# LUMBAR FUSION PHYSICAL THERAPY POST OP PROTOCOL

**PHASE 1 – 0-4 WEEKS (WOUND HEALING AND PROTECTION – OUTPATIENT PT STARTS AT 2-4 WEEKS)**

**OBJECTIVES:** Pain control, wound care and promote healing via progression of mobility. Resume driving after 2-4 weeks or when off pain medication. Limit driving to short intervals < 30 min./time.

**PRECAUTIONS:** Avoid flexion motion and extension/rotation beyond neutral. NO lifting > 15 lbs. and NO impact activities for 12 weeks. Limit sitting to no longer than 30 min./time. Wear brace as directed if > 2 level fusion or osteoporotic. If prescribed – patient wears bone growth stimulator 6-12 months.

**RADICULAR SYMPTOMS MAY COME AND GO THROUGHOUT RECOVERY. ANY NEW WEAKNESS, SEVERE PAIN OR GLOBAL NUMBNESS SHOULD BE REPORTED TO SURGEON/PA.**

## PSIF/ALIF/LLIF/TLIF

**TYPICAL PSIF CAN BE DONE ALONE, OR IN COMBINATION WITH ANTERIOR, LATERAL LUMBAR, OR TRANSFORAMINAL LUMBAR INTERBODY FUSION**

**PLACEMENT OF ONE OR MULTIPLE INTERBODY DEVICES INTO DISC SPACE THROUGH POSTERIOR, ANTERIOR, LATERAL OR TRANSFORAMINAL APPROACH.**

**CAN BE WITH LAMINECTOMY/FACETECTOMY** (includes decompression at operative levels through midline incision) **AND WITH ROBOTIC NAVIGATION,** (merges intra-operative x-ray with pre-operative CT scans to navigate instruments and screws into spine)

**WITH ANTERIOR APPROACH, ECCHYMOSIS/EDEMA IS COMMONLY SEEN, CAN SETTLE INTO GROIN ESPECIALLY IN MEN.**

**WITH LATERAL APPROACH, ANTERIOR THIGH NUMBNESS AND HIP FLEXION/QUAD WEAKNESS IS TO BE EXPECTED ON SAME SIDE AS THE LATERAL APPROACH (irritation of psoas and/or lumbosacral plexus) WHICH SHOULD IMPROVE OVER TIME.**

## PSIF – ONE MIDLINE INCISION, TWO PARAMEDIAN INCISIONS. DERMABOND CLOSURE.

**ALIF – ANTERIOR MIDLINE INCISION (performed with assistance from general surgeon to complete approach and wound closure).**

DERMABOND or STAPLE CLOSURE. (Staples removed 10-14 days post-op.)

**LLIF – LATERAL INCISION (left or right flank). May have multiple lateral incisions depending on number of levels.**

DERMABOND CLOSURE.

**TLIF – POSTERIOR MIDLINE INCISION WITH TWO “STAB WOUNDS”. (Usually combined with PSIF for fixation of surgical levels, typically with robotic navigation.**

DERMABOND CLOSURE MIDLINE – “STAB WOUNDS” CLOSED WITH NYLON SUTURES (removed at 2 week post-op check). Drainage common – reinforce with pressure dressing and monitor for signs of infection.

**SURGICAL SITE: OK TO GET WET-DO NOT SUBMERGE DO NOT APPLY LOTIONS/BALMS/OINTMENTS**
PHYSICAL THERAPY:

EDUCATION:
BODY MECHANICS BED MOBILITY/POSITIONING, LOG ROLLING, TRANSFERS.
POSTURE EDUCATION: SITTING IN NEUTRAL WITH SUPPORT, CHANGING POSITION EVERY 30 MIN., AND HOW TO LIFT < 15 LBS. FOR 12 WEEKS.
DRIVING: ALLOWED WHEN OFF NARCOTIC PAIN MEDICATION AND NO LEG WEAKNESS (2-4 WEEKS)

EXERCISES:

STRETCHING:
SUPINE: Hip flexors, hamstrings, calves.
MAT EXERCISES:
TA BRACING – isometrics – mini pelvic tilt
GLUTE SETS – isometrics
TA WITH MARCHING, HEEL SLIDES, SAQ, SLR
STANDING BALANCE:
AIREX – tandem balance, lateral step off.
WALKING/RECUMBENT STEPPER – 1-2x/day for up to 10 minutes.

PHASE 2 – 4-8 WEEKS (START OF FUNCTIONAL STRENGTHENING – UP TO 12 WEEKS TOTAL)

OBJECTIVES: Wean off pain medication to OTC management, begin scar management (when incision closed), ambulation progression to promote healing, pain free ADL tasks.

PRECAUTIONS: NO lifting > 15 lbs. for 12 weeks. Avoid extension beyond 10 degrees, bending and twisting (squat). Continue to wear brace (if prescribed) for driving in car – up to 8 weeks (osteoporosis).

FUSION:

WITH VERTEBRAL AUGMENTATION: Involves placement of fenestrated screws with cement pushed into the vertebral body through the distal portion of the screw. This will appear as dark, cloudy area within vertebral body on x-ray. Used in osteoporotic/osteopenic patients for increased fixation/better fusion outcomes.

WITH OSTEOTOMY: Involves removal of a portion of the vertebral body to allow for better correction of alignment of the spine. Typically seen in cases with fracture of the vertebral body.

WITH ILIAC FIXATION: Extension of the posterior fusion to include the pelvis. Occasionally involves one additional midline incision at the inferior portion of the construct. Can include 2 iliac “bolts” for true SI joint fusion.

REVISION PSIF: Involves either removal/replacement of old hardware to include additional levels OR leaving old hardware and tying in with additional screws/rods (z-rod, domino connectors, etc.) See op note for details.
PHYSICAL THERAPY:

EDUCATION:
BODY MECHANICS: REVIEW ERGONOMICS OF WORKSTATION (issue guidelines).
POSTURAL EDUCATION: MINIMIZE FORWARD LEAN AND SWAYBACK POSTURE.

LIMIT FLEXION BELOW KNEE LEVEL AND KNEES ABOVE HIP HEIGHT. AVOID EXTENSION BEYOND 20 DEGREES (as exercise) AND ROTATION > 25 DEGREES.

EXERCISES:

STRETCHING:
Hip flexors, hamstrings, gastroc/soleus.

BALANCE PROGRESSION:
AIREX – Tandem, double leg, single leg, step overs, standing shuttle side taps/squats.
BOSU: Sit to stand (hard side), balance either side.

STRENGTH:
Progression of TA bracing with ball bridge, double leg/single leg, bird dog, mini squats, step ups, mini lunge (closed chain to open chain), side-lying clams, wall pushups, theraband row and pulldowns etc. Lower extremity knee extension and hamstring curls.