Adolescent Idiopathic Scoliosis

Postoperative Rehabilitation Considerations: Inpatient and Outpatient

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Objectives

• Rehab considerations in acute care:
  • precautions, the power of positioning, center of mass, proprioception

• Rehab considerations in out-patient:
  • hyper/hypo mobility, modified stabilization exercises, pelvic mobility, balance, proprioception
Rehab typically begins 1 or 2 days following a spinal fusion for idiopathic scoliosis.
Goals

- Pain management
- Early mobility
- Independent bed mobility and transfers out of bed
- Sit out of bed in a chair
- Independent gait
Early mobility

- Patient education
  - Precautions
  - New ROM
- The Power of Positioning
- Log rolling
- Transition to sit – breathing
- Sit edge of bed
• High back or adjustable back chair
• Weight shift
• LE support
• Sit OOB - how long?
Gait

- Roller walker
- Smooth and gliding
- Increase height?
- Household distances
- Timeline to return to school/work
- Consider balance$^{1,2}$
Out-patient

- Seldom required immediately following discharge from hospital
- Often referred later due to pain; muscle imbalances
- Goals vary based on patient impairments
Treatment considerations

- Education:
  - body mechanics
  - ROM changes
- Stabilization exercises
- Stretching/strengthening
- Scar management
- Postural exercises
- Consider balance
- Consider endurance
Body mechanics and ROM

- Modifications for decreased ROM of the fused segments
- Predisposition for joint hypermobility?³
- Consider joint hypermobility above and below the fused segments⁴
Stabilization exercises

- Modified abdominal strengthening
- Dynamic stabilization exercises
- Cervical, scapular, lumbosacral, pelvic girdle
Postural exercises

- Limited thoracic extension may increase risk for forward head, forward shoulder posture\(^4\)
Postural exercises

• Anterior or posterior pelvic tilt at rest?

• Accompanying hip muscle asymmetries?

• Pelvic mobility and orientation have been shown to change following a spinal fusion\(^5\)
• Assess reactions on dynamic surfaces and in response to perturbations

• Increased ankle strategies?"}

• Other compensations?

• Relevance to return to prior activity level
In Summary

• Acute Care:
  • Power of positioning
  • COM, balance and proprioception

• Out-patient:
  • Body Mechanics
  • Hyper- and hypo-mobility
  • Posture
  • Balance
Fusion? Yeah, so I have a few nuts bolts, screws and rods, you could say I'm built "Ford Tough"
References


Photo References

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