Spinal Cord Injury Classification

Spinal cord injury (SCI) is classified based on **neurological level**, **completeness**, and **severity** using the **ASIA (American Spinal Injury Association) Impairment Scale (AIS)**.

1. Neurological Level of Injury (NLI)

- The **lowest** spinal segment with normal sensory and motor function on both sides of the body. - Tested segment-by-segment:

- Sensory: Dermatome testing
- Motor: Myotome testing

2. Completeness of Injury

- **Complete injury**: No sensory or motor function is preserved in sacral segments (S4–S5). - **Incomplete injury**: Some sensory or motor function preserved below the injury level, including sacral segments.

3. ASIA Impairment Scale (AIS)

Grade	Description
A	Complete: No motor or sensory function in S4–S5.
B	Sensory Incomplete: Sensory but not motor function preserved below the level, including S4–S5.
C	Motor Incomplete: Motor function preserved; more than half of key muscles have muscle grade <3.
D	Motor Incomplete: Motor function preserved; at least half of key muscles have muscle grade ≥3.
E	Normal: Motor and sensory functions are normal.

4. Zone of Partial Preservation (ZPP)

- Only used in **complete injuries** (AIS A). - Refers to dermatomes and myotomes below the neurological level that retain some function.

Notes

You can expand the examination by adding:

- Standard sensory key points
- Standard motor key muscles

- Reflex testing
- Deep anal sensation and voluntary anal contraction (for sacral sparing)

Complete spinal cord injury.

Complete transection spinal cord injury.

Incomplete spinal cord injury.

Cervical spinal cord injury.

Traumatic spinal cord injury.