

Examination of the Nervous System



Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

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Examination from Afar: Nervous System

- **Information collected during an examination from a distance**

- Mention - central versus peripheral
- General body condition
- Posture
- Gate
 - **Ambulatory**
 - **Recumbent**
- Position of head and neck
- Facial symmetry
- Muscular atrophy



- ❖ *In regions where rabies is endemic – animals showing neurological signs should always be considered rabies suspects*



Collecting a Meaningful History: Nervous System

- **Historical information related to the neurological evaluation**
 - Duration of illness
 - Exposure to rabid animals
 - Food / water consumption
 - Type
 - Amount
 - Changes in feed
 - Mastication and swallowing ability
 - 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



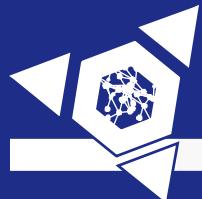
Examination: Nervous System

Head and Neck

- **Mentation – central versus peripheral**
- **Facial symmetry**
 - Cranial nerve evaluation
 - Olfactory, optic, oculomotor, trochlear, trigeminal, abducens, facial, vestibulochoclear, glossopharyngeal, vagus, spinal accessory, and hypoglossal
 - Which of the cranial nerves can we assess during an exam?
- **Oral cavity**
 - Excessive salivation or food materials
 - Chewing motion
- **Head and neck**
 - Position
 - Movement, pain

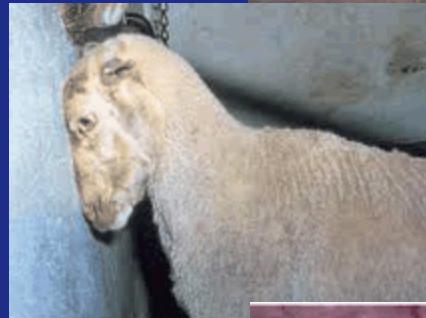
❖ ***Always wear gloves if rabies cannot be ruled out***





Examination: Nervous System

- **Gait**
 - Lameness
 - Proprioceptive deficits
 - Circling
 - Leaning posture
- **Reflexes**
 - Difficult in large animals
 - Patellar – sheep and goats
- **Pain response**
 - Panniculus
- **Muscular weakness/atrophy**
- **Ability to pass urine and feces**
- **Rectal palpation**
 - Rule out pelvic fracture





Interpretation of Results: Nervous System

- **Abnormal findings: central versus peripheral**
- **Abnormal findings: nervous system**



Ancillary Tests: Nervous System

- **Cerebrospinal fluid analysis**
 - Ensure that rabies is no longer on the list of possible diseases
- **Response to therapy**
 - Otitis media
 - Parasites
- **Rabies diagnosis – PCR, Histology**
- **Hematology**
- **Radiography in small ruminants**