



## SOP: Canine Physical Examination

These SOPs were developed by the Office of the University Veterinarian and veterinarians at the VMCVM and reviewed by Virginia Tech IACUC to provide a reference and guidance to investigators during protocol preparation and IACUC reviewers during protocol review. They can be used as referenced descriptions for procedures on IACUC protocols. However, it is the sole responsibility of the Principal Investigator to ensure that the referenced SOPs adequately cover and accurately represent procedures to be undertaken in any research project or instructional activity. Any modification to procedure as described in the SOP must be outlined in each IACUC protocol application (e.g. if the Principal Investigator plans to use a needle size that is not referenced in the SOP, simply state that alteration in the IACUC protocol itself).

### Table of Contents

- I. Procedure Summary and Goal .....2
- II. Personal Protective Equipment (PPE) and Hygiene .....2
- III. Supply List .....2
- IV. Detailed Procedure .....2
- V. Variations .....4
- VI. Potential Adverse Effects, Mitigation, or Treatment.....4
- VII. Suggested Literature Search for Pain Category D and E Procedures.....5
- VIII. References .....5

## I. Procedure Summary and Goal

Describes procedures for the thorough and systematic physical examination.

### Considerations

Having a basic knowledge of the animal's behavior is important in safe and humane handling. Prior to initiating the physical examination please refer to the restraint SOP. These methods can be utilized to ensure that the physical examination is completed properly and safely.

A systematic approach to the physical examination will help to detect minor abnormalities before they become serious issues. The use of a physical examination in addition to abdominal palpation can identify early signs of dysfunction or abnormalities.

## II. Personal Protective Equipment (PPE) and Hygiene

- a. Ensure appropriate PPE is used to protect handler from accidental injury or exposure to blood and other body fluids. Caution can be taken especially in situations where the animal is unhealthy and has a known contagious illness.
- b. Hearing protection (optional)
- c. Always wash your hands after handling an animal.

## III. Supply List

- a. Penlight
- b. Stethoscope
- c. Otoscope
- d. Ophthalmoscope
- e. Lubricating jelly
- f. Watch
- g. Scale
- h. Thermometer
- i. Examination Glove

## IV. Detailed Procedure

- a. General Appearance/Initial Observations
  - i. Observe the dog from a distance before approaching and beginning to handle the animal. Note the general appearance and any signs of asymmetry. The body condition can also be assessed at

this time paying close attention to any protrusion of ribs. A further assessment of the body condition can be done once the animal is handled.

- ii. Note the animal's overall mentation (level of consciousness, attentiveness). Descriptors of this state include alert and responsive, depressed, uncontrolled hyper excitability, stupor or coma.
- iii. Assess the posture and gait of the animal. Watch the animal ambulate and stand. Note any signs of limping, incoordination or unsteadiness. Note the symmetry of the limb placement and the weight distribution.

b. Examination

i. Head/Neck

1. Assess the symmetry and overall shape of the skull. Palpate the head bringing attention to any abnormalities.
2. Examine each individual eye assessing the position and movement. Evaluate the conjunctiva of the eye. Palpate the medial and lateral canthus. Use a penlight to assess both pupils as well as the direct and consensual response.
3. Examine the ears starting with the external pinnae. Examine the ear canals for any obvious discharge. The otoscope can be utilized to examine the internal canal and tympanic membrane.
4. Examine the bridge of the nose for shape and symmetry. Note any discolorations or erosions present. Examine the nares for discharge as well as patency.
5. Open the mouth by placing one hand on the mandible and the other on the maxilla behind the canine teeth. Assess the caudal portion of the oral cavity, the tongue and tonsils. Continue with the oral exam by moving the animal's lips to assess the teeth. Evaluate for any dental occlusions, calculus/tartar, and inflammation along the gum line. Apply gentle pressure on the gums to blanch the capillaries and obtain a capillary refill time (CRT).
6. Palpate the mandibular lymph nodes to assess size and shape. Flex and extend the animal's head to assess for signs of pain. Move the animal's head dorsal, lateral and ventral to observe range of motion. Apply light pressure to the trachea and observe for cough. Palpate the area adjacent to the trachea to detect enlargement of thyroid glands.

ii. Integument

1. Move hands along the entire surface of the body to assess condition of skin and hair coat. Identify any cutaneous and subcutaneous masses, alopecia, pustules, papules, dermatitis. Utilize a flea comb to screen for live fleas and/or flea dirt.
2. Assess the hydration of the animal by tenting the skin in the interscapular region.
3. In female dogs palpate the mammary glands check both chains for masses.

iii. Thoracic Limbs

1. Palpate muscles, joint and long bones to evaluate for any heat, swelling or pain. Examine the nails, nail bed and footpads.
2. Place each foot in a knuckling position to assess conscious proprioception.
3. Palpate the prescapular lymph nodes to evaluate size and shape.

iv. Thorax

1. Observe the animal breathing and palpate the thoracic cage to assess integrity of the ribs. Palpate both sides in a simultaneous manner to assess symmetry.

2. Palpate the spine and apply gentle pressure moving cranial to caudal to assess for any hyperesthesia.
  3. Auscultate the thorax listening for any increase or decrease in lung sounds. Obtain a respiratory rate.
  4. Complete cardiac auscultation while the animal is standing. Auscultate both sides of the chest. On the left side the pulmonic, aortic and mitral valves should be assessed. The tricuspid valve is assessed on the right side. During auscultation palpate a pulse simultaneously to identify abnormal vs. normal heart sounds.
- v. Abdomen
1. Palpate the abdomen by moving cranial to caudal, dorsal to ventral. Be aware of the animal's behavior during this time as this can reveal signs of pain.
- vi. Pelvic Limbs and Tail
1. Examine rear limbs in similar manner used for the thoracic limbs.
  2. Palpate the popliteal lymph nodes to evaluate size and shape.
  3. Examine tail for abnormalities (masses, hair loss).
- vii. External Urogenital and Perineal Area
1. Examine the external vulva.
  2. Assess the anus and perineal skin and normal response of anal sphincter contraction and flexion of the tail.
  3. Rectum
    - a. Obtain a rectal temperature with a lubricated thermometer.
    - b. To complete the rectal examination utilize a glove and lubricating jelly. Insert one digit into the rectum. Evaluate the rectal wall thickness, anal glands, pelvic urethra and vaginal tract. Palpation of the dorsal rectum can allow assess of sublumbar lymphadenopathies.

## V. Variations

The order of the physical examination can be changed at the discretion of the individual completing the examination. This can be based on preference or comfort and should still be thorough and systematic.

## VI. Potential Adverse Effects, Mitigation, or Treatment

- a. Distress
  - i. Physiological changes
    1. Metabolic/Hematologic disturbances
    2. Stress leukogram
    3. Tachycardia, tachypnea, hypertension, hyperthermia
    4. Hyperthermia
      - a. Stop physical examination
      - b. Contact MDL veterinary staff

## **VII. Suggested Literature Search for Pain Category D and E Procedures**

Not applicable

## **VIII. References**

Douglas Mader, MS, DVM, DABVP (Canine & Feline), DABVP (Reptile & Amphibian), DECZM (Herpetology), Marathon Veterinary Hospital, Marathon, Florida. "Physical Examination: The Cornerstone of Veterinary Medicine." Clinician's Brief. N.p., n.d. Web. 28 Apr. 2017.

"Small Animal Physical Exams." Recognized Student Organization Websites. N.p., 08 May 2014. Web. 28 Apr. 2017.