Postoperative Instructions For External Skeletal Fixation

For a fracture (broken bone) to heal, the fragments must be immobilized. Movement will hinder the healing process and result in delayed union or nonunion. The fixator apparatus is an external splint used to aid in the immobilization of the bone fragments. The pins are inserted into the bone and then connected outside the skin surface with clamps and a stainless steel bar or acrylic column. This type of splint may be used alone or in conjunction with other orthopedic implants such as intramedullary pins and orthopedic wire.

As with other types of stabilization devices, external skeletal fixation is only effective if proper postoperative care is undertaken. You must enforce rest during the healing phase and allow only exercise with the dog on a leash. Care must be taken not to let your pet catch or bump the external bar on any objects like a fence, door, furniture, etc. If this happens, premature loosening of the pins may occur. It may be advisable to keep the fixator wrapped to prevent such occurrences.

Although the pins penetrate the skin surface and pass through the soft tissues into the bone, it is uncommon for bone infection to occur. You must, however, clean the skin surface where the pins penetrate the skin on a daily basis. A Q-tip should be used to remove any crust that may build up around the skin pin interface. Your veterinarian may dispense a solution for cleaning or you can use hydrogen peroxide or medicated soap and water. Also, if steel clamps and bars are used it is imperative that the clamps are checked daily to make sure the bolts are tight.

You may notice drainage around the pin exit sites. This is from pin irritation of the soft tissues (muscles, etc.) with movement. Obviously, excessive activity will cause more drainage (another reason to enforce rest). The drainage should be clear or a pink blood tinged appearance. If the character of the drainage changes (becomes more cloudy or purulent), please contact your veterinarian.

Premature loosening of the pins is another complication that may occur; however, by the time the pins loosen the fixator may have served its purpose and hopefully can be removed. This is not true in all patients. In some animals the healing process is slow and the fixator will need to be tightened or new pins inserted. Premature loosening of the pins is generally due to excessive patient activity. Once again, you can see the importance of restricting exercise after surgery.

The appropriate time to remove the fixator needs to be determined by radiographs. X-rays are obtained every 4-6 weeks following surgery. The fixator can generally be removed after 10-14 weeks. When the fixator is removed, the insertion points are left open. The area must be cleansed daily and will heal in 7-10 days.