



# FUSION VETERINARY ORTHOPEDICS

## Fracture Management

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### **Introduction:**

Fractures (broken bones) occur frequently and often times unexpectedly in our furry friends. Fractured bones happened typically after significant trauma, or less frequently due to disease of the bone as seen with bone cancer. Blunt force trauma such as being hit by a car, jumping from high surfaces, or evening jumping up after a Frisbee can lead to a broken bone. Young growing dogs are even more susceptible to broken bones especially around the growth plates.

### **Clinical Signs and Diagnosis:**

Often times the broken bone is only a small part in the bigger picture after suffering a traumatic event. It is extremely important that after any traumatic event that your dog is evaluated by a veterinarian to ensure life-threatening conditions are recognized and treated. If the event occurs during the day your pet should be taken to your regular veterinarian or an emergency hospital as soon as possible, if it happens at night or when your veterinarian is closed your pet should be taken to an emergency veterinarian. It is not recommended to wait after traumatic events.

Immediately after trauma it may not be known if there are any broken bones. Your veterinarian or the emergency veterinarian will evaluate your entire pet. This typically includes radiographs (X-rays) of the chest, abdomen, and limbs, potential ultrasound of the abdomen and chest, along with blood work, and monitoring of vital signs. Pain management is very important and often your pet will need to be stabilized with intravenous fluids and medications. Once stable any fractures will be identified. In some situation the fractured limb is placed into a bandage or splint (if the fracture involves a lower limb) until surgical treatment can take place. It is not uncommon for fracture management to occur 24-72 hours after the trauma. We need to ensure that there is no bruising of the lungs or heart, and that your pet is able to handle the anesthesia needed for a fracture to be repaired.

**Any growth plate fracture or joint fracture should be treated as quickly as possible. At Fusion Veterinary Orthopedics, we recommend surgery in these patients within about 24-48 hours after injury.**

With broken bones your pet may not want to put any weight on the limb, and severe swelling or bruising may be noted. Your veterinarian or our team at Fusion Veterinary Orthopedics will perform an orthopedic and neurologic exam to determine the location of the fracture and if any neurologic deficits are present. Radiographs will be needed to determine the exact bone, the fracture configuration,



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and the best way to repair the broken bone. In some cases a CT scan may be recommended with our advanced imaging center.

## **How is this treated?**

Surgery is recommended for most fractures. Depending on which bone is fractured, and the type of fracture will dictate what type of fixation is needed. Our team at Fusion Veterinary Orthopedics have many options to repair fractures from intramedullary pins and wire, locking bone plates and screws, or external skeletal fixation.

Since not all fractures are the same our team is trained in many different ways to fix fractures so that treatment can be customized to your dog and the type of fracture. Dr. Dycus is trained in the use of minimally invasive fracture management and when able, recommends performing fracture fixation in as minimally invasive way as possible. To accomplish this at Fusion Veterinary Orthopedics, we routinely use fluoroscopic imaging (real time radiography) and arthroscopy to assist in placement of pins, plates, and screws. This allows us to make smaller incisions, avoid disrupting the fracture blood supply, reducing pain, and speed up healing time.

## **What happens after surgery?**

After surgery your dog will need a period of rest and relaxation of about 8-12 weeks. This means no running, jumping, or playing. They will need to be taken outside on leash to urinate and defecate; excessive climbing up and down stairs or on and off furniture should be avoided. We recommend when not directly supervised that patients be placed in a crate, small laundry room or bathroom, or a small portion of the house sectioned off so that your dog can't overdo it. Excessive activity will lead to implant breakdown, soft tissue injuries, or delayed healing.

If staples/sutures are present they will be removed, or the incision evaluated at approximately 2 weeks after surgery and radiographs will be needed around 4-6 weeks, and 8-10 weeks after surgery to evaluate healing. At these rechecks an orthopedic exam will also be performed to ensure the surgical site is healing as expected.

Just as with people we recommend physical rehabilitation at Fusion Veterinary Orthopedics beginning 2 weeks after surgery. Rehabilitation will involve once to twice weekly formal rehabilitation sessions along with at home exercises. We have noted quicker healing, maintenance of muscle mass and range of motion, and superior outcome in the patients that undergo formal rehabilitation. Furthermore, rehabilitation offers an outlet of energy in controlled manner so that your dog is still able to maintain some activity while healing. Patients that have been treated



# FUSION VETERINARY ORTHOPEDICS

conservatively usually require once to twice weekly rehabilitation for a period of about 3-6 months.

Following surgery, we recommend that patients begin oral joint supplements and omega-3 fatty acids, maintain a healthy body weight, and remain active once healed from surgery. These things will be the beginning blocks along with surgery to minimize and slow down the progression of OA.

## **Are there any complications?**

At Fusion Veterinary Orthopedics, we take great pride ensuring our patients return to as normal function as possible. As with any surgery there are small risks associated. Particularly, with fracture fixation surgery the most common complications noted are implant breakdown (breaking/bending of the pins, plate and/or screws), infection, and soft tissue injuries. Infection rates are relatively low unless the bone has penetrated the skin causing an open fracture; your dog will be given antibiotics during surgery and in some cases will be sent home with antibiotics after surgery. If an infection does occur, then once the bone is healed the pins, plate and/or screws will be removed to resolve the infection. Implant breakdown and soft tissue injuries typically occur from over activity. Many of them will resolve with appropriate rest, rehabilitation, and medications.

Additional, just as if any individual human or animal undergoes anesthesia, it is considered very safe, but there are risks involved. Because of this risk a complete physical exam and blood work is completed by our team. During surgery your pet will be always monitored by one our trained staff members to ensure the highest level of monitoring and safety.