

Incomplete Paraplegia (T10 Vertebra Injury)

The human brain and spinal cord make up what is known as the Central Nervous System. Injury to the spinal cord can occur through trauma, disease and degeneration, which can result in debilitating conditions known as paraplegia and quadriplegia. Paraplegia commonly refers to damage of the nerves between the T2 and S5 vertebra (including T10) which link the brain to lower regions of the body.

Incomplete paraplegia refers to the **partial** severing of the spinal cord that involves 31 pairs of nerves and results in reduced numbers of functioning signal pathways between the brain and areas below the spinal injury. It differs from complete paraplegia

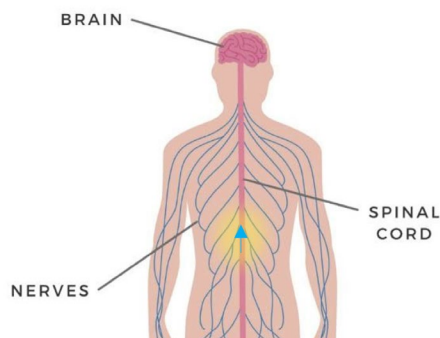
where **full** severance has occurred and no reliable signal paths remain through the injury site. With incomplete paraplegia, one or both sides of the individual may be affected and their level of functional impairment will depend on the type and degree of damage to the corresponding nerves. (Coexisting medical conditions are also a contributing factor.)



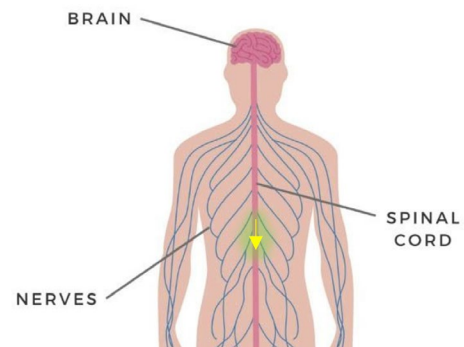
T10 Vertebra (Image credited below)

Two nerve pathways exist in the spinal cord;

The **Afferent** pathways carry information from parts of the body **to the brain** for processing.
(Used for sensation.)



The **Efferent** pathways carry signals **from the brain** to perform actions.
(Used for motor function.)



The brain's post-trauma ability to adapt to the changed signal pathways (called neuroplasticity) can result in substantial improvement for the person suffering from Incomplete Paraplegia. This can take from weeks to years and a medically guided rehabilitation process usually forms part of the recovery. Factors including age will influence recovery and even in younger people, aids will typically be required for walking and some daily activities.

Symptoms

A person affected by partial severance at the T10 vertebra may experience:

Inability to walk, stand or experience sensation in the legs

Lower abdominal issues, including abnormal bladder and bowel operation

Lack of control or feeling in the buttocks

Loss of muscle control or sensation in one side of the lower body

Pain, weakness, numbness or tingling in a number of areas below the navel

Care

Basic care of the affected person will likely include:

Gaining a good understanding of the individual's specific requirements

Providing activities that strengthen muscles and assist overall health

Accompanying to rehabilitation appointments

Access to assistive technology

Helping with dressing, mobility and other daily tasks when required

Promoting community integration

Ensuring that maximum independence is facilitated and dignity and rights are preserved

With intentional care, independence should increase through physical improvement and equipping the individual with techniques to manage their condition. Some partial and even complete paraplegics are able to drive, aided by modified vehicles that employ their superior upper body functionality.

Reference Links and Credits:

<https://www.nichd.nih.gov/health/topics/spinalinjury/conditioninfo>

<https://www.flintrehab.com/spinal-cord-injury-levels/>

<https://www.spinalcord.com/paraplegia>

<https://www.spinalcord.com/t9-t12-vertebrae-thoracic-spinal-cord-injury>

<https://www.who.int/news-room/fact-sheets/detail/spinal-cord-injury>

<https://www.flintrehab.com/spinal-cord-injury-levels/>

<https://www.ncbi.nlm.nih.gov/books/NBK542179/>

<https://my.clevelandclinic.org/health/diseases/12098-spinal-cord-injury>

https://www.physio-pedia.com/Prognosis_and_Goal_Setting_in_Spinal_Cord_Injury

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