

Endodontic or root canal therapy is indicated for teeth that have infected or dead pulp. This can occur if a tooth is broken, exposing the living pulp tissue inside the tooth, or if trauma to the tooth causes the pulp to hemorrhage or die. A damaged tooth may have an obvious fracture and visible red or black pulp tissue, or there may be very subtle discoloration.

*Most pets will show very little if any pain.*

***Why would a root canal be the preferred treatment over extraction?***

Teeth that are considered “strategic teeth” such as the canine teeth, maxillary 4<sup>th</sup> premolars and mandibular 1<sup>st</sup> molars perform important functions for eating and maintaining the strength of the jaw and should be considered for endodontic treatment if possible.

Dogs that are working dogs, utility dogs or retrievers use their canine teeth to hold and carry objects.

When extracting the maxillary 4<sup>th</sup> premolar and mandibular 1<sup>st</sup> molar, important “self-cleaning” functions of the cheek teeth are lost, causing increased plaque retention.

The mandibular canine teeth have very large roots in proportion to the width of the jaw, and the extraction can be very difficult, and weaken the jaw. The mandibular canine teeth also aid in keeping the tongue centered so that it does not hang out the side of the mouth.

The maxillary canine teeth hold the upper lips out from the gums to prevent the mandibular canine tooth from hitting the upper lip when closing the mouth.



### ***How is a root canal performed?***

To perform a root canal, the pet is put under general anesthesia. (see anesthesia page) The tooth is x-rayed to determine if there are any potential complicating factors such as a root fracture.

A typical Root Canal Procedure includes the following:

- An access opening is drilled through the enamel into the pulp chamber in the center of the tooth. In the case of teeth with multiple roots, this may require more than one access opening.
- The pulp is removed, and the pulp chamber is cleaned and shaped using endodontic files.
- The canal is flushed of debris and disinfected.
- X-rays are taken throughout the procedure to insure that the canal is completely filed and filled.
- Once the canal is prepared, it is filled with a sealant that fills the pulp canal and prevents bacteria from entering the canal.
- The access openings are sealed with a composite material that closely matches the tooth color.

In some cases it may be beneficial to have a crown made for the tooth to help protect it from further wear. This will require special preparation of the tooth, and impressions to make a mold for the crown. Once the crown has been manufactured at the dental lab, a second anesthesia will be needed to fit and cement the crown in place.

The aftercare is the same as for any other general anesthetic procedure, keeping the pet confined and quiet until the effects of the anesthetic are completely gone. Only small amounts of food or water should be offered the evening of surgery.

### ***Follow up evaluation:***

The treated teeth should be x-rayed in approximately 9-12 months, and some specialized endodontic procedures require annual x-rays for a period of time. The x-rays can usually be taken during an annual COHAT.

### ***Prevention:***

Hard chew toys should be strictly avoided. Approved chews should be flexible enough to slightly bend with your hands. Never give animal bones, cow hooves, knotted rawhide

or any treat that is very hard and rigid as these are the most common cause of fractured teeth and endodontic disease.

