

Bovine Physical Examination

instructor to student ratio: 1:<10

Category

3. Minor conscious intervention

Objective

Describes procedures for the thorough and systematic physical examination. A limited or partial physical exam can be done for purposes of examining only one body system for rechecks, sedation, or other purposes (eg basic health examination).

Alternatives to animal use

Knowledge of anatomy, physiology and pharmacology are essential, and lectures, practicals, tutorials and video presentations of the procedure augment the success of the examination. There is no alternative to a physical examination on the live animal.

Equipment

- a. Cattle yards
- b. Cattle crush
- c. Halter
- d. Stethoscope
- e. Thermometer

Safety and Risk considerations

Restraint: In order to perform a physical examination proper restraint is required. Please reference *SOP029: Mustering, Drafting and Yarding of Cattle* and *SOP028: Restraint and Inspection of Cattle* for this.

Drugs, chemicals or biological agents

NIL

Procedure

- a. Initial Examination
 - 1. Observe the animal from a distance and assess the overall appearance of the animal.
 - 2. Signs of pain can be indicated by reluctance to move, arched posture, stilted gait and teeth grinding.
- b. Restrain the animal in suitable facilities
- c. Head and Neck Examination
 - 1. Examine the head of the animal for symmetry. Observe the general head position and test for normal cranial nerve responses.
 - 2. Evaluate the nares for patency and any discharge.
 - 3. Assess the eyes for position, symmetry and vision. Check the sclera of both eyes.
 - 4. Assess the hydration of the animal by performing a skin tent.
- d. Musculoskeletal Examination
 - 1. Evaluate the limbs of the animal palpating the joints and assessing for any heat or swelling.
- e. Thoracic Examination
 - 1. Observe the animal's normal rate and rhythm. Obtain a respiratory rate.
 - 2. Auscultate the lung field and assess for inspiratory vs. expiratory sounds. Palpate the trachea to assess if a cough can be induced. Both the left and right side should be evaluated.
 - 3. Auscultate the heart. The apex of the heart can be assessed caudal to the elbow at the sixth intercostal space. The aortic, pulmonic and mitral valves can be auscultated on the left side of the animal. Assess the animal's heart rate and rhythm.
 - 4. Observe the jugular vein and mammary vein for any signs of distension or pulsation while evaluating the heart.
- f. Abdominal Examination
 - 1. The left side of the cow should be pinged. This can be done by simultaneously percussing and auscultating the left side of the animal while flicking a finger against the body wall. This should also be completed in the same manner to the right side.
 - 2. Auscultate the rumen by placing the stethoscope in the left paralumbar fossa. Assess the rumen contractions and calculate the normal rumen contractions hear per minute.
- g. Udder Examination
 - 1. Examine the udder for symmetry. Evaluate any signs of oedema or inflammation.

h. Rectal Examination

1. Reference **SOP120: Bovine Examination per Rectum.**

Impact on wellbeing of animals

Physical examination should not cause any harm or distress to the animals beyond that described in the restraint or rectal exam SOPs.

Animal Care

The procedure has no effect on the wellbeing of animals so routine care only is required.

Pain Relief

The procedure caused no pain if conducted carefully, so pain relief measures are not needed.

Reuse and repeated use

Provided the animal is tolerant of being handled, several examinations can be conducted on the one animal.

Qualification, experience or training necessary to perform procedure

Detailed Physical Examination

Demonstrator: Graduate veterinarian with appropriate clinical and surgical experience

Student: They should be at least in fourth year of BVSc study or third year DVM study.

Basic Health Examination

Demonstrator: experience in assessing cattle from a distance and collecting temperature, pulse and respiration data.

Students: competence in handling cattle

References and relevant links

Jackson, P., & Cockcroft, P. (2008). *Clinical examination of farm animals*. John Wiley & Sons.