

Post-operative Information: Corrective Ulnar Osteotomy or Osteotomy

Your pet has had a growth abnormality of the ulna (bone of forearm) corrected with either ulnar osteotomy or ulnar osteotomy. These procedures are used to correct developmental abnormalities of the elbow and/or the wrist (which often are both present to some degree). The key to success with these procedures is that the remaining bone growth will continue after surgery and slowly bring the elbow and/or the wrist back into alignment. Long term joint stiffness and degenerative joint disease (i.e. "arthritis") may be a complication of these growth abnormalities that may need to be managed.

ACTIVITY RESTRICTION x 6 weeks

- Please keep your pet in a comfortable, safe indoor location without free access to stairs for the next 24 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 and additional pain medications as needed.
- 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 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

- Do not allow your pet to lick or chew the incision once the bandage is removed. 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.

BANDAGE/SPLINT MANAGEMENT

- 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 few days. Please place a plastic baggy over the foot whenever you take your pet outside to prevent soiling of the bandage; remove when indoors. You may remove the bandage in 5 days. 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); no need to replace.
- Please monitor the bandage for slipping or damage from chewing, etc. If it changes position or loses its integrity (i.e. section is chewed off), serious problems may occur with healing or new problems with pressure sores may develop. Please call if any changes in bandage position occur; the bandage may need to be replaced.

PROGRESS EXAMS

- Return to your veterinarian in 10-14 days for a progress exam. Skin healing and leg function will be evaluated, sutures will be removed, and any physical therapy questions will be addressed.
- Your pet should start touching his/her toe down within the first 2 weeks. Thereafter, leg use should steadily improve to 90% normal at 6-8 weeks. If you notice a sudden deterioration in leg use or more angular change to the wrist at any time after surgery, please see your veterinarian for exam.
- For dogs younger than 10 months at the time of surgery, it is not uncommon for a second (and rarely a third) surgery to be performed to keep the bone that was cut from healing. This is exactly opposite to what we normally want bone to do; in your pet's case, we want the ulna gap (that we surgically created) to stay open to allow the radius to grow unrestricted and self-correct its angle. We are in a race between the radius finishing its growth (and straightening things out) and the surgical ulna gap healing/bridging. Please monitor the degree of wrist angulation; if this continues or worsens, please see your veterinarian. If exam or xrays show that the ulna gap is bridged and the radius

still needs time to grow, we may need to open up the bridging bone again with a short procedure. Please return for re-evaluation every 2-4wks (as directed) for follow-up exam and/or xrays.

DIET

- Ideally, keep your pet on the thin side of normal his/her whole life. Any orthopedic condition can progress with arthritis over time with excessive, wear & tear; carrying less body weight will relieve some of this stress from the elbow (and other) 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 side.
- Glucosamine/chondroitin supplements, promoting healthy joint cartilage, might have some beneficial effects in these cases but that this has not been clearly established. You and your veterinarian should discuss whether or not these products would be helpful for your pet long term.

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.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 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 2: Range of Motion Exercise--* Have your pet lie on his/her good side. Apply a warm compress to the elbow and wrist. Grip the foot with one hand and slowly and gently push the foot up into flexion of all joints; hold for 5 seconds. Slowly pull the foot and push the leg down and back into full extension of all joints; hold for 5 seconds. *Focus on the wrist and elbow.* Repeat this motion 15-20 times twice daily. This exercise should not be performed to the point of pain or resentment. Continue 4 weeks.
- *Week 3: Massage--* Have your pet lie on his/her good side. Perform both superficial skin massage and deeper muscle massage. Skin massage around the forearm involves using your fingers loosely on the surface of the skin, applying enough pressure to move the skin relative to the underlying tissues. Muscle massage of the forearm and upper limb involves deeper kneading and pushing of the muscles. Perform massage for 10-15 minutes twice daily. Continue 4 weeks.
- *Week 4: Active exercise (for dogs)--* Place your pet on a short leash and have him/her walk at your side. Walk outside on even/solid footing for 10 minutes twice daily. Continue 4 weeks.
- Swimming is wonderful rehabilitation exercise (for some dogs) when performed correctly. You may allow controlled swimming after week 4. 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 your pet; start with short excursions (5 minutes) and increase duration and frequency gradually.

LONG TERM LIFESTYLE

- After the supporting bones are done growing and the surgical sites are healed, there are no restrictions on activities for your pet. A gradual return to full function should occur, to allow for a smooth return of muscle function and strength following the restricted period.
- Elbow joints can be very unforgiving following growth abnormalities such as this; wrists are much more tolerant. Stiffness and discomfort can be signs of degenerative joint disease (i.e. arthritis) that may progress over time.

Maintaining a lean body condition and a moderate degree of low-impact activity will be very helpful in optimizing the long term function of your pet's elbow and wrist.

- Growth plates are difficult to evaluate; we can make educated guesses about how healthy they are (based on xrays), but many times we can only see the problem once they are "closed" and have stopped growing (when a short or crooked bone is the result). The main goal with surgical manipulation of young bones with growth plate abnormalities is to return the joints to alignment to prevent future arthritis. Early correction and frequent monitoring until full grown are essential. Once a dog has stopped growing, other procedures can be used to further straighten bones that did not achieve full self-correction.

Prepared by CITY OF LAKES VETERINARY SURGERY