



## Animal Dental Care

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# SMALL ANIMAL DENTISTRY: FIFTY KEY QUESTIONS

## Module 7

### Advanced Oral and Dental Procedures

#### **36. What are the indications for endodontic therapy in dogs and cats?**

- the most common indication for endodontic therapy is pulpal exposure
- endodontic disease is very common for permanent teeth in both dogs and cats
- dogs commonly fracture their maxillary fourth premolars, canines, and lower first molars when chewing on cow bones, deer antlers, nylon bones, hard plastic chew toys, cow hooves, kennel bars, sticks, rocks, ice cubes, and various other hard objects
- compressed rice flour bones have also resulted in dental fractures
- rope toys can result in dental fractures for dogs that are aggressive chewers as they tug on the toys and apply torque to their crowns
  
- cats most commonly fracture the cusps of their permanent canine teeth due to trauma
- the trauma most often occurs when playing and running into objects, or less commonly from head trauma when hit by a car
- this is seen most commonly for the cusps of the permanent maxillary canine teeth that are in a more exposed position than the permanent mandibular canine teeth

Chronic pulpal exposure for 104 in a one year old neutered male DSH. Note the yellow discoloration of the crown and the brown exposed pulp tissue.



Acute pulpal exposure for 404 in an 11 month old spayed female domestic shorthair cat. Note the hemorrhagic exposed pulp tissue.

Chronic pulpal exposure for 304 in a nine year old spayed female Labrador retriever from chewing on tennis balls. Note the brown darker brown tertiary dentin and exposed pulp tissue.





Acute pulpal exposure for 304 in the past 24 hours in an 11 month old male Shilo shepherd. Note the hemorrhagic exposed pulp tissue.

- a tooth can be salvaged with a vital pulp therapy that has had acute pulpal exposure, depending upon the age and breed of the patient, the time elapsed since the pulpal exposure, and the extent of trauma and other pathology for the affected tooth
- patients with teeth that have acute pulpal exposure should be started an analgesic to alleviate pain before definitive treatment can be done
- most dogs and cats have growing roots up until 10 to 12 months of age, at which time the apices are open and there is a larger blood supply to the pulp
- after the apices close, there is a reduced blood supply, the endodontic system is narrower, and the teeth are viable for a shorter period of time following pulpal exposure
- oral radiography is very helpful to evaluate the apex of a fractured tooth to determine if it can be salvaged by a vital pulp therapy or a root canal procedure