

# The Oral Exam in Dogs and Cats: What is Normal, What is Not, and How to Chart It

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## 1. Oral Anatomy Refresher

- a. 3 skull shapes (brachycephalic, mesaticephalic and dolichocephalic)
- b. Primary bones of oral cavity (maxilla, incisive bone, mandible)
- c. Structures of the oral cavity
  - i. Teeth
  - ii. Gingiva
  - iii. Oral mucosa
  - iv. Hard palate
  - v. Soft palate
  - vi. Tongue
- d. Definition of normal occlusion (7 criteria, AVDC.org)
- e. Normal Dental Anatomy
  - i. Crown
    1. Enamel
    2. Dentin
    3. Pulp chamber
  - ii. Root
    1. Cementum
    2. Dentin
    3. Root canal
    4. Periodontal ligament
    5. Apex
  - iii. Furcation
  - iv. Cementoenamel junction (CEJ)
- f. Dental formulas
  - i. Dogs
    1. Deciduous dentition:  $2 \times (3/3 \text{ i}, 1/1 \text{ c}, 3/3 \text{ p}) = 28 \text{ teeth}$
    2. Permanent dentition:  $2 \times (3/3 \text{ I}, 1/1 \text{ C}, 4/4 \text{ P}, 1/1 \text{ M}) = 42 \text{ teeth}$
  - ii. Cats
    1. Deciduous dentition:  $2 \times (3/3 \text{ i}, 1/1 \text{ c}, 3/2 \text{ p}) = 26 \text{ teeth}$
    2. Permanent dentition:  $2 \times (3/3 \text{ I}, 1/1 \text{ C}, 3/2 \text{ P}, 1/1 \text{ M}) = 30 \text{ teeth}$
- g. Eruption schedules
  - i. Dogs
    1. Deciduous dentition: between 3 and 12 weeks
    2. Permanent dentition: between 3 and 7 months
    3. There are no deciduous molars or 1<sup>st</sup> premolars!
  - ii. Cats
    1. Deciduous dentition: between 2 and 6 weeks
    2. Permanent dentition: between 3 and 6 months
    3. There are no deciduous molars!
- h. Terms to describe tooth surfaces

- i. Modified Triadan numbering system—it will take a little time to study and memorize, but doing so will allow your charting to become faster and more accurate

## 2. The complete oral examination

- a. The conscious oral exam—depending on patient temperament, you should try and assess:
  - i. Extraoral facial structures
  - ii. Lymph nodes
  - iii. Occlusion (document any abnormalities with photos before intubating, everything else can be photographed once the patient is anesthetized)
  - iv. Examples of things to look for:
    1. Asymmetry/swellings
    2. Dried saliva on neck, chest and front legs
    3. Poor quality coat in cats (indicating a reluctance to groom)
    4. Discharge from nose or eyes
    5. Lip fold pyoderma
- b. Brief assessment during intubation (*make this assessment very brief in brachycephalic breeds, obviously skip if any patient is unstable and must be intubated without delay*)—some things you will have an easier time seeing without an ETT in place, such as:
  - i. Tonsils
  - ii. Caudal soft palate/pharynx
  - iii. Base of tongue (flip it up and look underneath too)
- c. After intubation (and hooking up monitoring equipment/ensuring patient safety) assess:
  - i. Hard palate
  - ii. Buccal and labial mucosa
  - iii. Mandibular symphysis (mobile or rigid)
  - iv. Recheck anything you may have missed/skipped during intubation
  - v. Remember to document any abnormalities with photographs!
  - vi. This is also a good time to do a chlorhexidine rinse (*a 2014 study found that a 0.12% CHX rinse 30 minutes prior to dental cleaning significantly decreased aerosolization of oral bacteria*)
- d. There is no such thing as a “dental”! (or a “medical” or a “surgical”, for that matter)
  - i. Dental, (**den**-tl), *adjective*, 1) of or relating to the teeth, 2) of or relating to dentistry or dentists

## 3. Dental probing/charting your findings

- a. Two things you must have to properly chart your patient’s mouth: a dental probe/explorer combination instrument and a good dental chart (one with plenty of room to record both exam findings as well as treatments)
- b. I use the AVDC’s abbreviations throughout this presentation. You can download a PDF of all of the AVDC’s abbreviations at: <https://avdc.org/wp-content/uploads/2019/08/abbreviations.pdf> (you will not need to use most of them, many of them are purely academic or are only being used by dental residents for logging their cases)
- c. If you choose to use your own abbreviations you must include a key to explain them to other veterinary professionals who may read the chart (especially if the patient is going for referral)
- d. “Four-handed” charting
- e. Knowing the dental formulas and the Modified Triadan system are essential for accurate, efficient charting

- f. Points to remember when probing:
  - i. Always work in the same order so that you do not miss a quadrant
  - ii. Be sure to record missing and/or supernumerary (extra) teeth
    - 1. RADIOGRAPH RADIOGRAPH RADIOGRAPH!
  - iii. Patient positioning may make a difference (I prefer to chart with them on their backs)
  - iv. Gently “walk” the probe around the tooth (4 to 6 places, no sliding)
  - v. If the patient has excessive subgingival calculus, this may prevent the probe from fully entering periodontal pockets and reduce the accuracy of the probing.
  - vi. Gingival hyperplasia will falsely increase pocket depth (pseudopockets) and gingival recession may result in “normal” appearing probing depth even though a large amount of periodontal disease may be present
  - vii. Gingival recession (mm) + perio pocket (mm) = total attachment loss
  - viii. Pocket vs. sulcus
  - ix. Importance of using both dental rads and exam in overall assessment of teeth
- g. Assessing the periodontal health of each tooth:
  - i. Periodontal pocket depth
  - ii. Gingival recession
  - iii. Furcation exposure
  - iv. Mobility
  - v. Gingivitis
  - vi. Plaque and calculus index
  - vii. Overall periodontal disease stage
- h. Recognizing oral pathology
  - i. Malocclusions
  - ii. Missing teeth/dentigerous cysts
  - iii. Fractured/worn/discolored teeth
  - iv. Tooth resorption
  - v. Caries
  - vi. Oral masses
    - 1. Benign
    - 2. Malignant
  - vii. Oropharyngeal inflammation
  - viii. Enamel abnormalities
  - ix. Persistent deciduous teeth
- i. Charting treatments
  - i. Extractions/crown amputations
  - ii. Periodontal treatments (open and closed root planning, Doxirobe, gingivectomy)
  - iii. Biopsies