

## **Post-operative Information: Tibia Fracture (Internal fixation with Plate and Screws or Interlocking Nail)**

Your pet has had a fracture of the tibia (i.e. broken shin bone) repaired with metallic implants called bone plates and screws or a rod-bolt combination called an interlocking nail. These implants are surgically attached to the bone, bridging the fracture to provide stability until the bone heals to its original strength. The majority of patients will have their implants for their entire life, and do not have long term activity restrictions.

### **ACTIVITY RESTRICTION x 8 weeks**

- No **RUNNING, JUMPING, or FURNITURE ACCESS** for 8 weeks. **STAIRS ONLY WITH ASSISTANCE/GOOD TRACTION**
- Please keep your pet in a comfortable, safe indoor location with no free access to stairs for the next 24-48 hours as he/she recovers from anesthesia and surgery. Your pet may be groggy for the first few days. He or she may whine or appear more anxious than usual; this may indicate pain/discomfort or side-effects of the medications. Please call your veterinarian for assistance with medication adjustments or return for exam & additional pain medications as needed.
- It may be several days before your pet defecates (poops) due to medications given related to the surgery.
- Confine your pet to one level/section of the house on carpeted floors. Use baby gates, etc. to prevent access to slick floors or stairs. Do not allow jumping on/off furniture. Confine to a small area/room/crate when unattended. Please do not allow any playing, running or jumping. For dogs, use a short leash when going outside to urinate/defecate.
- Your pet should start touching his/her toe down within the first 2 weeks. Thereafter, leg use should steadily improve each week. By 8 weeks, he/she should be 90% recovered. If he/she suddenly deteriorates or does not appear to be progressing well enough, please return to your veterinarian for exam; x-rays may be needed to diagnose the problem.
- Your pet will feel like using the leg normally before the bone is healed. Please continue the restriction during this difficult time when he/she is feeling "too" well! Failure to do so may cause serious healing problems.

### **INCISION CARE**

- A wound dressing may have been applied to the incision. It may be removed in 3 days if present. Remove it sooner if there is blood visible under the dressing (strike through).
- Please look at incision twice daily. It should be dry, slightly red along the margins, and slightly swollen/thick on the edges. Over several days, it should lose redness and swelling.
- Problems to call your veterinarian about: discharge, gapping, excessive swelling.
- Do not allow your pet to lick or chew the incision. Pets tend to want to lick early in the healing period and this can compromise the incision and predispose to infection. If necessary, please use an E-collar if you must leave your pet unattended.

### **LICK SLEEVE**

- If you are using a Lick Sleeve, please still check the incision each day. Unbuckle and roll the sleeve down from the top. It should be wrapped back around the belly twice to properly fit.
- It may be trimmed at the bottom to fit your pet's leg if needed.
- Unbuckle for bathroom breaks if interferes with urination (males).
- Wash if becomes soiled. Line drying is recommended. We may be able to provide a second one for a fee.
- Most questions may be answered at: <https://www.licksleeve.com/pages/faq>

### **PROGRESS EXAMS**

- Return to your veterinarian in **10-14 days** for a progress exam. Skin healing and leg function will be evaluated, any sutures will be removed, and any physical therapy questions will be addressed.
- If your pet is doing well, the next visit will be **6-8 weeks** after surgery. Leg function will be evaluated, x-rays will be taken of the fracture site to judge healing, and physical therapy recommendations will be adjusted.
- Your pet may need to be seen again at 12 weeks if healing was incomplete at the second visit.

**PHYSICAL THERAPY REGIMEN** (We can also recommend professional PT assistance in the Twin Cities. Studies have shown that

a PT can decrease post-operative recovery time. Please let your veterinarian know if you are interested in a referral.)

**\*\*\*A video demonstration of exercises can be found on our website: [www.clvsurgery.com](http://www.clvsurgery.com) under the "Post-Operative Care" section \*\*\***

- Our lives are often very busy, so if you must err, err on the "do less" side of these instructions. Less PT will result in a slower return to function, but more aggressive physical therapy by a non-professional too early may result in failure of the implants and surgical repair.

- **Week 1-2 (Day 1-14): Icing:** Cooling the surgical area will reduce pain and swelling. Do this as often as possible the week following surgery- several times a day. You may start this *with the Lick Sleeve in place, if present*. Apply ice packs (wrapped in thin cloth once bandage is removed) to the incision area twice daily for 15 minutes. Baggies of frozen peas work well for this, or make an ice pack by freezing 2 parts isopropyl alcohol to one part water in a ziplock bag.

- **Range of Motion (ROM) Exercise-** Have your pet lie on his/her good side. Grip the front of the thigh with one hand and hold the foot with the other. Slowly push the foot up into flexion of knee and then slowly pull the foot and push the thigh down and back into extension of knee. Repeat this motion slowly and smoothly *10 times twice daily*. Flex and extend only to your pet's comfortable limit. Do not go to the point of creating pain or resentment. Following ROM, apply ice packs as described above.

- **Indoor walking--**Lay out a path that will allow you and your pet to turn corners and walk around objects on one level of the house with solid/non-slip flooring. Place your pet on a short leash. Walk slowly enough so that your pet has to put each foot down and does not hop. If he/she is barely putting foot down, stop every few steps and ask your pet to back up a few steps. Walk your path for *5 minutes twice daily*. Use small treats to encourage participation.

- **Week 3-8: Sit/stand Exercise (for dogs)**—Have your pet repeatedly sit and stand for *10 repetitions twice daily*. Use small treats to encourage participation. Do not push down on his/her rump.

- **Continue ROM Exercise:** As above. At the end of each motion (flexed/bent knee and extended/straighter knee), hold for 5 seconds. Discontinue icing unless desired/recommended. A warm compress may be used before ROM to warm the joint.

- **Walking-** for 5 minutes twice daily; add 5 minutes each week until your pet is walking a normal pace at least 20 minutes twice daily and using the operated limb every step. Use small treats to encourage participation. Avoid walking locations that will result in uncontrolled activities, such as meeting other dogs, ice, etc. Use small treats to encourage participation.

- **Massage-** Your pet may stand or lie down. Perform both superficial skin massage & deeper muscle massage. Skin massage around the knee joint involves using your hand loosely conformed to the surface of the skin; enough pressure is applied to move the skin relative to the underlying tissues. Muscle massage of the thigh and shin involves deeper kneading and pushing of the muscles. Perform massage for 10-15 minutes twice daily.

- **Week 8: \*\*Confirm appropriate healing with your veterinarian prior to increasing activity as below. \*\***

- **Expanded walking-** Place your pet on a short leash and have him/her walk at your side. Walk outside with varied but gradual incline with solid footing for 10 minutes twice daily. Continue 4 weeks, gradually increasing time and distance.

## LONG TERM LIFESTYLE

- After the fracture is healed, there are no restrictions on activities for your pet. A gradual return to activity should occur, to allow for a smooth return of muscle function and strength following the restricted period.
- Once a fracture is well healed, there is minimal risk to that site in the future. The metal implants do not create any problems in the vast majority of patients. Occasionally these metal implants can become infected; it is believed these infections originate from bacteria normally found in the blood stream in patients with infections elsewhere in the body or from dental disease. Implants can also loosen or create bone pain caused by cold temperatures. On occasion metal implants will have to be removed months to years after the original surgery if they cause the patient problems. Please have your veterinarian evaluate any lameness or pain you notice associated with the operated leg. This implant removal is rarely indicated, but will require a second surgical procedure that is not accounted for in the original surgery fees.

*Prepared by CITY OF LAKES VETERINARY SURGERY*