

Post-operative Information: Tibial Tuberosity Advancement (TTA)/ Tibial Plateau Leveling Osteotomy (TPLO)

Your dog has had either a TTA or TPLO surgery to treat a torn Cranial Cruciate Ligament, also called an ACL. These are similar surgeries involving a change in the bone structure of the tibia (shin bone), which greatly decreases the abnormal forces in the knee that occurred from the torn ACL. The tibia was cut, and metal implants were placed to keep the bone stable while it heals in its new position. With proper aftercare, the prognosis for your dog is good to excellent. It is important to recognize that healing from this repair is similar to healing from a broken bone, and requires specific care for a good outcome.

ACTIVITY RESTRICTION x 8 weeks

- Please keep your pet in a comfortable, safe indoor location with no free access to stairs for the initial 24 hours following the procedure. Your pet may be groggy for the next 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 any medication adjustments or return for an examination and additional pain medications as needed.
- Confine to one level/section of the house on carpeted floors. Limited, supervised access to stairs is recommended for 8 weeks. Use a belly band for support when walking across slick floors or up/down stairs to prevent falling. Use baby gates, etc. to prevent free access to stairs during this restricted period.
- Please use a short, hand-held leash when taking your pet outside to urinate/defecate. Confine your pet to a small area/room/crate when unattended. Please do not allow your pet to run or jump during this restriction period.
- Your pet should start touching his/her toe down within the first 2 weeks. Thereafter, leg use should steadily improve. If you notice a sudden deterioration or he/she stops using the leg at any time after surgery, please call your veterinarian for advice. An exam and/or x-rays may be needed to determine if an infection or implant failure has occurred.
- Your pet will feel like using the leg normally before the bone is well healed. Please continue the restriction during this difficult time when he/she is feeling "too" well! Failure to do so can result in serious healing problems.

INCISION CARE

- Please look at the incision once 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:*
 - a) gapping (the edges should be exactly touching);
 - b) discharge (other than small amount of crusting);
 - c) swelling (other than slightly raised skin near edges). Some bruising is normal and will resolve in 5-7 days.
- Do not allow your pet to lick or chew the incision as this can compromise the incision and predispose to infection. If necessary, please use an E-collar if you must leave your pet unattended.

BANDAGE CARE (if present)

- A bandage *may have been* applied to the operated limb. The goal of the bandage is to provide pressure to the surgical site to minimize swelling and improve patient comfort for the first day. Please place a plastic baggy over the foot whenever you take your pet outside to prevent soiling of the bandage; immediately remove when indoors. You may remove the bandage 12-24 hours after surgery. If the bandage slips below the incision or becomes soiled or wet *before this time*, please remove it by simply cutting away one layer at a time (use caution, avoid skin); it does not need to be replaced.

DIET

- Ideally, keep your pet on the thin side of normal his/her whole life. Any orthopedic condition can progress with arthritis over time due to excessive wear & tear; carrying less body weight will relieve some of this stress from the joints. Good parameters to monitor body condition are: 1) you should be able to feel the ribs and pelvic bones, but not see them; 2) your pet should have an "hour glass" figure when viewed from above looking down; 3) your pet should have a tucked up belly when viewed from the side.
- Fish oil (added to food or in capsule form) is advised in patients with joint problems. Although there is some debate about effectiveness, using fish oil as an additive shows great promise. A good dose range is about 100mg/kg body weight. For an example, a 75 pound dog (34kg) would get about 3400 mg per day. There are also joint focused diets that have fish oil already added to them.
- Glucosamine/chondroitin supplements may have some beneficial effects in these patients, but this has not been clearly established. You and your veterinarian should discuss whether or not these products would be beneficial for your pet.

PROGRESS EXAMS

- Please make an appointment to see your veterinarian 10-14 days following surgery for a progress exam. Knee function will be assessed at this time, any sutures will be removed, and questions regarding physical therapy can be addressed.

- Please see your veterinarian in 8 weeks for progress x-rays. Adjustments may be made to the physical therapy schedule based on these results. Your pet may need an additional x-ray 12 weeks after surgery if the bone is not healed at 8 weeks.

PHYSICAL THERAPY REGIMEN (We can also recommend professional physical therapy assistance in the Twin Cities. Studies have shown that a formal program 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.clyvsurgery.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 physical therapy 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: 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 bandage in place, if present*. Apply ice packs (wrapped in thin cloth once bandage is removed) to the incision area as often as possible 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. Continue for 2 weeks.
- *Week 2: Expanded ROM Exercise--*Have your pet lie on his/her good side. Apply a warm compress to knee for 5 minutes. Grip the front of the thigh with one hand and hold the foot with the other. Slowly push the foot up into full flexion of all joints; hold for 5 seconds. Slowly pull the foot and push the thigh down and back into full extension of all joints; hold for 5 seconds. Repeat this motion *10 times twice daily*. Again, do not go to the point of creating pain or resentment. Follow each session with 5-10 minutes of ice packs (see Week 1). Continue 4 weeks.
- *Week 3: 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 4 weeks.
- Walk 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, etc. Use small treats to encourage participation.
- *Weeks 4: 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 for 4 weeks.
- *Week 8: 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.
- ***Confirm appropriate healing with your veterinarian prior to the following increased physical therapy activities.***
- *Week 12: Jogging exercise-*On a short leash, intermittently jog and walk your dog for 10 minutes twice daily. Continue 4 weeks, gradually increasing time and distance.
- *Light play exercise-*On a long leash, encourage playing and romping with your dog for 15 minutes twice daily. Use toys for teasing and tugging. Continue 2 weeks.
- Swimming is wonderful rehabilitation exercise when performed correctly. You may allow controlled swimming after week 8. Controlled swimming requires that your pet not jump or leap into the water; *walking into the water until it is deep enough to swim is required*. Throwing balls to fetch often results in sudden jumping and lunging, which can cause serious problems in the healing phase. Do not over extend you pet; start with short excursions (5 minutes) and increase duration and frequency gradually.

LONG TERM LIFESTYLE

The prognosis for dogs treated with a TTA or TPLO to correct a ruptured cranial cruciate ligament is good to excellent. The majority of dogs return to a normal gait, level of activity, and endurance. Following the 12 week recovery period, there are no recommended limitations to their lifestyle. It can take several months for all potential improvement. Professional physical therapy services will likely speed recovery dramatically.

Prepared by CITY OF LAKES VETERINARY SURGERY