# Neurological Assessment

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Multiple sclerosis is an autoimmune disorder that attacks the myelin sheath of a neuron. While this disorder occurs sporadically in patients, those that lack vitamin D in their diets, and those with the genetics HLA-DL2 are more susceptible to developing it. Questions to ask patients when assessing would be as following: asking if the patient has had problems with swallowing or speaking, asking about loss of sensation in limbs, and assessing for the Lhermitte Sign by asking them to flex their necks and reporting if they have had any tingling sensation in their legs from it (Teoli, 2020). The Lhermitte Sign is a symptom only found in multiple sclerosis and is a likely indicator of this disorder.

Meningitis can occur from a bacterial infection, or from encountering a virus. It causes inflammation of the pia mater, arachnoid mater, and subarachnoid space. Questions to ask to assess patients would be asking them to describe the pain of their headaches, if they have pain in turning their head, or any nausea and vomiting. Another assessment that can be made is to look for if there is pain in the patient from laying down and bringing a leg up. This is called the Brudzinski's sign and is a strong indicator of meningitis (Stribos, 2020). Both multiple sclerosis and meningitis have signs having to do with the movement of the head and neck. However, meningitis does not cause muscle weakness.

Cerebral vascular accidents, also known as strokes or CVAs, can happen for many reasons. The two types of strokes, hemorrhagic and ischemic, happen from different causes but both result in the blockage of oxygenation of the brain. Hemorrhagic strokes happen from

ruptured blood vessels. Ischemic strokes happen from a blockage of blood in the brain that causes brain tissue necrosis. Assessing this patient starts by asking them questions such as can you smile, lift both arms symmetrically, and speak. Finding a drooping face, asymmetrical arm lifting, and difficulty speaking all indicate strokes (Santos, 2017). Multiple sclerosis and CVAs both have dysphagia but happen much more quickly with strokes, while it develops more slow-term in multiple sclerosis.

Bell's palsy is an acute facial paralysis that occurs unilaterally (Menchetti, 2021). It is a spastic paralysis caused by an entrapment of the facial nerve so that half of the face cannot relax. It is also a disease of lower motor neurons. Assessing the patient would start in asking the patient to wrinkle forehead, close eyes tightly, smile, puff cheeks, and identify different tastes. Asymmetric movements of the face would indicate Bell's palsy. Bell's palsy and cerebral vascular accidents both include paralysis of half of the face. However, Bell's palsy has spastic paralysis while strokes have flaccid paralysis.

Peripheral neuropathy refers to any condition that damages the peripheral nervous system (Martyn, 1997). Symptoms from this are motor nerve damage, and loss of senses in the periphery. An example of peripheral neuropathy comes from diabetics. Numbness and tingling in many diabetic's feet results as a side effect of diabetes. Questions to ask patients with peripheral neuropathy is if they have any numbness or tingling in their fingers, arms, legs, or toes. Another question that can be asked is if the patient has experienced any muscle weakness of painful cramps. Multiple sclerosis and peripheral neuropathy can both result in loss of muscle sensation

from damage to neurons. However, multiple sclerosis damages the myelin sheath of a neuron, and peripheral neuropathy can damage many other parts of the neuron.

## References

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