

### Pelvic Contour Width

Trochanters need to be supported/protected and the ischials need to be protected.



- Too wide**
- Trochanters not supported
  - Lateral instability
  - Ischials can bottom out
  - Common with bariatric and pediatric clients

### Pelvic Contour Length

Buttocks should be supported while loading femurs for stability. Ischials need to be protected during activity.



- Too long**
- Ischials can slide forward into Posterior Pelvic Tilt
  - Inadequate femoral loading



- Too short**
- Ischial excursion not respected
  - Ischials press into anterior shelf causing potential skin integrity issues

### Femoral Support Length

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



- Too long**
- Pulls the hips forward in the seat (sliding)
  - Inhibits function
  - Increase pressure behind knees



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

### 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**
- Causes interference with hip angle
  - Femurs will not be loaded
  - May increase pressure at the ischials



- Too shallow**
- Femurs will not be loaded
  - Encourages sliding
  - May not provide optimal pressure reduction at the ischials

### Pelvis and Lower Extremities Assessment Goals

- ✓ Lateral Stability
- ✓ Inferior/Forward- rearward stability
- ✓ Posterior stability
- ✓ Posterior-Lateral stability
- ✓ Maximize surface contact area
- ✓ Optimize immersion
- ✓ Decrease magnitude of pressure



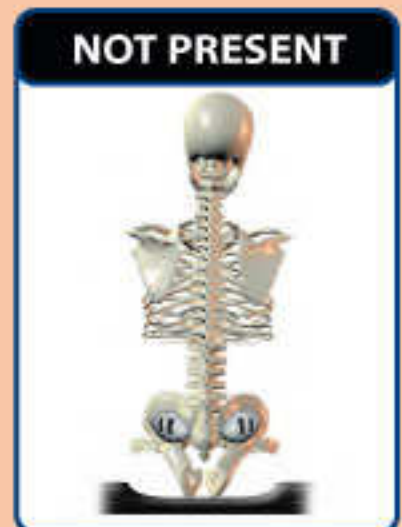
### Pelvis and Spine Assessment Goals

- ✓ Posterior pelvic stability
- ✓ Posterior-lateral pelvic stability
- ✓ Lumbar support
- ✓ Posterior thoracic stability (▼T9)
- ✓ Posterior thoracic stability (▲T9)
- ✓ Lateral thoracic stability



### Posterior Pelvic/Sacral Support

- Not present**
- Pelvis will collapse into a posterior-rotated position
  - Flattening of the lumbar spine
  - Hips sliding forward



### Posterior Lateral Pelvic Support

- Not present**
- Pelvis and spine may become asymmetrical
  - Pelvis may collapse into a posteriorly rotated position
  - Flattening of the lumbar spine
  - Hips sliding forward

### Lateral Thoracic Support

- Depth**
- Too shallow may not provide adequate lateral stability
  - Too deep may compromise function and/or cause injuries



### Vertical placement range

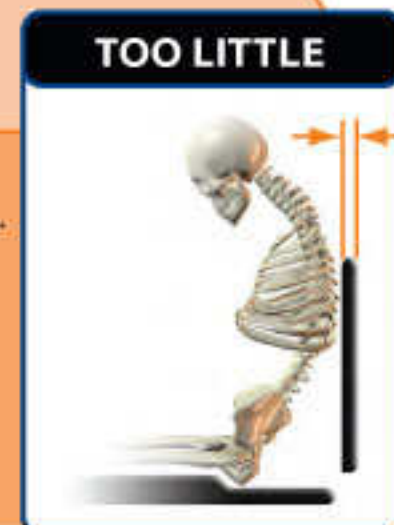
- Consider the goal:
- Supporting the ribcage
  - Three point correction
  - Symmetrical support

### Thoracic Support - Contour/Shape

Must facilitate optimal thoracic loading surface contact area.

- Too little may cause**
- Forward collapse of trunk
  - Lateral collapse of trunk
  - Incorrect head and neck position

- Too much may**
- Inhibit function
  - Encourage collapsed trunk posture



### Thoracic Support - Height

- Too Low**
- Lumbar spine not supported
  - Thoracic loading inadequate
  - Trunk collapses in client who does not have trunk control

- Too High**
- Function may be compromised
  - In absence of correct shape - may push pelvis and / or trunk forward



### Lumbar Support Contour /Shape

- Too little**
- In the absence of posterior pelvic support lumbar area will not be supported and may collapse

- Too much**
- Pelvis rotates forward or rearward
  - Hips slide forward
  - Trunk falls forward: Compensation with extensor muscles may inhibit function

