

The tooth crown can be fractured from chewing hard objects such as animal bones, nylabones, cow hooves, knotted rawhide, sticks or rocks. Fractures can also occur with behaviors such as cage or fence biting, tennis ball chewing, and rough play. Broken crowns can expose the sensitive tissue inside the tooth; either directly through pulp exposure, or indirectly by opening up the porous **dentin** (see tooth anatomy).

If there is direct pulp exposure, this is called a *complicated crown fracture*.



The pulp of the tooth becomes infected from exposure to oral bacteria, leading to pulp necrosis (death of the pulp) and tooth death. **There are only two options for pulp exposure: extraction (see Oral Surgery & Extractions) or endodontic therapy (See Endodontics).**

If the crown is fractured without pulp exposure, this is called an *uncomplicated crown fracture*. The tooth should be radiographed to determine if there is any evidence of indirect pulp exposure, or root damage. If there are no complicating factors, the exposed dentin can be treated with a dentin bonding agent and composite sealer that seals the porous dentin to prevent more bacteria from entering.

Some fractures extend beneath the gum line and may involve the root of the tooth. These are called *complicated crown/root fractures*. Endodontic therapy may be possible in some selected cases, but often extraction is necessary.

Avoiding tooth fracture: do not allow your pet to chew on any object that cannot be bent with your hands. Hard, rigid toys or treats should be avoided, and behavior training to correct problem behaviors such as cage or fence biting should be initiated.