Periodontal disease is the most common disease in veterinary medicine, as more than 70-80% of pets have it. Therefore, routine dental prophylaxis or teeth cleaning is an important part of preventative medicine and treatment in which the veterinary technician plays an important role. 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; the hard-connective tissue of the tooth 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 surrounding the teeth (gums around the teeth)  
**Halitosis** - bad breath  
**Lingual** - direction toward the tongue  
**Malocclusion** - abnormal position of the teeth  
**Occlusal** - regarding the tooth surface that meets tooth surface on the opposite jaw  
**Periodontal ligament** - collagen fiber which attaches tooth to the bone (holds 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
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, 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 for root planning; can also be used supragingival; 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 and is inserted into gingival sulcus to measure pocket depth and evaluate mobility
Polisher - removes plaque and smoothes the scaled tooth surface; used with prophy 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)
References:


Image courtesy of www.whiteimpression.com