



**Description:** Ring fixators are orthopedic devices that are applied to bones to stabilize fractures or help correct bone deformities. Small pins are inserted thru the bone above and below the fracture or deformity. These pins are then connected to rings which are in turn connected to each other with threaded side bars. By slowly changing the angle and distance between the rings using the threaded side bars, crooked bones can be straightened and even lengthened. The process requires significant owner participation and diligent after-care.

**Indications:** Ring fixators can be used in a variety of situations such as fractures near the end of a bone, growth deformities, joint fusion, and even certain bone cancers. Often there may be other types of bone fixation that could also be used, and surgeon preference and experience may dictate which means of stabilization is most appropriate for a given case. Ring fixators seem to be particularly well suited to correction of complicated angular limb deformities that also require some lengthening of the bone.

#### **Postoperative Care**

**Medication:** Anti-inflammatory pain medication is generally prescribed following any orthopedic procedure. Antibiotics may be used to help treat or prevent infection. Topical cleansers are used to clean around the pins.

**Bone distraction:** If straightening and/or lengthening the bone is part of the procedure, the owner or care-giver will be shown how to turn a bolt on the device, usually twice daily, that will distract the bone. This is a gradual process that is usually not painful to the pet. It is important that it be done every day as recommended however, or the bone will heal before it is in the desired position. When used to stabilize simple fractures, ring fixators do not need to be adjusted at home.

**Bandaging:** A light bandage will usually be applied around the fixator and the limb to help protect the bone and the pins from trauma. The bandage will need to be checked and replaced at least weekly by a veterinarian. Some animals will tend to chew or lick at the pins, so an E-collar or Bite-Not collar may be necessary.

**Exercise:** Activity should be strictly limited to a small confined area, with short leash walks only, until the bone is healed and the fixator removed. Although strong enough for weight-bearing, ring fixators are not strong enough to allow vigorous play, running or jumping. Swimming should not be allowed until the device is removed.

**Recommended Follow-up:** The limb, bandage and pins should be checked by the surgical office at least weekly. This may be a relative quick visit, or may require sedation if the patient is not cooperative. Follow-up radiographs are usually taken every 4-6 weeks to judge bone position and healing. Once the bone is sufficiently healed, the pins and rings will be removed. Pin removal will require a brief anesthetic procedure, but can usually be done on an out-patient basis.

**Prognosis:** The prognosis for healing of the bone and improved use of the limb generally should be good when ring fixators are used. Obviously, the specific prognosis varies widely depending on the severity of the individual case. Owner participation and compliance are critical in the outcome of these cases.

Your pet's recovery and well-being are our primary concerns, so please do not hesitate to call and speak with a surgical technician or surgeon if there are any questions regarding your pet's recovery.