

Spinal Injury Awareness

Factsheet



Spinal Cord Injury (SCI)

- The spinal cord is a bundle of nerve fibers and tissue within the spine
- SCI is the result of damage to any portion of the spinal cord
- Damage to any part of the spinal cord can impact sensory, motor, and reflex capabilities
- The effect of the injury will depend on its location

Implications of SCI

SCI is a life changing event and requires a high level of care.

- Sensory, motor and reflex messages are impaired
- It affects a wide range of bodily functions and a persons mental health

Common symptoms of cervical spine injury

- Inability to breathe on one's own without assistance (C1-C4)
- Impaired ability or inability to speak (C1-C4)
- Numbness, tingling, or loss of feeling below the level of the injury
- Paralysis in the legs, torso and arms
- Inability to control bladder and bowel function
- Inability to groom or dress oneself

Common symptoms of thoracic spine injury

- Breathe normally with limited endurance
- Use a manual wheelchair
- Feed oneself
- Transfer themselves in and out of their wheelchair without assistance
- Drive a modified car with hand controls
- Able to use a standing frame and/or leg braces
- Lack of control of bowels or bladder

Common symptoms of lumbar spine injury

- Paraplegia with functional independence
- The need for a manual wheelchair for part-time or full-time use
- Ability to ambulate using braces or other walking devices
- Lack of control of bowels or bladder

Bowel function after Spinal Cord Injury

- Descending input from the brain to the colon and ano-rectum is lost
- Primitive (enteric) nervous system remains in tact therefore peristalsis continues

Cervical Spine
C1 - 7

Thoracic Spine
T1 - 12

Lumbar Spine
L1 - 5



- Injury above T12 = reflex bowel therefore upon stimulation the bowel will evacuate
- Injury below L1 = Flaccid bowel therefore requiring Manual evacuation

Spinal Injury Awareness

Factsheet



Common symptoms of sacral spine injury

- Lack of control of bowels or bladder
- Lower back pain
- Leg pain, which may radiate down the back of the leg(s)
- Sensory issues in the groin and buttocks area

What is Autonomic Dysreflexia (AD)?

Autonomic dysreflexia is a sudden and exaggerated autonomic response to stimuli in people with spinal cord injuries or dysfunction.

The condition should be addressed immediately because it is a medical emergency that can result in death if untreated.

Treatment

- Digital rectal examination should be conducted following the application of a local anaesthetic
- If it is thought that the onset is due to constipation/the need to defecate, then the stool should be removed gently and gradually
- If symptoms persist or worsen the procedure should be stopped. If symptoms subside then the process can continue cautiously.

Bladder function after SCI

- Paralysis at any level usually affects bladder control
- Normal signals do not work effectively (neurogenic bladder)
- The detrusor and sphincter may become overactive or inactive
- This causes high pressure in the bladder, damage to the kidneys and Autonomic Dysreflexia

Bladder care

- Regular catheter changes
- Checking for any sign of UTIs or urinary tract infections
- Regular examination, for any sign of kink in the tubing which leads to the urinary collection bag
- Drinking plenty of fluids
- In case of self-catheters, one should take care to do them frequently and keep it consistent with the fluid intake amount

Care management

Autonomic dysreflexia is a life-threatening emergency and needs to be addressed immediately.

AD is recognised as a medical emergency and hence should be taught as such to staff and patients who may encounter it.

This will result in a more effective response to and treatment of patients with AD that may possibly save lives.

Short term AD complications

Rapidly lowering blood pressure may cause

- Dizziness
- Nausea
- Vomiting
- Significant drop in pulse rate can lead to cardiac arrest

Long term AD complications

- Seizures
- Stroke
- Myocardial infarction
- Pulmonary oedema
- Cerebral haemorrhage
- Bleeding in eyes
- Kidney damage