

# SPINAL CORD INJURY PATHOCHART

## PATHOPHYSIOLOGY

Spinal cord injuries usually occur due to trauma and fractures of the vertebrae. If the spinal cord is damaged, the body will lose all functions controlled from that point and down (distal to the injury). This could include autonomic regulation, breathing, bowels, and bladder function. The higher the injury, the more risk of difficulty breathing, especially if C5 or higher. The most dangerous complication of spinal cord injuries is Autonomic Dysreflexia, an overreaction of the Autonomic Nervous System that can cause severe hypertension and hyperthermia.



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## ASSESSMENT FINDINGS

- Loss of motor/sensory functions BELOW level of injury
- Loss of control of bowels/bladder
- Autonomic Dysreflexia
  - Severe HTN, Bradycardia
  - Elevated Temp, Flushed skin
  - Blurry vision

## DIAGNOSTICS

- Sharp/Dull test to test sensation
- CT and MRI of spine
- Neuromuscular stimulation tests

## NURSING PRIORITIES

- Optimize Autonomic Regulation
- Optimize Functional Ability
- Promote Comfort

## THERAPEUTIC MANAGEMENT

- Physical Therapy / Rehab
- Respiratory support if high-level injury
- Therapeutic Hypothermia
- Monitor for neurogenic shock
- Immobilization/Traction
- Halo Brace

## MEDICATION THERAPY

- Analgesics
- Corticosteroids
- Muscle Relaxants
- Autonomic Dysreflexia
  - Nitroglycerin
  - Calcium Channel Blockers