



Information for health care professionals on patients with spinal cord injury and their supports

This document provides information on functions that may be impaired by spinal cord injury (SCI) and health information for health care professionals to consider when supporting patients with SCI.

Often one of the best resources is the patient themselves – people with SCI all have their own unique experiences and familiarity with their situation and needs.

Healthcare professionals working with patients with SCI should consider the following:

Respiratory impacts of SCI

Quadriplegia and high-level paraplegia results in compromised breathing due to paralysed respiratory muscles and abdominal muscles, in addition to weakened cough reflex. Support may therefore be required to maintain respiration and clear the airway of secretions.

Issues and advice to consider:

- When sitting up, paralysis of the abdominal muscles can lead to lowering of the diaphragm. This may increase the required respiratory effort of the person with SCI. Consider application of an abdominal binder and supine positioning 45 degrees or lower to prevent respiratory fatigue
- Prophylactic sputum clearance management may be required if chest secretions increase
- Regular position changes will encourage postural drainage
- An assisted cough will likely be required to assist with sputum clearance. Use of a mechanical insufflation/exsufflation device may be required
- Oxygen therapy may need to be considered
- Physiotherapist referral is essential
- Continuous monitoring of oxygen saturation levels, arterial blood gases and vital capacity is essential for early recognition of respiratory failure
- Consider if non-invasive ventilation may be appropriate to prevent respiratory fatigue
- Be aware that constipation can splint the diaphragm and increase respiratory effort.



Thermoregulation

SCI compromises the ability of the autonomic nervous system to regulate body temperature in the paralysed parts of the body. People with SCI are at high risk of heat exhaustion during fevers if cooling methods are not commenced.

Issues and advice to consider:

- If possible, reduce environmental temperature (e.g use of fans or air conditioning)
- Remove clothing and use modesty sheet only
- Use osculating fan if available
- Encourage cold drinks and offer assistance to patients who have difficulty managing their own liquid intake
- Applying a cold dampened cloth around the back of neck and armpits will assist in regulation
- If appropriate, use paracetamol and ibuprofen to reduce fever
- Monitor temperature closely and cease cooling interventions as soon as temperature returns to normal limits (typically 36.5 – 37.5°C or 99.7-99.5°F) to prevent hypothermia.

Autonomic Dysreflexia

Autonomic Dysreflexia is a life-threatening condition that causes a surge in blood pressure which can lead to seizures, stroke or death. It requires immediate clinical attention.

The common causes are a distended bladder, impacted bowel, compromised skin integrity or any noxious stimulus in the paralysed part of the body.

Issues and advice to consider:

- Please ensure the bladder can drain effectively
- If indwelling catheter in situ, secure to prevent pulling or kinking
- The cause will need to be identified and removed e.g changing catheter
- Ensure the patient is sitting upright, or has the head of their bed elevated
- Loosen clothes and remove any compression stockings or abdominal binders
- If the cause is not immediately resolved, consider administration of medications.

For more information, visit health.qld.gov.au/qscis/health/dysreflexia



Preventing skin damage

There is a very high risk of skin breakdown in people with SCI.

Issues and advice to consider:

- If left on an ambulance trolley, pressure damage will occur. Transfer to an alternating pressure mattress as soon as possible.
- Assist the patient with a position change every two hours
- Place pillows under legs of the patient to ensure the heels and ankles remain completely pressure free.

For more information, visit health.qld.gov.au/qscis/health/skin-care

Neurogenic bladder and bowel

Neurogenic bladder and bowel are very common conditions for people who have an SCI.

Issues and advice to consider:

- Due to lack of bladder sensation, close monitoring of urinary output is required to prevent bladder distension which can lead to autonomic dysreflexia or other complications
- If indwelling catheter required, ensure it is adequately secured to prevent pulling or kinking
- An indwelling catheter will require routine changes according to the regular routine of the patient
- Prevention of constipation is essential as this can splint the diaphragm and impair respiration and incontinence, leading to compromised skin integrity and loss of dignity
- Adherence to the amount and timing of usual oral laxatives and rectal interventions is essential
- Bowel care routines may include digital rectal stimulation, the insertion of the finger into rectum and rotation of finger while maintaining contact to the rectal wall to elicit involuntary anal/rectal contractions and reflex bowel emptying. This may also require post-event assistance with hygiene
- Chemical rectal stimulants, such as suppositories or enemas, may be required
- The patient may require assistance to transfer onto toilet or for re-positioning on their side to use an incontinence sheet in bed
- Assistance with personal hygiene may be required to prevent moisture lesions
- Avoid containment pads such as nappies, as these will avoid detection of incontinence episodes and can lead to skin excoriation from faecal matter. Incontinence sheets are a more appropriate solution.

For more information, visit health.qld.gov.au/qscis/health/bladder-bowel



Useful resources

Queensland Spinal Cord Injuries Service

The Queensland Spinal Cord Injuries Service (QSCIS), located in Brisbane, has developed a unique continuum for the acute care, rehabilitation and ongoing management of individuals with spinal cord injuries, representing a best practice model in this field. QSCIS provides world-class care to people with spinal cord injury. The service aims to assist individuals who have suffered spinal cord injury to reach their maximum potential and stay healthy.

<https://www.health.qld.gov.au/qscis/about-the-queensland-spinal-cord-injuries-service>

E learn SCI

A web-based teaching and educational resources for health care clinicians. An initiative of the International Spinal Cord Society (ISCoS) it's aim is to provide comprehensive information on SIC management to students and clinicians from all medical and paramedical disciplines involved in SCI care.

<http://www.elearnsoci.org/>

SCIRE (Spinal Cord Injury Research Evidence)

Reviews, evaluates, and translates existing research knowledge into a format designed to inform health professionals and other stakeholders of best rehabilitation practices following SCI.

<https://scireproject.com/>