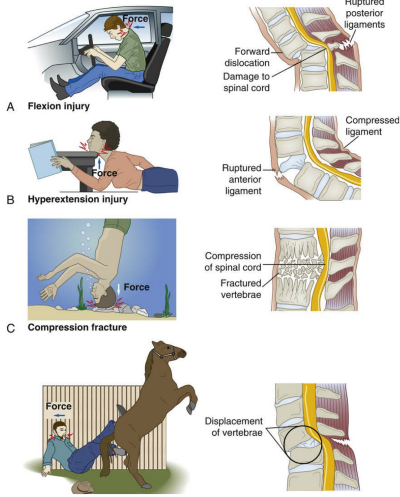


# Pathophysiology

Classified By mechanism, level & degree

## ① mechanism



## ② level

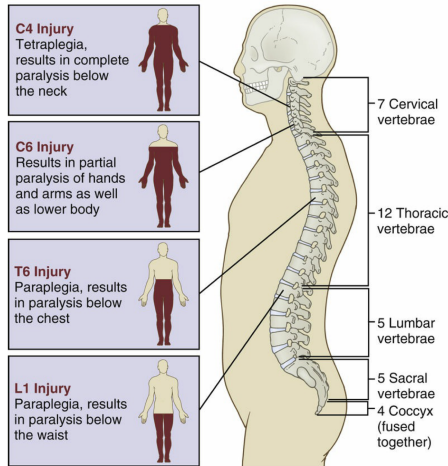


FIG. 60.4 Symptoms, degree of paralysis, and potential for rehabilitation depend on level of spinal injury.

## ③ degree

Primary: initial injury

Secondary: causes defects after injury

Complete: total loss of sensory & motor function below level of injury

Incomplete: mixed loss of voluntary motor activity & sensation  
↳ some nerves are still intact

## Risk factors

- male 16-30
- trauma

## diagnostic tests

- oct
- mri

## nursing interventions

### • Prehospital care

- ↳ ABC w/ spine stabilization
- ↳ systemic & neurologic w/ SBP below 90

### • Acute hospital

- ABC w/ spine stabilization
- O<sub>2</sub> ↑ 90°
- mmp 85-90
- quad neurological assessment
- NG
  - ↳ low intermittent suction
  - ↳ high likelihood of ilius

### • elimination

- neurogenic bladder
  - ↳ medication
  - ↳ manual bowel emptying

### ■ Sexuality

- ↳ not their fault erectile dysfunction
- ↳ low to no infertility
- ↳ sexual function meds

### ■ Sensory deprivation

- encourage stimulation, encourage good rest

### ■ tissue perfusion

- frequent vital sign checks
  - ↳ concerned about low BP/bodycardia
- monitor blood loss/anemia
- SCD's Anticoagulants

### ■ nutrition / metabolism

- in ↑ metabolic state
- ↑ protein diet, lots fluids, ↑ fiber, ↑ nutritional dense
- daily weights
- swollen straws

- Neurogenic Bowel
  - ↳ high fiber & adequate fluids

- NB
  - prevents paralytic ileus
  - suction of IVD
  - nutrition within 72 hrs

## Complications

- Pneumonia
- Sepsis
- Automatic hyperflexia
  - ↳ SIS: vasodilation above injury
  - ↳ vasoconstriction below injury
  - ↳ treatment: remove/prevent aggravating stimuli, hypertensive med get HOB up

- VTE

	Spinal Shock	Neurogenic Shock
Mechanism	immediate temp loss of total power, sensation/reflexes below injury	swollen loss of sympathetic nervous system signals
Symptoms	SIS hypotension, Bradycardia, flaccid paralysis	SIS hypotension, Bradycardia & variable motor movement

## teaching

- **health promotion**
  - daily skin inspections & vti prevention
  - Regular Breast Exam/ prostate screening
  - prevention of disease
    - ↳ altered nervous system & ↓ physical activity place pts at risk for cardiovascular problems
- **home safety**
  - remove rugs, use a step stool
  - install handrails on stairs

## treatment

- **non surgical vs. surgical**
  - surgical
    - ↳ cervical/lumbar fusion if spinal cord is unstable
  - non surgical
    - ↳ C-collar
    - ↳ halo vest
- **medications**
  - ↳ heparine
    - prevention of VTE
    - sub q
  - ↳ **vasopressor**
    - norepinephrine & phenylephrine
    - maintain the MAP greater than 85-90 to improve perfusion
  - ↳ **anticholinergic drugs**
    - ditropan / detrol
    - suppress bladder contractions
  - ↳ **α-1 adrenergic med**
    - terazosin & doxazosin
    - relax sphincter
  - ↳ **stool softener**
    - docusate sodium
    - stool softener & decrease spasm of pelvic floor
  - ↳ **Corticosteroids**
    - reduce inflammation