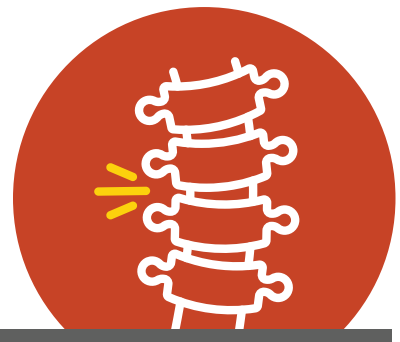
Shepherd Center

Reducing Complications After *Spinal Cord Injury*



Early prevention strategies can reduce secondary complications and improve patient outcomes.

Provide Aggressive Pulmonary Care and Protect Airways

» Control secretions with oral and deep suctioning, an in-exsufflator cough-assist device and higher tidal volumes on ventilation.
» Provide oral care twice per day, including swabbing mouth with normal saline or oral chlorhexidine.
» Elevate the head of the patient's bed.
» Provide trach care daily, including swabbing around tracheostomy with hydrogen peroxide solution and changing split gauze.
» Perform early intubation to reduce sputum retention.
» Allow patients to have "sedation vacations" to minimize sedation time.

Prevent Venous Thromboembolism (VTE)

» Use appropriate pressure-grade/sequential stockings.
» Administer low-molecular-weight heparin when the patient is stable, and the risk of bleeding is low.
» Assess extremities frequently for swelling, discoloration, temperature, or asymmetry.
» Consider a vena cava filter, especially for patients who are not candidates for anticoagulation or have not responded to prophylaxis.

Bowel Management

» Start a bowel program immediately.
» Use a chemical or mechanical stimulant, as ordered, to start peristalsis.
» Introduce fiber, hydration and mobilization as soon as possible.
» Monitor for changes in bowel sounds, consistency, and output.
» Diarrhea may be a sign of impaction.
» Discontinue medications that may cause constipation when possible.

Maintain Skin Health

» Use gel-padded backboards, operating tables, and stretchers.
» Examine skin twice a day for signs of bruising, redness or abrasion.
» Keep skin clean, especially where it has contact with bowel movements.
» Control moisture, especially in perineal area, folds under breasts and skin folds. Use anti-fungal powder to reduce friction and bacteria. Antiperspirant deodorant is a good strategy for troublesome areas.
» Use draw sheets and lifts to reposition, reducing risk of shear.
» Implement an every 2-hour schedule for padding and positioning, unless medically contraindicated.
» Always check bony prominence areas after a position change.
» Perform weight shifts every 15–30 minutes, maintaining pressure relief for 2 minutes when seated to allow full reperfusion of tissues.
» Consult a registered dietitian for individualized nutritional assessment to ensure adequate protein and fluid intake
» Provide foot hygiene or care; trim nails, monitor for thick callouses, as there may be a pressure injury underneath.
» Routinely ensure that pressure-relieving equipment, including seat cushions and mattresses is working and utilized properly.

Pain Management

» Treat acute pain to prevent chronic pain.
» Consult with therapy to coordinate interventions, positioning, splinting and other modalities to address pain.
» Consider a pain consultation for trigger-point injections and alternative measures.

Intervene with Early Therapy

» Consult therapy early to address strength and endurance, abnormal tone, and maintain range of motion (ROM).
» Reduces the risk for complications such as joint contractures, VTEs, respiratory infection, and bowel impaction.
» Preserves and improves functional abilities.
» Use elastic bandages and an abdominal binder when transitioning to upright positions for hypotension.
» Consult with speech therapy regarding swallowing and communication.

Neurogenic Shock:

» ***Hypotension***
- Rule out other causes of hypotension.
- Consider vasopressors (dopamine, norepinephrine, phenylephrine).
- Maintain mean arterial pressure (MAP) of 85-90 mmHg in early phase.

» ***Bradycardia***
- Consider hyperoxygenation before suctioning – 100% O2.
- Consider pre-medication prior to suctioning with atropine.
- Consider Pacemaker.

» ***Decreased preload***
- Consider fluid resuscitation.

» ***Spinal shock***
- Consider vasopressors (dopamine, norepinephrine).
- Monitor muscle tone and prevent contractures.
- Protect joints and range of motion.

Take Other Infection-Control Precautions

- When patients present with fever, focus on one of the **Three W's: wind (pulmonary), wound (sugical site), and water (urinary).** The source of infection for people with spinal cord injury is usually found in one of these areas.
- Use maximal barriers (gown, mask, sterile gloves, cap) when inserting a central line.
- Clean the skin with chlorhexidine before inserting a central line.
- Monitor duration of intravenous catheters to reduce bloodstream infections.
- Minimize the use of antibiotics and use targeted (not broad-spectrum) antibiotics.
- Monitor urine, look for changes in color, odor and clarity; check patient temperatures to detect possible urinary tract infection.
- Only treat clinical urinary tract infections to prevent antibiotic resistance.
- Remove the indwelling catheter as soon as possible.
- Provide adequate nutrition, including a positive nitrogen balance.

For additional education on these topics, visit Shepherd Center NeuroRehabilitation Learning Institute at ***education.shepherd.org.***

Rev. 06/2026