

SAND2011-4001C

Examination of the Respiratory System

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company,
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SAND #





Examination from Afar: Respiratory System

- **Information collected during an examination from a distance**
 - General body condition
 - Ease of respiration
 - **Normal**
 - **Distress**
 - **Labored**
 - **Painful respiration**
 - Respiratory rate
 - Respiratory discharge
 - **Purulent**
 - **Serous**
 - **Bloody**
 - Coughing
 - Sneezing
 - Swelling near sinuses





Collecting a Meaningful History: Respiratory System

- **Historical information related to the respiratory evaluation**
 - Duration of illness
 - Difficulty breathing
 - Coughing
 - Sneezing
 - Nasal discharge
 - Vaccinations
 - Previous treatments
- **Historical information related to the herd**
 - Other animals affected
 - Duration of signs
 - Similarity of signs
 - Deaths associated with the illness
 - Changes in food and/or water
 - New additions to the herd

Examination: Upper Respiratory System

- **External nares**

- Symmetry
- Discharge
- Mucous membranes: color, ulcerations
- Odor of breath
- Patency of both nostrils
- Licking nose



- **Oral cavity**

- Excessive salivation
- Mucous membranes: color, ulcerations



- **Facial symmetry**

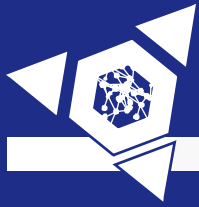
- Swelling
- Presence of a draining wound
- Ptosis (Drooping eyelid)
- Ear symmetry
- Head position
- Ocular discharge





Examination: Upper Respiratory System

- **Laryngeal and pharyngeal region**
 - Swelling
 - Ability to elicit a cough on palpation
 - Subcutaneous emphysema
 - Head and neck position
- **Trachea**
 - Swelling
 - Ability to elicit a cough on palpation
 - Subcutaneous emphysema
 - Auscultation
 - Large airway sounds
 - Increased rate



Examination: Lower Respiratory System

- **Lower airway examination**

- Normal respiratory rates (breaths / minute)

- Cattle: 18 – 35
 - Calf: 20 – 40
 - Goat: 15 - 30
 - Kid: 20 - 40
 - Sheep: 12 - 20
 - Kid: 20 - 40

- Auscultation

- Auscultation of both sides
 - Rate, rhythm, and intensity
 - Character of sounds
 - Crackles
 - Wheezes
 - Bronchial tones
 - Distribution of sounds

- Utilization of a re-breathing bag can enhance detection of abnormal lung sounds





Interpretation of Results: Respiratory System

- **Abnormal findings: upper respiratory system**
- **Abnormal findings: lower respiratory system**



Ancillary Tests: Respiratory System

- **Laryngeal examination**
 - The larynx of adult cattle can be observed using a Frick speculum and pen light
- **Ultrasound examination**
- **Endoscopy**
- **Radiography**
- **Microbiology**
- **Hematology**