

WHAT IS BROWN-SÉQUARD SYNDROME?

More than 500 cases of Brown-Séquard syndrome have been reported to date.

Brown-Séquard syndrome (BSS) is a rare neurological condition caused by an injury to one side of the spinal cord in the region of the neck or back. This results in muscle weakness or paralysis on one side of the body and a loss of sensation on the side opposite the injury. BSS is considered an incomplete spinal cord injury due to the partial preservation of sensory and/or motor function.

01 | Causes

The most common causes of BSS are traumatic, penetrating injuries, including:

- Gunshot wounds
- Stab wounds
- Motor vehicle accidents
- Fractured vertebra resulting from a fall

Less commonly, BSS can be caused by non-traumatic conditions such as:

- Cervical spondylosis
- Multiple sclerosis
- Meningitis
- Herniated disk

02 | Symptoms

The first symptoms of BSS are usually the loss of voluntary motor function below the area of trauma on the same side that the injury occurred. Loss of pain and temperature sensation will also occur on the other side of the body below the level of injury. These symptoms will generally improve with proper treatment, and more than 90% of affected individuals recover bladder and bowel control and the ability to walk.

03 | Treatments

Treatment for this disorder focuses on the underlying causes. Initial treatment for BSS may involve:

- Gunshot wounds
- Surgery for non-traumatic causes

- Medication to prevent blood clots
- Breathing support
- Neurogenic bladder management
- Temperature-regulating blankets

The second stage of treatment is rehabilitation through physical and occupational therapy. The goals of physical therapy are:

- Maintaining strength in neurologically intact muscles
- Maintaining range of motion in joints
- Preventing skin breakdown
- Improving mobility

For more information on Brown-Séquard syndrome and supportive resources, please visit clevelandclinic.org.

Did You Know?

Approximately 2%–4% of traumatic spinal cord injuries reported in the U.S. each year result in Brown-Séquard syndrome.

References:

https://www.physio-pedia.com/Brown-Sequard_Syndrome

<https://rarediseases.org/rare-diseases/brown-sequard-syndrome/#therapies>

<https://my.clevelandclinic.org/health/diseases/22749-brown-sequard-syndrome-bss>

<https://emedicine.medscape.com/article/321652-overview?form=fpf>

<https://www.ninds.nih.gov/health-information/disorders/brown-sequard-syndrome>