External Fixator Information and Questionnaire

Your pet has been diagnosed with a fractured bone that needs surgical repair. Orthopedic surgery is a combination of both art and science and the orthopedic surgeon will evaluate your pet’s radiographs and determine the best method of repair given your pet’s age, type of fracture or fractures, and the home environment for post-surgical rehabilitation. The surgeon may utilize one or a combination of pins, wires, screws, bone plates, or external fixator repair. The goal of any orthopedic surgery is fast return to function of the broken bone. All methods of fixation will fail over time if the bone does not heal; even metal plates. Think about how you can break a metal hanger by bending it many times. All orthopedic surgeries are a race between implant failure and bone healing and it is our goal to maximize your pet’s chances of winning that race.

Many times the method of repair can only be properly determined during surgery as fissures (small cracks in the bone) sometimes do not show up on a radiograph and can preclude certain types of fixation which would split the bone and worsen the fracture. Other times, in open or compound fractures or gunshot wounds that are contaminated, plates and screws can not be used as any infection would be difficult to correct.

An external fixator is a device that is worn outside of the injured bone with stainless steel pins connected to the fractured bone that penetrate the skin and firmly lock onto a bar on the outside. Although these are typically bandaged to keep them clean and prevent them from “catching” on things, they still require some care by you to keep the area around the skin clean from debris and drainage. Some pets are simply not candidates for external fixators due to temperament or the inability to confine them properly after surgery. Some owners are not candidates to care for an external fixator due to physical limitations or time constraints. The use of an external fixator has many advantages over standard plates, wires, pins and screws in certain fractures with small fragments where a plate simply will not fit or when the bone is broken into many pieces and fitting them together is not possible.

Advantages of fixators include:

1. There is often less initial cost.
2. They can often be placed in a “closed” manner without making any skin incisions which reduces surgery time and infection rates.
3. There is less manipulation of the fracture area so important blood supply to the bone fragments is not disturbed allowing faster healing. You do not have to put
the pieces back together like a puzzle for proper healing; in fact, research has shown that in certain cases, leaving all the pieces apart but untouched actually allows the bone to “reconstruct” itself and heal faster!

4. Additionally, fixators can be slowly removed over time to stimulate faster bone healing than more traditional methods like pins and wires and plates.

**Disadvantages of fixators include:**

1. Less initial cost over plates and screws but more rechecks and follow up radiographs over 6-15 weeks to monitor healing and remove pins to stimulate faster healing.
2. More aftercare by you to keep the fixator clean and change the bandage. Some patients simply will not use the leg well until all the pins are removed. Utilizing external fixators is a partnership between the doctor and the owner where both must do their part in order for the bone to heal quickly without any loosening of pins and with the least amount of discomfort to your pet.

The fee that you are charged for the clamps and rods utilized in doing this procedure are a “usage fee” only. We do reuse these parts but they have a limited lifespan and must be replaced after two or three uses. The parts are priced to take this into account; but should you fail to return for your scheduled rechecks and allow us to remove these parts for future use, you will be billed for the difference between the usage fee and the replacement cost.

In order to help the surgeon decide on the best method of fixation for your pet, we have developed this simple informational questionnaire that will allow us to make a more informed decision. Please take a moment to answer these questions and feel free to ask your doctor if you have any questions or do not understand something.

**Confinement**

Fixator patients simply cannot be allowed to roam the yard or be overly active while wearing the fixator. There must be strict confinement after surgery. Can you confine your pet to a room, kennel, or run after surgery that is clean and dry?

**Cleaning**

The area where the pin penetrates the skin will always have some minor clear drainage that will dry and harden into crusts. These crusts must be kept clean to prevent pin infection or loosening. Properly cared for pins almost never get infected. Will you be able to clean this area with a q-tip and hydrogen peroxide every few days without fail? If not, would you be willing to bring your pet to the hospital to have a technician do this for a nominal fee?
Bandaging
Studies have shown that placing wads of padding between the fixator and skin prevents the skin from rubbing up and down on the pins which will minimize swelling and discomfort to your pet.
Will you be able to purchase several ace bandages (any drug store) and 3X3 gauze sponges (available from us for a nominal fee) to bandage the fixator?
Will you be able to change the bandage after being shown how to do it by our trained technicians as often as necessary to keep it clean? (Usually once or twice a week)

Physical Therapy
Just like human orthopedic surgery, our animal patients benefit greatly from post-operative physical therapy. This will require a commitment of time on your part.
Will you have fifteen or twenty minutes twice daily to spend with your pet doing physical therapy?
Have you read the physical therapy guidelines in the fixator handout and are you willing and able to follow these guidelines?

Dependability
Since this is a partnership, one of your most important jobs besides monitoring the cleanliness of the fixator and your pet’s comfort is to keep your scheduled appointments for initial sterile bandage changes during the first ten days and bringing your pet to the hospital for progress radiographs. Early detection of loose implants so they can be removed or replaced is critical to the success of a fixator. With proper care, this is hardly ever necessary. There is a very short window of opportunity during bone healing (usually 4-8 weeks after surgery) when we can make changes in the fixator that will speed up the rate of bone healing in a significant manner (up to 30%). We do this by making the fixator “weaker” as the healing bone strengthens by removing pins, connections, or changing the bars from titanium to graphite. If you miss your appointment and this window of opportunity, it will mean that your pet may have to wear the device for an additional one to two months, and sometimes longer if problems develop that were not caught early.

In light of this information, please read and answer the following questions before signing this form.

1. Will you be able to follow a strict schedule of rechecks appointments designed by your doctor and the surgeon?
2. Will you be able to confine your pet as outlined in this handout?
3. Will you be able to clean surgical pins that are in your pet’s leg on a regular basis?
4. Will you be able to change your pet’s fixator wrap as needed with a clean ace bandage?
5. Will you be willing to devote fifteen minutes twice daily to perform physical therapy with your pet as needed in the first few weeks after surgery?
6. Will you call us and schedule a recheck immediately anytime there is excess drainage or your pet suddenly stops using the leg?

If you answered yes to the above questions and are willing to actively participate in the care of an external fixator please sign here:

__________________________________________
Owner/Agent Signature Date

If you have read over this questionnaire and do not believe your pet or your lifestyle are compatible with caring for an external fixator, please sign here and we will have the surgeon discuss other options with you that may better suit your situation:

__________________________________________
Owner/Agent Signature Date