-2 times/day, otherwise it can be discontinued.

### **2) Massage, As Needed**

### **3) PROM, As Needed**

### **4) Controlled Leash Walks**

Increase to 20 minutes, 3-4 times/day

At this point you can now begin to allow more freedom for your dog during walks-up to 10-15 feet on a leash. This encourages more intermittent trotting which is good to build up muscle girth and strength.

## 5) **Sit-To-Stand Exercises**

Increase to 10 repetitions, 3-4 times/day

## 6) **Figure 8's:**

Do 10 repetitions, 3-4 times/day

To perform "Figure 8's," simply walk as if you are following an imaginary "8" drawn onto the ground. If your dog has difficulty navigating the figure 8, make the circles larger. The purpose of "Figure 8's" is to increase muscle strength and encourage balance. On a leash, slowly walk your dog in a "Figure 8" pattern. This will encourage weight shifting to both sides, and challenge balance reactions when the "Figure 8" turns are performed. Start with very wide turns and, over time, tighten the turns.

Warning:

If you notice any signs of lameness or discomfort while increasing any of the abovementioned exercises, revert to the previous week's level of activity. For example: during week three you notice that your dog becomes very fatigued after walking for 20 minutes. Return to walking for 10-15 minutes until your dog is able to tolerate this level of activity for a few days, and then try again to progress to 15-20 minutes.

## **Week 5-8**

### 1) **Discontinue Moist Heat, PROM, And Massage:**

This can be discontinued if your dog is using his limb consistently.

### 2) **Controlled Leash Walks With Hill Work:**

Do controlled leash walks for 20-30 minutes, 3-4 times/day. Do hill work for 5-10 minutes, 1-2 times/day.

Find an incline that is suitable for your dog to walk up and down. While on your daily walks, slowly walk your dog up and down this incline. Begin with about 5 minutes of hill work and slowly increase to 10 minutes after a few days. Hills are great for the quadriceps and hamstrings, which help support the knees.

How To Perform Slow Controlled Hill Walks:

#### a) Uphill And Downhill

Use a **SHORT LEAD** and walk **SLOWLY** up the hill. Make sure to closely observe that your dog is bearing weight on the affected leg. The slower you walk, the more likely your dog will put weight on it. Do the same while going downhill.

#### b) Walking Sideways

Bring your dog halfway up the hill and stop. Turn your dog so the affected leg is closer to the bottom of the hill. Let your dog stand in this position for a minute or so before beginning the walk. Keep your dog on a **SHORT** lead and **SLOWLY** walk across the hill. Perform the horizontal walking exercise only after your dog has accomplished going up and down the hill several times.

### 3) **Sit-to-Stand Exercises:**

Do 10-15 repetitions, 3-4 times/day

### 4) **Figure 8's:**

Do 10-20 repetitions, 3-4 times/day

### **5) Curb Work:**

Do 10-20 feet, 3-4 times/day

Curb work is basically stepping up and off a length of curb while on your walk with your dog. The curb should be appropriate for your dog's height. A small 10 to 30 pound dog should step on and off a curb that is about 2 inches high, a 40 to 70 pound dog should use a curb that is about 3 inches high and all larger dogs should use a curb that is about 3-5 inches high. Any surface that has some height can be used for this purpose; it does not have to be a curb but you do need a length of about 20 feet to perform this exercise, which is why curbs work best. While on your walk, simply step up and off the curb for a length of 10 to 20 feet, making an "S" pattern as you walk on and off the curb. Curb work is great to increase muscle strength, girth, and balance, as well as improve flexion and extension. Go at a pace that is comfortable for your pet. If your dog seems to have any difficulty with this exercise, do NOT perform it at this time.

Note:

You are now nearing the end of total recovery; these next few weeks will be the strengthening period. These exercises can be used as a guide for you to challenge your dog in a variety of ways while regaining lost strength and muscle tone.

## **Week 8+**

### **1) Stair Work:**

Do 5-7 steps in a row, 1-3 times/day

At this stage, you can begin to incorporate stairs as a form of exercise. Start with your dog on a leash and, if needed, use a towel under the belly to support him. To start, walk slowly up three stairs, and then slowly walk back down. Increase the number of stairs and the frequency each week. DO NOT give your dog free access to the stairs yet, it is still too early. Always keep your dog on a leash while doing this exercise.

How To Perform Stairs:

Whether utilizing stairs inside your home, in your apartment building, or outside at the park, it is going to be extremely important to have full control of your dog. Using the same techniques as the short controlled leash walks, you are going to walk up the stairs alongside your dog. Initially, attention should be on proper placement and comfort level of the affected leg.

### **2) Controlled Leash Walks With Hill Work:**

Do 30 minutes total with 10 minutes on hills, 3-4 times/day

### **3) Sit-to-Stand Exercises:**

Do 10-15 repetitions, 3-4 times a day

### **4) Figure 8's:**

Do 20 repetitions, 3-4 times/day on walks

### **5) Curb Work:**

Go 20 feet, 3-4 times/day

**6) Jogging:**

Do intervals of 20 feet, 3-4 times/day

If possible, while on a walk, get your dog to jog for a length of 20 feet and then stop. Jogging increases muscle strength and girth.

**7) Swimming:**

Do 5-10 minutes, 1-2 times/week

Swimming can be performed as long as your veterinarian approves it in a controlled environment. It should be done in a pool and under direct supervision. Your dog should be lifted into and out of the water, and held in place, or allowed to swim with assistance for about two to five minutes. Your dog should not be allowed to jump into or out of water. Keep in mind that in the beginning your dog may only be able to swim steadily for about two minutes. Swimming is great for increasing muscle and range of motion. Swimming is hard exercise, do not overdo it!