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Prognosis, Treatment, Recovery, and Future for a Collegiate Male with a Spinal Cord Injury: A Case Study

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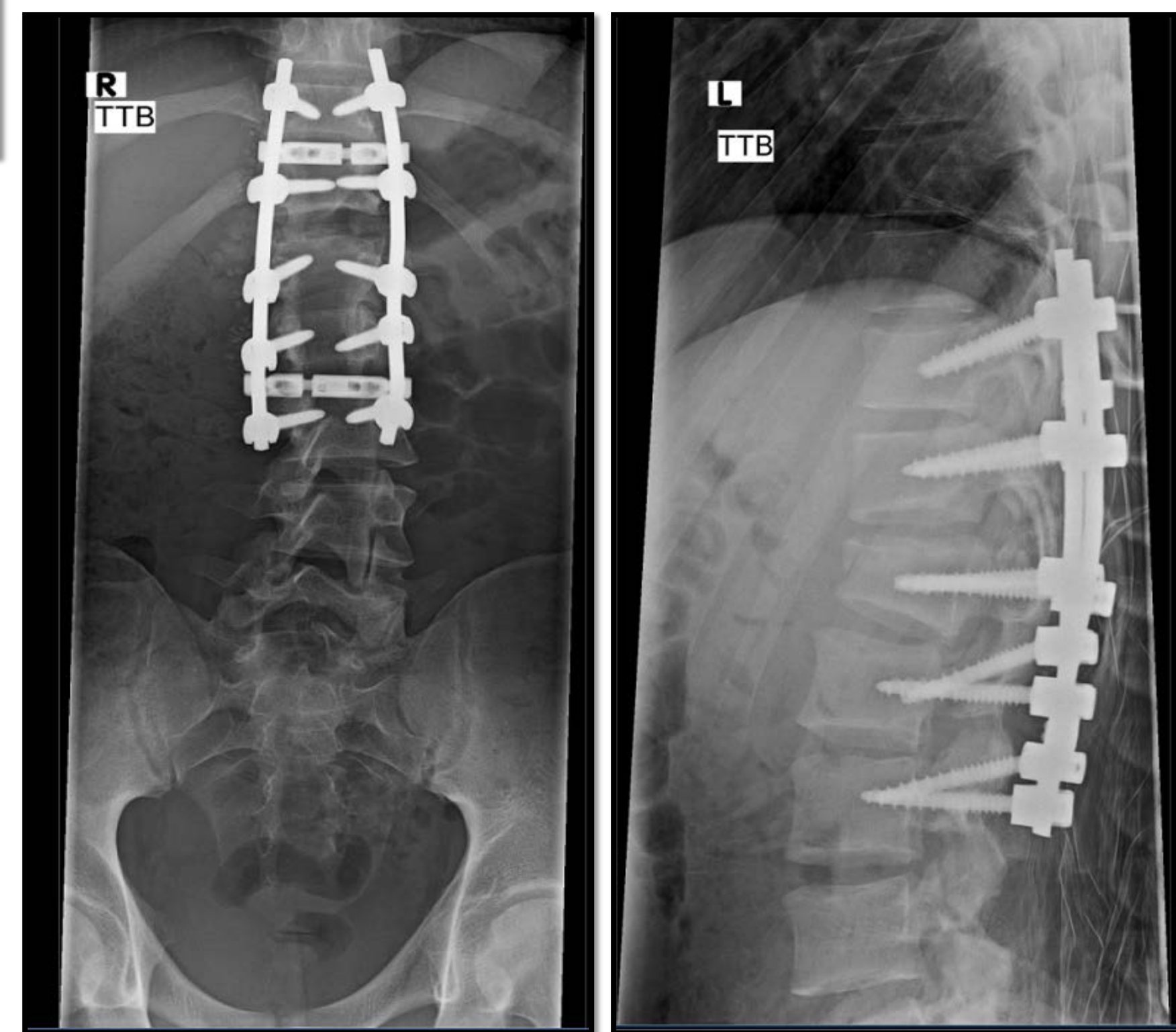
Case Study

- August 4th, 2015
 - Patient was 19 years old
 - Construction Accident
 - Fell 3 stories off of a platform that was not tied down correctly
 - The platform that fell rolled on top of him—causing the spine damage
- Patient airlifted to Renown Regional Medical Center in Reno, NV
 - Diagnostic Imaging performed
 - T-10-L-1 Complete Spinal Cord Injury
 - Surgery needed to repair damage to the bony anatomy
 - **note displacement from T-12 to L-1



- Surgical Intervention
 - August 4th, 2015
 - Rods and Screws Placed
 - Rods placed on both sides of the vertebrae
 - Screws were placed posteriorly to the vertebral bodies

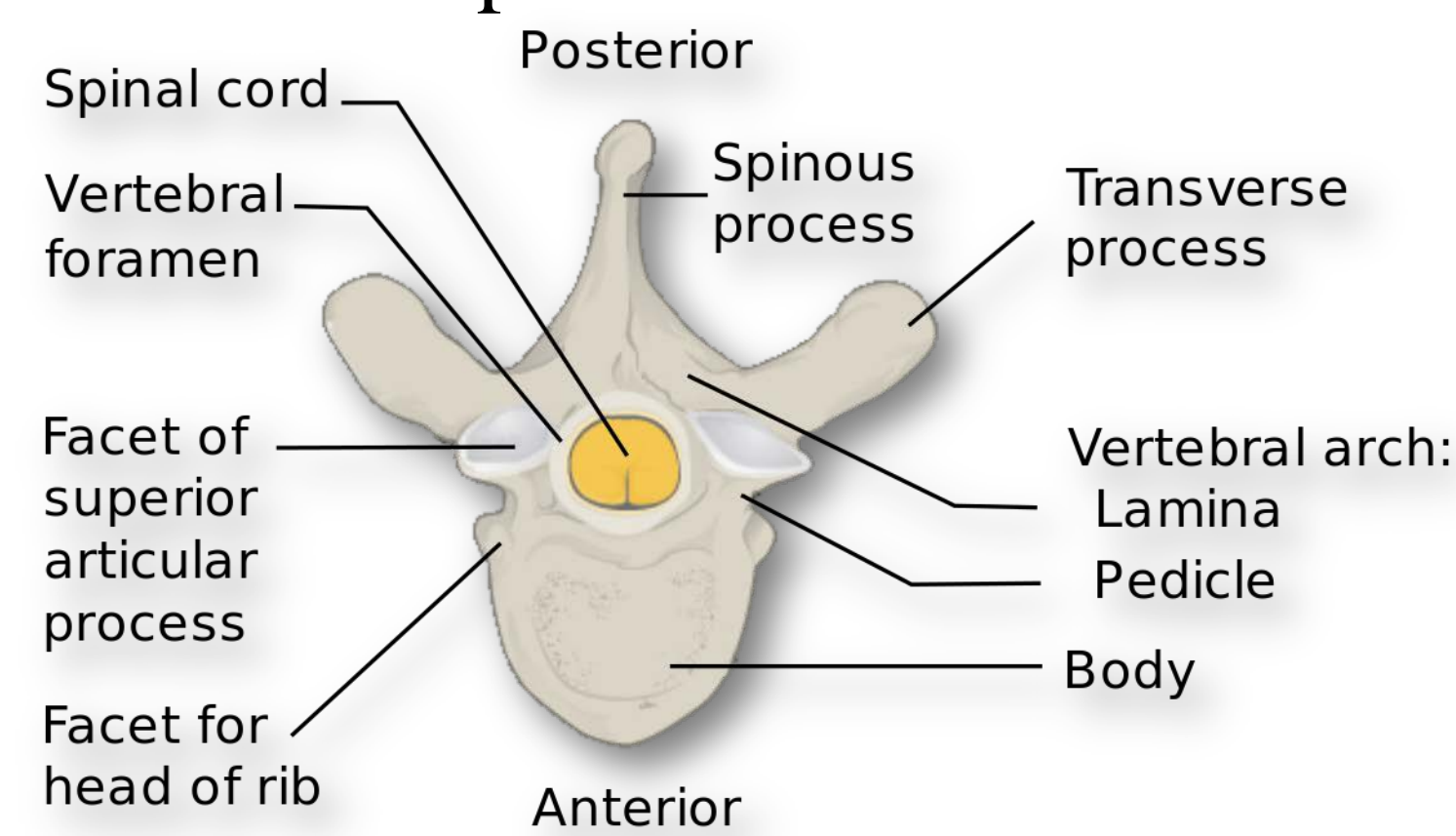
- Things to Note about SCI
 - First 48-72 hours are critical
 - People can have spinal cord injuries without bony misalignment
 - No radiological abnormality
 - Skin care is crucial
 - Because of lack of available movement



Anatomical Perspective

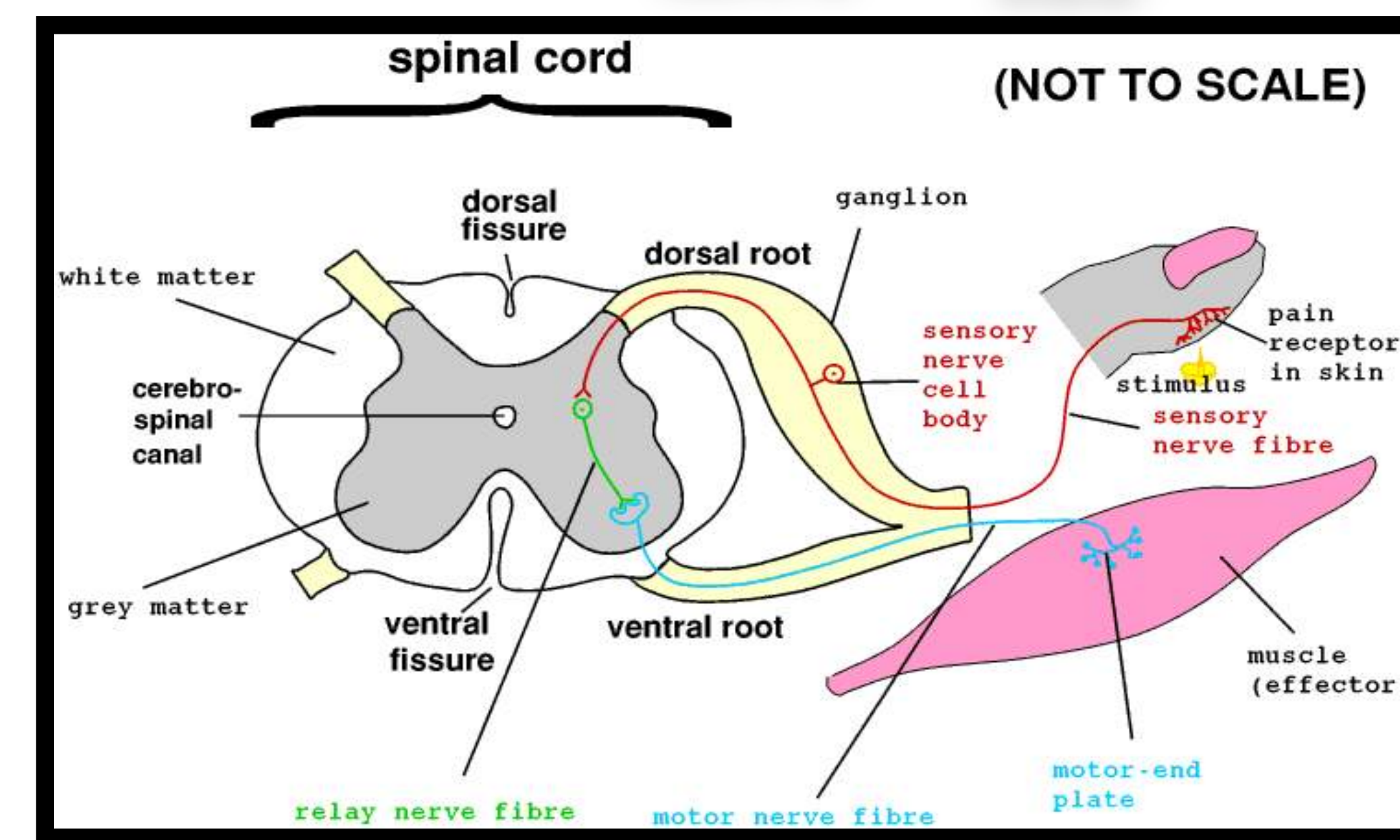
Anatomy of the Thoracic/Lumbar Spine

- Transverse Processes
- Spinal Processes
- Spinal Canal
- Body



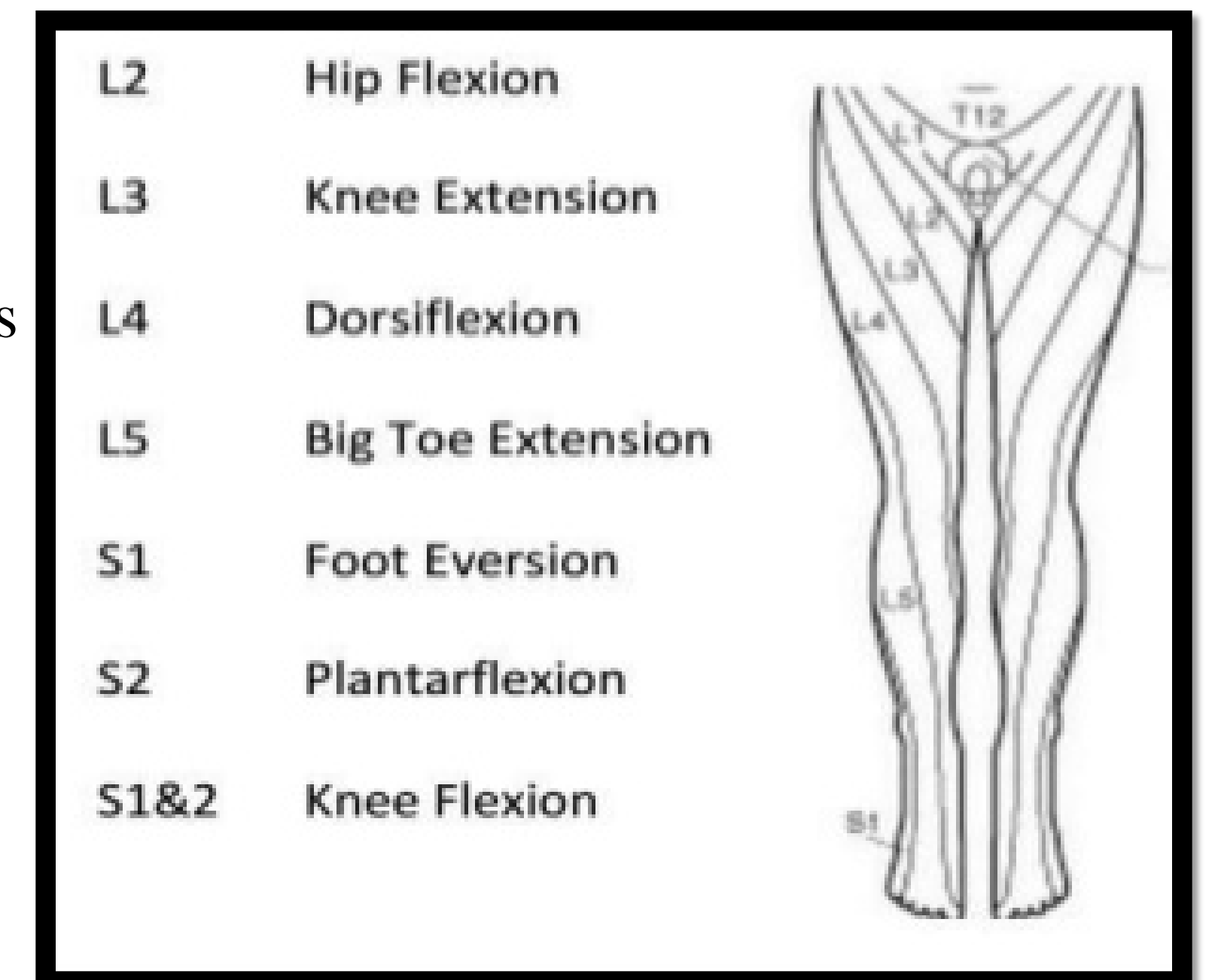
Anatomy of the Spinal Cord

- Afferent N. (sensory)
- Efferent N. (motor)



Therapeutic Perspective

- 6 Months in Hospital
- Rehabilitation at Shepard Center in Atlanta, GA
 - 1. Prevention of Joint Contractures
 - Flaccid
 - Muscle Spasticity
 - 2. Maintaining Movement in Upper Extremities
 - Strengthening Upper Extremities is CRITICAL!!!!
- Corset
 - Used to help patients stabilize and protect fractures in the acute phase
- Life Transitions
 - Day to Day Tasks
 - Showering
 - Dressing
 - Navigation
 - Transportation



Spinal Cord Injury Infographic

Types of Spinal Cord Injury

Prepared and designed by www.apparelyzed.com
spinal cord injury peer support

Complete Spinal Cord Injury
Complete loss of motor and sensory function below the spinal cord injury.

Paraplegia

Tetraplegia

Incomplete Spinal Cord Injury
Partial random preservation of motor or sensory function below the spinal cord injury.

Paraplegia

Tetraplegia

Common Types of Incomplete Spinal Cord Injuries

Brown-Séquard Syndrome
Below injury level, motor weakness or paralysis on one side of the body (hemiparaplegia). Loss of sensation on the opposite side (hemianesthesia).

Anterior Cord Syndrome
Below injury level, motor paralysis and loss of pain and temperature sensation. Proprioception (position sense), touch and vibratory sensation preserved.

Posterior Cord Syndrome
Below injury level, motor function preserved. Loss of sensory functions: pressure, stretch, and proprioception (position sense).

Central Cord Syndrome
Results from cervical spinal injuries. Greater motor impairment in upper body compared to lower body. Variable sensory loss below the level of injury.

Cervical Nerves:

- C1: Diaphragm
- C2: Deltoids
- C3: Biceps
- C4: Wrist extensors
- C5: Rotates arm
- C6: Triceps
- C7: Bends fingers

Thoracic Nerves:

- T1: Spread fingers
- T2: Chest muscles
- T3: Abdominal muscles
- T4: Muscles in the back
- T5-T12: (No specific muscles listed)

Lumbar Nerves:

- L1: Hip muscles
- L2: Thigh muscles
- L3: Knee Muscles
- L4: Foot muscles
- L5: (No specific muscles listed)

Sacral Nerves:

- S1-S5: Bladder and bowel
- S6: Sexual function

Key: ■ Normal Function ■ Impaired Motor Function ■ Impaired Sensory Function

Sources: www.apparelyzed.com, www.wikipedia.org, scl.rutgers.edu

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Psychological Perspective

- Day to Day Life
 - Moving on with New Outlook on Life
 - Facing New Reality
 - Facing Disability Stigmas
 - Coping Strategies
 - New Activity Interests
 - Different view of the world and how peers view the patient
- Community
 - Family
 - Friends
 - Significant Others
 - Teammates
 - Peers
 - Grieving is apparent for many of the surrounding community
 - Note all parties involved as a medical professional
 - Many go through a life transition that isn't physical

