

## American Spinal Injury Association (ASIA) Impairment Scale

The American Spinal Injury Association (ASIA) Impairment Scale is a tool used by medical professionals, particularly rehab specialists, to classify spinal cord injuries. The various classifications indicate the level of function of the patient regarding motor and sensory function, with some injuries featuring various levels of sensory and motor involvement. When used correctly, physicians can utilize the ASIA scale to aid in the plan of care for patients as well as predict the prognosis of their injury.



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### ASIA Impairments Scale (AIS)

#### ASIA A

##### (A) Apple

ASIA A is a complete injury of the spinal cord. Patients with this classification will have no sensory or motor function below the level of the injury.

#### Complete

##### Complete Injury

“Complete” refers to a spinal cord injury in which there is a total loss of sensory and motor function below the level of injury.

#### ASIA B

##### (B) Bee

ASIA B classification describes incomplete injury featuring complete loss of motor function below the level of injury; however, some sensation below the injury still exists, including sensation in and around the anal sphincter region (S4–5).

#### Sensory Incomplete

##### Sensory-satellite Incomplete

A person with Sensory Incomplete injury according to the ASIA Impairment Scale (AIS) will have some sensation below the level of injury but not in all key sensory areas. They may have areas of the body where they cannot sense light touch or pinprick, but have preserved sensation in other areas. This type of injury usually indicates that some spinal cord pathways are still intact, which may give some potential for future recovery.

#### ASIA C

##### (C) Cat

ASIA C classification includes incomplete injury with some sensory and motor function to muscles no more than three levels below the level of injury. Most of these functioning muscles score below 3/5 on MMT.

#### Motor Incomplete

##### Motor Incomplete

“Motor Incomplete” refers to a spinal cord injury in which there is some preserved motor function below the level of injury. In ASIA C, at least half of the key muscles that are tested in each myotome below the level of injury have a muscle grade less than 3/5 on manual muscle testing. The sensory function may also be affected to some degree, but the motor function is the primary factor that determines the classification as motor incomplete. The individual may have some voluntary movement, but it is limited and usually not enough to perform functional activities. The specific level and

extent of motor function depend on the location and severity of the injury.

## **ASIA D**

(D) Dog

ASIA D classification describes incomplete injury. Below the level of the injury, sensory and motor function are still intact, with approximately half of the current functioning muscle groups scoring at least a 3/5 or higher on the MMT scale.

## **Motor Incomplete**

Motor Incomplete

“Motor Incomplete” refers to a spinal cord injury in which there is some preserved motor function below the level of injury. In ASIA D, the individual may have some ability to move their limbs, but their movements are limited and they may require assistance with certain tasks.

## **ASIA E**

(E) Elephant

ASIA E classification describes a patient with baseline motor and sensory function. No deficits.

## **Normal**

Normal Spine

“Normal” refers to an individual with no evidence of a spinal cord injury and no neurological deficits.