

<b>Patient Name:</b> _____
<b>Diagnosis:</b> _____ _____
<b>Notes:</b> _____ _____

## Lumbar Fusion Physical Therapy Prescription

*The intent of this protocol is to provide guidelines for rehab. It's not intended substitute as a for clinical decision making.*

If any of the following occur, contact Dr. Poulter and hold off on physical therapy:

- Any signs of infection
- Worsening of radicular symptoms, including progressive weakness
- Unexpectedly high self-reports of pain in comparison to pre-surgical state

**Progress patients with multi-level fusions slower and more cautiously.**

### Phase I (0 to 12 Weeks): Protective Phase

#### Therapy

- One to two visits (if appropriate, otherwise start physical therapy at week 12)

#### Precautions

- Avoid bending and twisting, lifting, pushing and pulling **15 pounds or more for 12 weeks.**
- Limit sitting, including the car, to no more than 30 minutes at a time (standing/walk breaks).

#### Goals

- Diminish pain/inflammation, minimize lower extremity radiating symptoms (ice, modalities as needed)
- Learn correct body mechanics, transfers, positioning
- Achieve proper muscle firing for transverse abdominis, multifidi and glutes
- Focus on walking program, increasing tolerance to 30 minutes two times a day

#### Education

- **Postural Education:** Sitting posture with lumbar roll at all times; frequent change in positions; sleeping positions
- **Body Mechanics:** Light lifting, transfers (include log rolling), positioning, etc.

#### Exercises

- **Walking Program:** Begin one to two times a day for 10 minutes or less. Continue to progress as tolerated to at least 30 minutes.

- **Transverse Abdominis Bracing:** 10" isometrics with normal breathing (without pelvic tilt)
- **Multifidi:** 10" isometrics with normal breathing in prone (if able to tolerate)
- **Glute Set:** 10" isometrics with emphasis on proper glute firing
- **Neural Mobilization:** Performed as needed, gentle with caution not to flare up nerve roots
- **Light Stretching:** Hip flexors, quads, hamstring, gastrocs

## Phase II (12+ Weeks): Strengthening Phase

### Therapy

Starting at week 12: Two to three times per week for four or more weeks

### Precautions

- Keep spine in neutral for all strengthening and make sure to achieve proper neuromuscular control of transverse abdominis before progressing exercises.
- **Lifting:** During weeks 12 through 24, gently progress up to 40 pounds. After 24 weeks, progress per Dr. Poulter's orders.
- Minimize any rotation exercises long-term (even after fully healed).
- Full healing takes up to six months. Patients are cautioned not to overdo their activities before this time.

### Goals

- Complete light strength training with a neutral spine and correct firing of stabilization muscles
- Release soft tissue restrictions, muscle spasms, scar
- Increase aerobic endurance less than 30 minutes
- Body mechanics review (see above)

### Strength

*Only initiate these once patient can complete Phase I exercises. Then begin with light resistance and slowly progress. Emphasize good posture during each exercise and correct muscle firing of transverse abdominis. (This is **not** a complete list.)*

- **Transverse Abdominis/Multifidi Progression** (*maintain neutral spine*)
  - Start at table (supine, prone, quadruped) 10" isometrics
  - Progress with lower extremity/upper extremity movements (eg.: Marches, straight leg raises, upper extremity lift and lowers, planks, etc.)
  - Progress to weight bearing, balance, Swiss Ball, reformer, etc.
  - Progress to multi-planar exercises with lower extremity/upper extremity while maintaining a neutral spine only (**no twisting**).
- **Continue with Proper Glute Activation Exercises**
  - Eg.: prone hip extensions, bridges, side lying clams, side lying 90/90 leg lifts, side lying abduction, quadruped hip extension, bird-dog
- **Lower Extremity and Upper Extremity Strength Training** (*once proper transverse abdominis and glut firing achieved*)
  - Step ups, leg press, wall squats, squats, etc.
  - **Balance** (*with transverse abdominis bracing*): Single leg stance, tandem, foam, etc.
  - Upper extremity light resistive exercises (machines, Theraband, free weights)

### Cardio

- Time frames may vary per patient, consult with Dr. Poulter if you have questions.
  - (Eg.: an avid cyclist with proper bike fit might start sooner)
- Emphasize correct form and equipment setup (eg.: elliptical, bike, walking terrain, etc.)

- Prefer Pilates over yoga. If returning to yoga, ensure it's with an experienced instructor.
- When initiating running and sports below, slowly increase in the six month time frame.

	No Earlier Than:
Walking Progression	At least 30 minutes a day
Stationary Bike (upright/recumbent)	Four weeks (gradual increase in resistance to week 12)
Swimming	Eight weeks
Outdoor Biking	Eight weeks

	No Earlier Than:
Hiking	12 weeks
Pilates	12 weeks
Running	Four months
Golf	Four months
Yoga	Four months
Soccer/Basketball	Six months

### Flexibility

- **Stretching:** Hamstrings, gastroc/soleus, quadriceps, hip flexors, piriformis, etc.
- **Neural Mobilization:** Performed as needed, gentle with caution not to flare up nerve roots

### Aquatic Physical Therapy *(less than four weeks if available once incision has healed)*

- No rotation and transverse abdominis bracing during all exercises
- Walking all directions, balance, lower extremity and upper extremity strengthening

### **Phase III (16+ Weeks): Return to Work/Work Conditioning/ Return to Sport (if applicable)**

- Functional/sport/job drills may begin now with supervision
- Possible referral to work reconditioning program