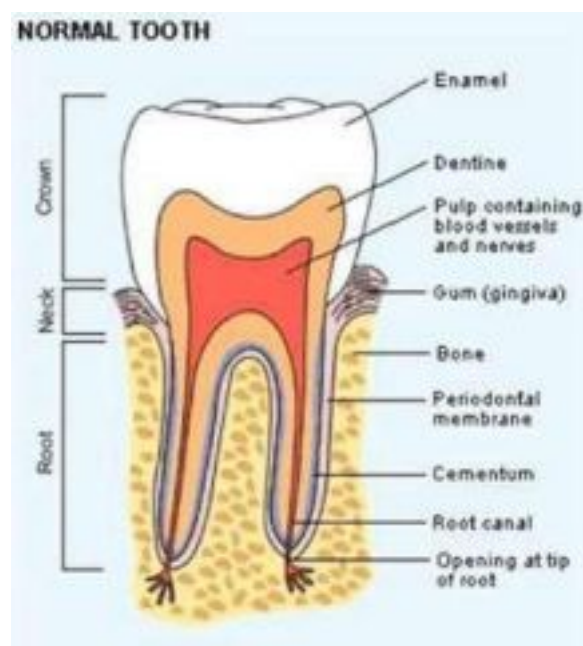


Periodontal disease is the most common disease in veterinary medicine, affecting more than 70-80% of pets. Routine dental prophylaxis or teeth cleaning is an important part of preventative medicine and treatment. Dental cleanings are performed under general anesthesia.

## Anatomy of the Tooth and Terminology

- **Apical** - direction toward the root
- **Attrition** - wearing of the teeth from mastication or teeth rubbing together
- **Buccal** - direction toward the cheek
- **Calculus** - calcified plaque which hardens on the tooth and may not be brushed off
- **Cementum** - hard connective tissue covering the tooth root and sometimes the crown
- **Crown** - portion of the tooth that sits above the gum line and is covered in enamel
- **Dentin** - the bulk of the tooth; hard connective tissue made mostly of calcium and collagen
- **Enamel** - the white hard outer layer of the crown (made mostly of calcium)
- **Endodontics** - treatment involving the pulp cavity (i.e. root canal procedure)
- **Floating** - smoothing a horse's teeth with a file (called a float) to rid of sharp edges
- **Gingiva** - mucosa/gums surrounding the teeth
- **Halitosis** - bad breath
- **Lingual** - direction toward the tongue
- **Malocclusion** - abnormal position of the teeth
- **Occlusal** - the chewing surface of the tooth, which meets the tooth surface on the opposite jaw
- **Periodontal ligament** - collagen fiber that attaches tooth to the bone and holds the tooth in place
- **Periodontium** - supportive tissues around the tooth, including bone of alveolus, periodontal ligament, cementum, and gingiva
- **Plaque** - a film which accumulates on the tooth made of food, bacteria, cells, and mucin
- **Pulp** - the soft part inside the tooth made of nerves, vessels, odontoblasts, connective tissues and lymphatics
- **Ranula** - a salivary cyst under the tongue



## Anatomy of the Tooth and Terminology (Cont.)

- **Recession** - apical gingival movement away from the tooth crown
- **Root** - lower part of the tooth that is in the alveolus
- **Stomatitis** - inflammation of the soft tissues in the mouth
- **Sulcus** - pocket under the gingiva; normal is 0-3 mm, greater than this suggests periodontal disease

## Types of Teeth

1. **Hypsodont (radicular or aradicular)**: High-crowned teeth. Seen in horses, cattle, deer (radicular - continuously erupting but not growing); in rodents, lagomorphs, chinchillas (aradicular - continuously growing)
2. **Brachydont**: Low-crowned teeth. Seen in dogs, cats, and humans.

## Dental Formulas for Adult Teeth

Dogs:  $2 (I \ 3/3 \ C \ 1/1 \ P \ 4/4 \ M \ 2/3) = 42$

Cats:  $2 (I \ 3/3 \ C \ 1/1 \ P \ 3/2 \ M \ 1/1) = 30$

Cows/Sheep/Goats:  $2 (I \ 0/3 \ C \ 0/1 \ P \ 3/3 \ M \ 3/3) = 32$

Horses:  $2 (I \ 3/3 \ C \ 0-1/0-1 \ P \ 3-4/4 \ M \ 3/3) = 36-42$

Pigs:  $2 (I \ 3/3 \ C \ 1/1 \ P \ 4/4 \ M \ 3/3) = 44$

Lagomorphs:  $2 (I \ 2/1 \ C \ 0/0 \ P \ 3/2 \ M \ 3/3) = 28$

Rat/Mouse:  $2 (I \ 1/1 \ C \ 0/0 \ P \ 0/0 \ M \ 3/3) = 16$

## Important Dental Instruments

- **Curette** - used for subgingival removal of calculus and root planing; can also be used supragingivally; has a rounded back and tip
- **Elevator** - used for breaking down the periodontal ligament with pressure and leverage
- **Luxator** - used for breaking down/cutting the periodontal ligament; not used for leverage
- **Extraction forceps** - used to extract (pull out) the tooth after the periodontal ligament has been broken down
- **Probe** - has a blunted tip; inserted into gingival sulcus to measure pocket depth and evaluate mobility
- **Polisher** - removes plaque and smoothes the scaled tooth surface; used with prophylaxis paste and done on slow speed (not faster than 1000 rpm or may cause thermal damage)
- **Scaler** - used for supragingival removal of calculus (NOT subgingival due to sharp tip)