

## Brown-Séquard Syndrome



PLAY PICMONIC

### Hemisection of the Spinal Cord

#### Sectioning Half of Spinal Cord

Brown-Séquard syndrome is caused by hemisection of the spinal cord. Causes include penetrating trauma, tumor, disc herniation, and demyelinating disease.

### Clinical Features

#### Ipsilateral Loss of Sensation At Level of Lesion

##### Same-sided Damaged Sensor as Leech

In Brown-Séquard Syndrome, there is a loss of all sensation on the same side as the lesion at the level of the lesion.

#### Ipsilateral Flaccid Paralysis At Level of Lesion

##### Same-sided Limp Wheelchair and Leech

In Brown-Séquard Syndrome, there is segmental flaccid paresis at the level of the lesion due to the affectation of the lower motor neurons.

#### Ipsilateral Spastic Paralysis Below Level of Lesion

##### Same-sided Spaz-tick in Wheelchair Below Leech

Due to the Corticospinal tract damage, there is ipsilateral spastic paralysis below the level of the lesion. Clinically, this manifests as Upper Motor Neuron (UMN) signs below the level of the lesion, such as spasticity, increased muscle tone, and exaggerated deep tendon reflexes.

#### Ipsilateral Loss of Proprioception, Deep Touch, Vibration, and Pressure Below Level of Lesion

##### Same-side Broken Propeller-scepter, Deep-diver Touching Sensor, Vibrating Sensory-tuning-fork, Pressure-cooker Below Leech

In Brown-Séquard Syndrome, there is a loss of proprioception, vibration, and tactile (fine touch) discrimination below the level of the lesion due to an interrupted posterior column.

#### Ipsilateral Horner Syndrome if Lesion is Above T1

##### Same-side Horny-Pam with Up-arrow Teapot (1) Wand Above Leech

In lesions above T1, Horner syndrome occurs due to damage to the ipsilateral sympathetic fibers. Remember that Horner Syndrome is characterized by the triad of miosis, partial ptosis, and facial anhidrosis. Refer to the Horner syndrome Picmonic to review it.

### **Contralateral Loss of Pain, Temperature, and Crude Touch Below Level of Lesion**

[Opposite-side Falling Thermometer Touching Crude-Oil, with No-sign Pain-bolts Below Leech](#)

In Brown-Séquard syndrome, there is contralateral loss of pain, temperature, and crude touch sensation one or two levels below the lesion due to an interrupted spinothalamic tract. Remember that input of pain and temperature sensation from one side of the body (spinothalamic tract) crosses at the segmental level and runs towards the brain through the other side of the spinal cord.