Seating Shapes

ASSESSMENT GOALS

Pelvis and Spine

- ✓ *Posterior pelvic stability*
- ✓ *Posterior-lateral pelvic stability*
- ✓ *Lumbar support*
- ✓ *Posterior thoracic stability*
- ✓ *Lateral thoracic stability*

Posterior Sacral Support Not Present

- Pelvis will collapse into a posterior pelvic tilt
- Flattening of the lumbar spine
- Increase in thoracic spine kyphosis
- Hips sliding forward

Posterior-Lateral Sacral Support Not Present

- Pelvis and spine may become asymmetrical
- Pelvis may collapse into a posterior tilt and rotated position
- Flattening of the lumbar spine
- Hips may slide forward
- Pelvis may shift laterally
- Pelvis may become oblique, spine may become laterally flexed

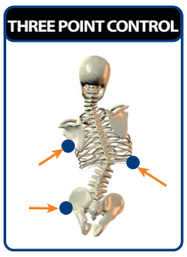
Posterior Thoracic Support (Shape)

Too Little

- May cause inadequate accommodation of thoracic spine creating forward or lateral collapse of trunk
- May cause poor head position/control
- In absence of correct shape may push pelvis and/or trunk forward

Too Much

- May inhibit function
- May encourage a collapsed trunk posture
- This can be common with bariatric clients



Lateral Thoracic Support

Vertical Placement Range

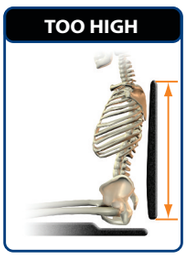
- Location must support the ribcage
- Provide three points of control

Too Low/Too Shallow

- Thoracic spine may not be supported
- May lead to collapse of trunk and poor trunk control
- May cause skin irritation

Too Deep

- May interfere with upper extremity function and/or cause injury



Thoracic Support (Height)

Too Low

- Thoracic and/or lumbar spine may not be supported
- May lead to collapse of trunk and poor trunk control

Too High

- Upper extremity function may be compromised
- May cause instability or discomfort
- May cause sliding away from backrest
- May cause increased pressure on scapula and thoracic area

Lumbar Support (Shape)

Too Little

- In the absence of posterior pelvic support contour, the lumbar area may collapse
- May cause posterior pelvic tilt
- May cause sliding of pelvis forward

Too Much

- Pelvis may rotate posteriorly or anteriorly
- Trunk can fall forward
- Extensor muscles may compensate for leaning forward and inhibit function

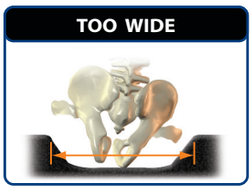
PELVIS & SPINE

ASSESSMENT GOALS

Pelvis and Lower Extremities

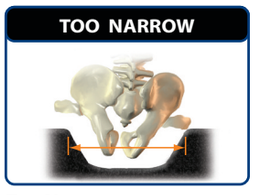
- ✓ *Assess hip flexion Range of Motion (ROM)*
- ✓ *Assess hamstring length*
- ✓ *Provide lateral stability*
- ✓ *Provide anterior stability*
- ✓ *Maximize surface contact area*

Pelvic Contour Width
Consider protecting the trochanters via offloading or immersion/envelopment.



Too Wide
Trochanters not supported may cause:

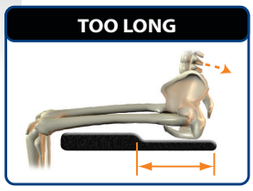
- Lateral instability and/or pelvic obliquity
- Ischial Tuberosities (ITs) can bottom out
- This may be common in pediatric patients



Too Narrow

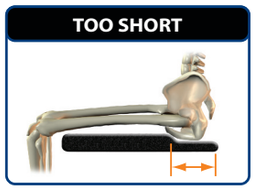
- This can be common with clients who are bariatric
- Creates a pelvic obliquity
- Increases pressure on greater trochanters

Pelvic Contour Length
Buttocks should be supported while loading femurs for stability. Ischial Tuberosities (ITs) need to be protected during activity.



Too Long

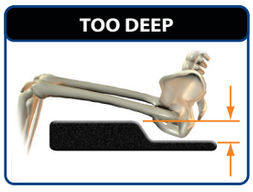
- ITs can slide forward into posterior pelvic tilt which can lead to additional loading on coccyx
- Possible inadequate femoral loading
- May cause increased shear force at ITs



Too Short

- Results in insufficient space for IT movement for functional activity
- ITs may press into anterior shelf of cushion causing potential skin integrity issues

Pelvic Contour Depth
The buttocks should be supported while maintaining optimal hip angle. Correct height depends on difference in height between ischials and posterior aspect of femur.



Too Deep

- May cause interference with hip angle
- May increase or decrease hip flexion angle, depending on hip ROM and amount of support at posterior pelvis
- The pelvis may not be optimally loaded which can lead to additional loading at coccyx

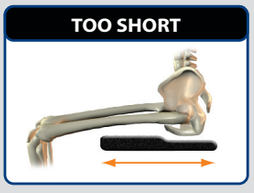
Too Shallow

- Femurs will not be loaded
- May not prevent sliding
- May not provide optimal pressure reduction at the ischials

Femoral Support Length
Femoral loading stabilizes the pelvis, positions the lower extremities, and redistributes pressure.

Too Long

- Pulls the hips forward in the seat which may cause sliding
- Inhibits function
- Increases pressure behind knees



Too Short

- Not enough surface contact area for loading
- Ischials may have increased pressure
- Lower extremities may not be optimally positioned

PELVIS & LOWER EXTREMITIES

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