KYPHOPLASTY PHYSICAL THERAPY POST OP PROTOCOL

PHASE 1 — 0 - 2 WEEKS | WOUND HEALING AND PROTECTION

OBJECTIVES
Decrease pain and inflammation and encourage wound healing. Educate on bed mobility, body mechanics and posture. Increase aerobic tolerance (independent with issued HEP and 15 min. exercise tolerance/time).

RESTRICTIONS
Prevent excessive initial mobility or stress on spine. Avoid lifting, bending and twisting of the spine.

PROGRESSION CRITERIA
Pain managed (meds/activity modification). Able to perform ADL's for self-care and hygiene. Tolerance of 15-30 min. of cardio exercise and 15 min. of strength/stretch exercise. Independent with prescribed HEP.

WOUND CARE
Surgical site of incision is ok to get wet. Do NOT submerge. Do NOT do not apply lotion/balms/ointments/oils to incision.

BRACING
Jewett brace. Usually no brace unless > 2 levels and/or patient osteoporotic.

PHYSICAL THERAPY

Education

- Bed Mobility: Bed mobility/positioning, log rolling, transfers.
- Body Mechanics: No lifting > 5 lbs. Reinforce sitting (get up every 30 min.), standing and ADL modifications – neutral spine
- Driving: Allowed when off narcotic pain medications and no leg weakness (2 - 4 weeks).

Exercises

- Initial post op home exercise program
  - ankle pumps
  - glute sets
  - abdominal isometrics
  - short arc quad sets
  - dowel bench press
  - diaphragmatic breathing
- Cardio: increase tolerance to walking up to ½ mile total daily (15 – 30 min. Cardio).

Notify the surgeon if the incision is draining or there are signs of infection.

KYPHOPLASTY PHYSICAL THERAPY POST OP PROTOCOL

PHASE 2 2 - 4 WEEKS | OUTPATIENT PHYSICAL THERAPY (OUTPATIENT PT)

OBJECTIVES	Reestablish neuromuscular recruitment of multifidus with dynamic lumbar stability exercise. Normalize gait and any extremity flexibility deficits. Return to functional ADL's and improve position tolerance for return to work.
RESTRICTIONS	Avoid twisting, and bending of the lumbar spine. Avoid lumbar loading.
PROGRESSION CRITERIA	The patient is able to incorporate good body and lifting mechanics, Dynamic sitting, and standing tolerance of 15-30 minutes. Cardio tolerance of 30 min/day.
WOUND CARE	The incision should no longer have scabbing. Scar tissue mobilization via cupping – educate the patient on self-mobilization of the scar. No additional balms or ointments if scabs are still present.
BRACING	If patient wearing brace – gradually wean out of brace per doctor.

PHYSICAL THERAPY

Education

- Back education program: anatomy, surgery education and biomechanics
- Posture education: reinforce neutral spine with performance of functional activities – ways to
- protect spine with loading.
- Driving: usually allowed by this point when off pain meds and ease with in/out of car.
- Modalities: for symptom modulation as needed. (e-stim./heat)

Exercises

- Train neutral spine with diaphragmatic breathing – drawing in abdomen
- Add gentle arm and leg exercises. supine heel slides, supine leg lift, marching
- Add lumbopelvic control with
- Movement/instability – ball etc. Cat/camel, pelvic rocks, wig-wag
- Hip and knee flexibility – quads, hamstrings, piriformis, gluts, hip flexors, calves
- Initiate balance exercises- sitting/standing
- Initiate aquatics (if available)
- Gait training

KYPHOPLASTY PHYSICAL THERAPY POST OP PROTOCOL

PHASE 3 — 4 - 8 WEEKS | ADVANCED STRENGTH PHASE (OUTPATIENT)

OBJECTIVES

Advance lifting to 15+ lbs. Progress with flexibility and strength. Address ADL and return to work concerns. Advance stabilization and trunk control.

RESTRICTIONS

Advance weight as tolerated based on age and bone density concerns/functional status. Special consideration for osteoporosis, cancer history.

PRECAUTIONS

Avoid preloading the spine in a posterior pelvic tilt. Focus on low load/higher reps to improve endurance rather than high load low reps for strength. Avoid prone upper body extension or prone leg extensions that are ballistic to avoid high compression to the weaker spine. Avoid sitting rowing, leg press due to anterior column loading.

Activities to avoid with osteoporosis:

- Dynamic abdominal ex.'s (sit-ups)
- Twisting movements (Golf swing)
- Trunk flexion with weight (swinging kettlebell, lifting laundry)
- Explosive or abrupt loading (ATV riding)
- High impact loading - jumping

DISCHARGE CRITERIA

Manual muscle tests within functional limits. Trunk AROM within functional limits and symmetrical side to side. Independent with final gym program. Oswestry score >20.

PHYSICAL THERAPY

Education

- Activity specific training/body mechanics adaptations for specific tasks/job.

Exercises

- Thoraco-lumbar stability with increasing complexity.
  - Briding on unsteady surfaces (ball)
  - Double leg/single leg, bird dog, step
  - Kneeling arm pulldowns, shuttle,
  - Airex pad rowing, punchouts, chops,
  - Diagonal lifts, rowing on BOSU, lunges
  - Squatting, floor to stand
- Advanced cardiovascular training
- Elliptical, arm bike
- **Avoid sitting rowing, leg press due to anterior column loading.**