

# Advanced Animal Imaging Neurological Exam

Patient's Name: \_\_\_\_\_  
 Client's Name: \_\_\_\_\_  
 Date: \_\_\_\_\_

Select the appropriate classification from the seven main neurological exams. Patient's can have more than one problem. Mark the appropriate response with the patient's clinical signs.

## #1) Observe Posture (*Standing, Sitting or Laying Down*)

Head Tilt:	Present	or	Absent
Head Turn:	Present	or	Absent
Opisthotonos:	Present	or	Absent
Ventroflexion:	Present	or	Absent
Lordosis:	Present	or	Absent
Kyphosis:	Present	or	Absent
Scoliosis:	Present	or	Absent

## #2) Sensitivity

### **Superficial Sensitivity**

(Please Circle the Correct Clinical Response)

Sup. Sensitivity Front Left:	Absent	Decreased	Normal	Increased	With Clonus
Sup. Sensitivity Front Right:	Absent	Decreased	Normal	Increased	With Clonus
Sup. Sensitivity Hind Left:	Absent	Decreased	Normal	Increased	With Clonus
Sup. Sensitivity Hind Right:	Absent	Decreased	Normal	Increased	With Clonus

### **Deep Pain Examination**

Vocalization from Pain:	Present	or	Absent
Attempt to Bite from Pain:	Present	or	Absent
Lifted Limbs during Pain:	Present	or	Absent
Shifts Body with Pain:	Present	or	Absent

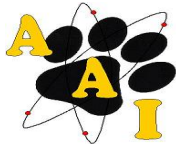
### **Muscle Atrophy**

(Please Circle the Correct Clinical Response)

Muscle Atrophy Head:	Absent	Decreased	Normal	Increased	With Clonus
Muscle Atrophy Front Left:	Absent	Decreased	Normal	Increased	With Clonus
Muscle Atrophy Front Right:	Absent	Decreased	Normal	Increased	With Clonus
Muscle Atrophy Hind Left:	Absent	Decreased	Normal	Increased	With Clonus
Muscle Atrophy Hind Right:	Absent	Decreased	Normal	Increased	With Clonus

## #3) Behavior / Mental Status

Alert Consciousness:	Present	or	Absent
Apathy:	Present	or	Absent
Semi Coma / Stupor:	Present	or	Absent
Narcolepsy:	Present	or	Absent
Coma:	Present	or	Absent



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## #4) Gait

Lameness:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Paresis:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Plegia:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Monoparesis:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Paraparesis:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Hemiparesis:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Tetraparesis:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Ataxia:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Sensory Ataxia:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Vestibular Ataxia:	<i>Present</i>	<i>or</i>	<i>Absent</i>
Cerebellar Ataxia:	<i>Present</i>	<i>or</i>	<i>Absent</i>

## #5) Postural Reactions

### ***Proprioception***

*(Please Circle the Correct Clinical Response)*

Proprioception Front Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Proprioception Front Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Proprioception Hind Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Proprioception Hind Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### ***Hopping***

*(Please Circle the Correct Clinical Response)*

Hopping Front Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hopping Front Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hopping Hind Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hopping Hind Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### ***Wheelbarrowing (Forward)***

*(Please Circle the Correct Clinical Response)*

Wheelbarrowing Front Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Wheelbarrowing Front Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Wheelbarrowing Hind Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Wheelbarrowing Hind Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### ***Hemistanding (Lateral)***

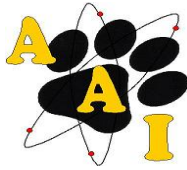
*(Please Circle the Correct Clinical Response)*

Hemistanding Front Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hemistanding Front Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hemistanding Hind Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Hemistanding Hind Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### ***Extensor Postural Thrust***

*(Please Circle the Correct Clinical Response)*

Ext. Post. Thrust Hind Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Ext. Post. Thrust Hind Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>



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## #5) Postural Reactions (Continue)

### *Placing Reaction (Vision)*

*(Please Circle the Correct Clinical Response)*

Placing Reaction with Vision:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Placing Reaction Tactile:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### *Tonic Neck Reaction (Eyeball Placement)*

*(Please Circle the Correct Clinical Response)*

Head and Neck Placed Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Head and Neck Placed Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

## #6) Spinal Reflexes

### *Front Limb Reflexes*

*(Please Circle the Correct Clinical Response)*

Extensor Radialis Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Extensor Radialis Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Biceps Reflex Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Biceps Reflex Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Triceps Reflex Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Triceps Reflex Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Flexor Front Left:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Flexor Front Right:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### *Hind Limb Reflexes*

*(Please Circle the Correct Clinical Response)*

Patellar Reflex (L4-L5):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Cranial Tibial (L6-S1):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Gastrocnemius Muscle:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Flexor Hind (L6-S2):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

### *Other Reflexes*

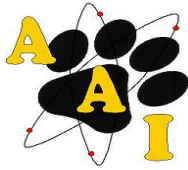
*(Please Circle the Correct Clinical Response)*

Anal Reflex:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Cutaneous Trunci Reflex:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Neurogenic Urination:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

## #7) Cranial Nerves

*(Please Circle the Correct Clinical Response)*

Smell Left Nostril (I):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Smell Right Nostril (I):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Vision Left Eye(II):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Vision Right Eye(II):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Eye Movement(III+VI):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Eye Movement(III+VI):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>



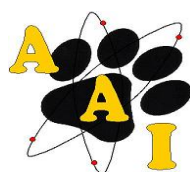
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## #7) Cranial Nerves (Continue)

(Please Circle the Correct Clinical Response)

Left Pupil Size (II+III):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Pupil Size (II+III):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Menace Reaction (II+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Menace Reaction (II+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Palpebral Reflex (V+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Palpebral Reflex (V+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Corneal Reflex (V+VI+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Corneal Reflex (V+VI+VII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left PLR (Light) Stimulation:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right PLR (Light) Stimulation:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Head Sensitivity (V):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Mastication / Taste (V):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Swallowing (IX+X):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Cotton Ball Test Left Ear:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Cotton Ball Test Right Ear:	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Hearing, Head Tilt (VIII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Hearing, Head Tilt (VIII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Left Neck Muscles (XI):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Right Neck Muscles (XI):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>
Tongue (XII):	<i>Absent</i>	<i>Decreased</i>	<i>Normal</i>	<i>Increased</i>	<i>With Clonus</i>

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# Advanced Animal Imaging Neurological Definitions

## Behavior / Mental Status

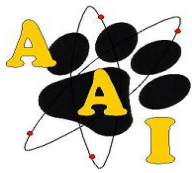
Findings	Definitions	Localization
Consciousness	normal behavior, alert, responds to painful stimuli	Cortex
Apathy	decreased interest in surroundings	Forebrain, brainstem
Stupor	state of lethargy, but still responding to painful stimuli	Brainstem
Narcolepsy	excess sleeping in the daytime	Brainstem
Coma	complete unconsciousness, no response to painful stimuli	Brainstem

## Posture

Findings	Definitions	Localization
Head Tilt	rotation of the head to one side	Vestibular System
Head Turn	the head is directed toward caudal, "looking backwards"	Brainstem
Opisthotonos	the head and neck are extended dorsally toward the back	Brainstem, Cerebellum
Ventroflexion	the head is flexed ventrally often touching sternum	*
Lordosis	downward curvature of the spine	Spine
Kyphosis	upward curvature of the spine	Spine, Abdomen
Scoliosis	lateral deviation of the spine	Spine, Cerebellum

## Gait

Findings	Definitions
Lameness	reduced ability to bear weight on a limb because of pain or restriction
Paresis	weakness resulting from neurological dysfunction
Plegia	total loss of voluntary movement
Monoparesis	partial loss of voluntary movement in one limb
Papraparesis	partial loss of voluntary movement in both pelvic or thoracic limbs
Hemiparesis	partial loss of voluntary movement in the limbs of one side
Tetraparesis	partial loss of voluntary movement in all four limbs
Ataxia	lack of coordination
Sensory Ataxia	caused by a lesion in the spinal cord or nerves (often occurs with paresis)
Vestibular Ataxia	caused by a lesion in the vestibular system (often occurs with the head tilt)
Cerebellar Ataxia	caused by a lesion in cerebellum (hypermetria and intention tremors are present)



# Advanced Animal Imaging

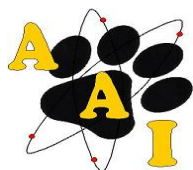
## Neurological Problems

### Spinal Reflexes

Reflexes	Nerve	Spinal Segments	Muscle(s)
Patellar	Femoralis	L4-L6	Quadriceps Femoris
Tibial Cranial	Peroneus	L6-L7	Tibialis Cranialis
Flexor (hind leg)	Ischiadicus	L6-S1	All Flexors of the Leg
Extensor Carpi Radialis	Radialis	C7-T1	Extensor Carpi Radialis
Flexor (front leg)	Medianus, Ulnaris, Musclcutaneous	C6-T1	All Flexors of the Leg

### Cranial Nerves

Function	Nerve(s)	Test	Abnormalities
Smell	Olfactory (I)	Food Test	Anosmia, Dysosmia
Vision	Opticus (II)	Menace Reaction	Peripheral Blindness, Central Blindness
Pupil Size	Oculomotorius (III)	Pupillary Light Relfex	Mydriasis, Miosis, Anisocoria
Ocular Movement	Oculomotorius (III) Trochlearis (IV) Abducens (VI)	Eye Movement Eye Position	Strabismus, Nystagmus
Facial Sensation Mastication	Trigeminus (V)	Palpebral Reflex Corneal Reflex	Dropped Jaw
Facial Expression	Facialis (VII)	Palpebral Reflex Face Symmetry	Face Asymmetry
Balance / Hearing	Vestibulocochlearis (VIII)	Posture, Gait, Eye Position, Audiometry	Head Tilt, Ataxia, Nystagmus, Strabismus, Deafness
Swallowing / Voice	Glossopharyngicus (IX) Vagus (X)	Swallow Reflex Gag Reflex Laryngoscopy	Unable to Swallow, Stridor, Dyspnoe, Megasophagus
Neck Muscles	Accessorius (XI)	Palpation	Trapezius Atrophy
Tongue Movement	Hypoglossus (XII)	Tongue Retraction Drinking	Tongue Deviation, Atrophy



# Advanced Animal Imaging Neurological Problems

	Forebrain	Brainstem	Cerebellum
<b>Mental Status</b>	Normal Apathy	Apathy Stubor Coma	Normal
<b>Behavior</b>	Normal or Abnormal	Normal or Abnormal	Normal
<b>Gait</b>	Normal (Pacing)	Hemiparesis or Tetraparesis	Hypermetria
<b>Postural Reactions</b>	Abnormal	Abnormal	Abnormal
<b>Cranial Nerve Abnormalities</b>	Menace Reaction	Multiple	Menace Reaction
<b>Tremor</b>	Rare	Rare	Intension
<b>Seizures</b>	Possible	Rare	No

<b>Tetraparesis</b>	Normal (increased) reflex(es) in the front limbs	C1-C5
	Decreased reflex(es) in the front limbs	C6-T2
<b>Paraparesis</b>	Normal (increased) reflex(es) in the hind limbs	T3-L3
	Decreased reflex(es) in the hind limbs	L4-S3