



POST OPERATIVE CARE

Instructions post fracture repair (External Skeletal Fixator - ESF)

Your dog/cat has had surgery to repair a broken bone using pins and an external frame (ESF). ESF's are often used in contaminated (infected) open fractures or complex (comminuted) fractures where the fracture has lots of tiny fragments of bone that cannot be put back together again.

The aims of fracture repair are:

1. To restore bone and joint alignment
2. To provide immobilisation of the bone ends so that callus can form to heal the fracture



It is important to realise that although an ESF is a strong repair, the bone ends are not welded together, and if your pet is over active in the early weeks after surgery, complications can occur which can lead to repeat surgery.

Picture of a fracture fixed with ESF.

The main complications that can occur after fracture repair with ESF's are:

1. **Metal work failure:** usually occurs when a pet is over active in the early stages of fracture healing and puts too much force on the metal pins leading to failure.
2. **Infection (fracture site):** can result in serious complications and result in the fracture not healing
3. **Pin Tract Infection:** Infection at the entry point of the pin through the skin. Usually less serious and can be managed by careful attention to pin tract care (see below).
4. **Delayed/non union:** despite best efforts, some fractures don't go on to heal in the time frame we would expect. This can lead to additional surgery being required to resolve this complication.

The following guidelines aim to reduce post operative complications to the absolute minimum. Paying strict attention to these guidelines will ensure your dog gets the best surgical outcome possible.



1. Metal work failure: Excessive load on the metal construct in the early stages of healing can lead to breakage of either the connecting frame or more commonly, one or more pins. This is more likely to occur if your dog/cat is over active eg, running, jumping climbing stairs etc. Please follow the exercise regime outline below to ensure a smooth recovery from surgery.

2. Infection (fracture site): We have taken exceptional care at surgery to limit the exposure of the wound to environmental bacteria. In some cases of fractures where ESFs have been used, there is gross contamination of the fracture site because the fracture was open to the outside before surgery was commenced. Therefore, it essential that the after care at home is aimed at reducing any additional contamination of the wounds. This means taking care to prevent your dog licking the surgical site and pin tracts. A buster collar will be provided. Your dog/cat will also be prescribed an appropriate course of antibiotic tablets, it is important that this course of tablets are completed and no doses are missed.

3. Pin Tract Infection: This is not uncommon and is usually less serious. It is characterised by a discharge around one or more pins and often your pet may be more sore on the leg. Pin tract infections can be minimised by ensuring your dog/cat doesn't lick the pins and that any discharging pins are cleaned with antiseptic solutions twice daily. A course of antibiotics will sometime be prescribed by your vet. Any pin tract discharges should be examined by your vet.

4. Delayed/non union: This can occur despite all efforts by the surgeon and owner to achieve a good outcome. Common causes are compromise of the blood supply to the fractured bone ends or infection both of which can prevent bone healing progressing at the usual rate. In some cases, this just means that extra time is taken during the rehabilitation process to get your pet back to normal exercise. In the worst case scenario, additional surgery may be required in the case of non union where the fracture has failed to heal despite best efforts. If this occurs, Tom will discuss all aspects of why the problem may have occurred, how it is going to be managed and what you can do to try to ensure a good outcome.

Exercise Program Post Surgery:

0-14 days: For dogs - Exercise on a lead in the garden only for toilet purposes. Confinement to a cage or small room with non slip floor at all other times. During this time, a reduction in food intake may be required to prevent weight gain. Stairs are out of bounds and running and jumping strictly prohibited. For cats – confinement to a cage for 2 weeks is best with short supervised periods of light exercise in a small carpeted room.

2-8 weeks post surgery: For dogs - Start with 10-15 minute lead walks two or three times a day. Encourage weight bearing by walking slowly to begin with. Increase the time on the lead by 5 minutes per walk per week. Hydrotherapy (if appropriate) can start at 4 weeks post surgery. Carpeted stairs can be attempted 6 weeks post surgery. Slippery floors must be avoided for 6 weeks post surgery. For cats – room confinement until 6 weeks post surgery with no access to high furniture (wardrobes etc) so they cant jump into high places

8-12 weeks post surgery: For dogs - long lead walks with some time on a flexible/extendible lead. Xrays are taken at 12 weeks post surgery to assess the fusion process and further recommendations on appropriate exercise are made after seeing those xrays. For cats – house confinement up to 10-12 weeks – if all is well, they can start outside activity from 12 weeks post surgery – once frame is removed

Contact your vet if any of the following occur:

1. Sudden deterioration in limping and or pain.
2. Wound interference/infection
3. Excessive swelling/heat or discharge from the operation site.