Handy tips for seating and wheelchair adjustment

Handy tips for seat depth adjustment

Adjust seat depth by:

- the rigid backrest featured with depth adjustment or extra lumbar sacral pad
- the back cane mounting positions adjustment along the seat rails in some wheelchair models
- the seat rails with telescopic inner tubing to allow changes in seat depth from the front
- be aware of the “interlocking” effects:
  - a new seat board and cushion may be required
  - assess the position of power wheelchair driving control
  - check manual wheelchair stability and propulsion efficiency
  - assess for potential environmental and access issues

Handy tips for seat width adjustment

- The seat width adjustment feature is available in many powered wheelchairs and tilt in space manual wheelchairs.
- A new seat board, cushion and backrest may be required.
- If the seat is too wide:
  - a custom made side hip support can reduce the width
  - pelvic guides on seat or backrest system can assist to centre the pelvis
  - the propulsion efficiency may be reduced in manual wheelchair
  - a new prescription may be required
- If the seat is too narrow:
  - use spacers at the axle plate to allow the wheel to be spaced away from the seat
  - loosen the fabric guard to accommodate excess bulk at the hips
  - reduce any excess camber
  - a new prescription may be required
- Seek advice from suppliers or Spinal Seating Services

Handy tips for seat to foot support adjustment

- Provided that the seat depth is appropriate for the client, an approximate calculation for seat to foot support distance is the lower leg length + shoes / heel height – estimated cushion height.
- Ensure the pelvis is firmly against the back support. Palpate for posterior superior iliac spine (PSIS) to check the client’s position.
- Check that the trunk to thigh angle is in accordance to the desired postural outcome as established in the MAT evaluation (Module 3).
- Adjust foot support height to contact the foot firmly without lifting the knees upward. The thighs should be good contact and weight bearing on the cushion.
- Some adjustment between the left and right side of the foot support may be required to accommodate ankle contractures.
- Adjust leg rest for each cushion trial due to the varying profile / height of the cushions.
- Recheck thigh contact on cushion and ankle / foot placement after footplate adjustment.
- For clients who are propped sitters, pre-setting the foot support to the best estimated measurement may minimise the risk of sliding down the wheelchair and facilitates adjustment to the foot support and cushion set up for optimal pressure management.
- For some clients who have long legs, the footplates may not be lowered enough. Foam seat block, seat wedges have been used to improve contact under thighs. Consult with Spinal Seating Service for custom seat base solutions.

Cautions:
A seat wedge reduces the seat to back angle- check for hip angle / hamstring restriction.
A raised seat surface height with a seat / foam block will require height adjustment to armrest, backrest and headrest.
Check the centre of gravity for wheelchair propulsion and head clearance in and out of the vehicle.
Refer to Seating service for a custom seat base such as the contour foam base and pressure evaluation with interface pressure assessment tools.

Handy tips for seat to back support assessment / adjustment:
- compare the thigh to trunk angle to the seating “true” angle (the back support surface to seat surface).
- Many commercial backrests have angle adjustment
- seat rail to back cane angle adjustments is needed if backrest has no angle adjustment
- consider accommodation to kyphotic and lordotic curves
- pay attentions to high risk areas such as scapulae and spinous processes
- thoracic lateral supports should provide sufficient contouring surface to the rib cage