# Initial Mobilisation for Individual with new Spinal Cord Injury

Considerations: Individual factors such as level of spinal cord injury, severity of neurological impairments (including but not limited to the degree of preservation of trunk and lower limb muscle power) and other co-morbidities or injuries. These factors will influence the equipment required, duration of sitting time and progression.

Duration: Limit the first sit to 1 hour to manage fatigue and pain. It is also important to assess that the selected equipment is appropriate for the individual and to ensure a full assessment of skin integrity is completed in a timely manner following sitting. This is essential to minimise the risk of pressure injuries and identify any change or modification required to the equipment in use.

## Equipment:

- Recliner or tilt in space wheelchair with anti-tippers is usually required however this is dependent on the considerations listed above.
    - Ensure selected wheelchair is measured and fitted to the individual appropriately
- Chest strap is used for safety
- Appropriate pressure redistribution cushion, such as a cushion with air cells, for example ROHO cushion
- Abdominal binder to manage orthostatic hypotension and to provide respiratory support and postural stability
- **Medication**: pseudoephedrine (used to treat orthostatic hypotension through vasoconstriction), if prescribed by medical team
- Appropriate clothing: loose and comfortable, without pockets, buttons or zippers that may cause pressure injuries and loose-fitting footwear to account for gravity related oedema
- Medical required braces (i.e. collar or TLSO brace)
- Hoist and sling that has been sized to the individual

# Initial mobilisation:

- Set an agreed time with nursing and multidisciplinary team members involved
- Pseudoephedrine (if indicated by medical team) given 30 minutes prior (liaise with nursing and medical team)
- Explain the process and demonstrate the equipment to be used
- Hoist transfer to wheelchair
- Posture and clothing check (see handout: Positioning in Wheelchair)
- A cushion with a high level of pressure distribution is most often used when first mobilising in a wheelchair. Ensure the cushion is set-up and adjusted correctly as per manufacturer's instructions.
- On the first sit the patient may need to remain tilted; leg elevation may also be required for blood pressure management
- Education to family or staff on how to use equipment (i.e., tilt function or wheel locks)
- Full skin assessment on return to bed in conjunction with nursing team
- Modification or adjustments are made to equipment as required to optimise posture, comfort, stability, functional independence, and skin integrity

## Progression:

- Aim to progress from a recliner/tilt in space wheelchair to an upright wheelchair. This is dependent on sitting tolerance and position. To increase sitting tolerance with respect to skin integrity, pain and fatigue, it is beneficial to increase the frequency of sitting (i.e. increase from sitting once per day to twice per day), before increasing the duration of the sitting time.

- As able, reduce the amount of recline and tilt used until able to sit as upright as possible (dependent on sitting balance) for the duration of the time spent in the wheelchair
- Slowly increase the duration the patient is sitting out of bed in the wheelchair (e.g. 30min intervals can be used to increase sitting time).
- Ideally, increase time sitting in wheelchair before introducing other pieces of equipment, such as a shower chair. For example, when sitting for a reasonable amount of time (over 4 hours) in the wheelchair, then introduce a shower chair.

## Pressure Relieving and Redistribution

Each individual should be educated on appropriate pressure relieving and pressure redistribution techniques suitable for them and encouraged to take responsibility for their skin care. Pressure lifts or leans should be performed every 20-30 minutes for at least 2 minutes or longer.

### Techniques to use in a wheelchair:

1. Use the tyres to lift and depress the shoulders - the therapist stands in front for safety if required

2. Leaning can also be used – by using the wheelchair frame or wheel for support, or by leaning on a table/bed to each side

3. Leaning all the way forward onto their knees, relieving the pressure from the ischial tuberosities, ensuring castors are facing forwards.

4. Person with high tetraplegia will require assistance to lean forward and sideways.

## Reference

Reznik, J., Simmons, J. (2020). Rehabilitation in spinal cord injuries (1st ed.). Elsevier Health Sciences.