

C5 to C8 Spinal Cord Injury Intervention Guide

Secrets From a Student Clinician

Body Structures Affected

C5

- Total paralysis of wrists, hands, trunk, and legs
- Biceps preserved, can raise arms and bend elbows
- Can supinate forearm

C6

- Triceps, wrist flexion, hands, trunk, and legs
- Preserved wrist extension and pronation of forearm
- Use of tenodesis grasp

C7

- Preserved triceps, wrist flexion, and finger extension
- All head, neck, shoulder, elbow, and wrist movement is preserved
- Full sensation at head, neck, shoulder, outer arms, and radial-side fingers
- Tenodesis grasp pattern preserved

C8

- Decreased sensation in inner forearm, axilla, ulnar-side fingers, trunk, and lower body
- Paralysis of trunk and lower body
- Weakened finger abduction
- Can grasp and release objects

****No voluntary control of bowel or bladder at any level****

Intervention Approach

Modify

- Use of compensation strategies for grasping/releasing objects, use of adaptive equipment for toileting, bathing, and dressing

Maintain

- Preserve functional use of neck and arms by maintaining joint integrity through active and passive range of motion exercises

Establish, Restore

- Improve upper extremity strength necessary for functional transfers

Prevent

- Prevent development of shoulder injuries due to overuse as a result of wheelchair propulsion
- Prevent skin breakdown in high risk areas

Complete vs. Incomplete Injury

The information in this resource is most appropriate for complete injuries.

For incomplete injuries, an establish/restore approach is used to improve existing strength and encourage return to previous function.

****Some incomplete injuries at this level can work on standing, walking, and regaining lower extremity strength.**



Intervention Focus

- Learning adaptive techniques to complete ADLs (dressing, bathing, feeding, grooming)
- Improving upper extremity strength to facilitate transitional movement during functional transfers
- Education regarding autonomic dysreflexia, skin integrity, and stretching to preserve joints
- Participating in self-catheterization and upright bowel program
- Trialing durable medical equipment for toileting and bathing including transfers from chair to equipment
- Practicing weight shifting from supported and unsupported positions to maintain skin integrity, complete safe transfers, and participate in ADLs
- Learning compensatory strategies and bed mobility techniques for dressing and self-catheterization from bed level

Intervention Ideas

1. Participating in transitional movement on mat table or similar surface using leg loops and/or bed ladder to improve strength, increase activity tolerance, and prepare for bed level dressing
2. Reaching in challenging ranges outside of base of support while in unsupported short sit position to improve coordination and balance
3. Completing transfers via slide board or lateral pop over strategies from surfaces of similar and alternating heights
4. Participating in functional mobility on uneven terrain or across long distances with a focus on wheelchair skills and/or propulsion techniques
5. Completing upper extremity and lower extremity stretches to reduce tone, prevent contractures, and maintain joint integrity

Short-Term Goals

- Patient will complete slide board transfer to/from wheelchair and drop arm commode with substantial assist for upper extremity force generation and lower extremity management.
- Patient will transition to/from unsupported ring sit and lateral prop on forearm with partial assist to facilitate sacral wound healing and maintain skin integrity.

Long-Term Goals

- Patient will perform toilet hygiene with substantial assist for reaching posteriorly to complete perineal hygiene while on commode chair.
- Patient's caregiver will independently be able to return demonstration of all functional transfers prior to discharge.

Durable Medical Equipment

- Hospital bed
- Hoyer lift or overhead ceiling lift
- Rolling shower commode chair

Wheelchair Recommendations

- Power wheelchair (joystick drive)
- Manual wheelchair (rigid frame)

