

Dural Mobility Assessment

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C/S: Neural Conduction and Mobility

- ***Neural conduction and mobility***
 - Segmental facilitation leads to hypertonicity (initially) and reduced motor function which causes atrophy (secondarily).
 - **Hyperaesthesia** can be one of the first signs of a neurological interference and tend to occur long before sensation becomes reduced.

C/S: Neural Conduction and Mobility

- **Dural Tension Testing of the Radial Nerve, Median Nerve, & Ulnar Nerve**
 - Human techniques to detect neural mobility restrictions or inflammation
 - The connective tissue attachment and continuity of the neural structures, as well as the inherent resting tension means that movement of one body part will have an effect on the nervous system elsewhere in the body and can also restrict movement when too tight.

C/S: Neural Conduction and Mobility

- **Dural Tension Testing of the Radial Nerve, Median Nerve, & Ulnar Nerve**
 - Potential Indications of Dural Tension
 - LMNL subacute or chronic
 - Chronic musculoskeletal injuries near or involving nerves in the NON-acute stages
 - Compulsive licking or chewing of an extremity
 - Nerve root compression / signs / inflammation
 - Loss of Range of Motion along the line of a nerve
 - Recurrent spinal joint dysfunctions at dural tension points (C6, T6 & L4 in humans)

C/S: Neural Conduction and Mobility

- **Dural tension testing:** Radial nerve, Median nerve, Ulnar nerve
- **NOTE:**
 - For these test, we are unable to ask when, if or where they may experience a deep stretch sensation, tingling, or pain along the line of the nerve.
 - Instead we must watch for a reaction of discomfort from the dog and also pay close attention to the amount of movement and end feel present in the end ranges of each movement in order to determine if adverse neural tension is present OR to determine the end range for your mobilization of the dura.

C/S: Neural Conduction and Mobility

- **Radial Nerve Dural Tension Test**

Depress / Retract the scapula
Straighten the elbow
Flex the shoulder
Abduct the shoulder
Internally rotate the shoulder
Flex the carpus



C/S: Neural Conduction and Mobility

- **Median Nerve Dural Tension Test**

Depress / Retract the scapula

Straighten the elbow

Flex the shoulder

Abduct the shoulder

Externally rotate the shoulder

Extend the carpus



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- **Ulnar Nerve Dural Tension Test**

Abduct the shoulder

Flex the elbow

Extend the carpus

(i.e. put the paw
behind the head)



L/S: Neural Conduction and Mobility

- **Remember** (from the T/S section)
- **Neural conduction and mobility**
 - Segmental facilitation leads to hypertonicity (initially) and reduced motor function which causes atrophy (secondarily).
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L/S: Neural Conduction and Mobility

- **Dural slump test, Straight leg raise, & Prone knee bend:**
 - Human techniques to detect neural mobility restrictions or inflammation
 - The connective tissue attachment and continuity of the neural structures, as well as the inherent resting tension means that movement of one body part will have an effect on the nervous system elsewhere in the body and can also restrict movement when too tight.

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L/S: Neural Conduction and Mobility

- **Dural slump test**

- Sciatic Nerve ‘stretch’

In sitting, round the spine, straighten the stifle, and flex from the hip as far as tolerated.

Movements to incorporate with this test include:

- Hock flexion + inversion will stress the sciatic nerve, tibial nerve and sural nerve
- Hock extension + inversion stresses the sciatic nerve and common peroneal nerve
- Hip Adduction stresses the lumbosacral plexus
- Medial rotation of the hip stresses the sacral plexus and common peroneal nerve
- Cervical flexion may increase the symptoms and extension may decrease the symptoms



L/S: Neural Conduction and Mobility

- **Straight leg raise**

- Sciatic Nerve ‘stretch’

Lateral recumbency, round the spine, straighten the stifle, and flex from the hip as far as tolerated.

Movements to incorporate with this test include:

- Hock flexion + inversion will stress the sciatic nerve, tibial nerve and sural nerve
- Hock extension + inversion stresses the sciatic nerve and common peroneal nerve
- Hip Adduction stresses the lumbosacral plexus
- Medial rotation of the hip stresses the sacral plexus and common peroneal nerve
- Cervical flexion may increase the symptoms and extension may decrease the symptoms



L/S: Neural Conduction and Mobility

- **Prone Knee Bend**

- Femoral Nerve 'stretch'

In Lateral Recumbency:

- Straighten or Round the spine (try one and if you don't get the tension you expect, then try the other) and...
- First bend the stifle – holding this position, then extend the hip (keeping a bent knee).
- Adding cervical flexion or extension may increase the symptoms (tension)

