Deep Inferior Epigastric Perforator (DIEP) Breast Flap Reconstruction Activity Protocol:

The intent of this protocol is to provide the physical therapist/patient with a guideline for post-operative rehabilitation for someone who has undergone a deep inferior epigastric perforator breast flap reconstruction (DIEP). However, every patient’s progress is unique, and clearance from the surgeon should be obtained before progressing. **IF THERE ARE ANY QUESTIONS PLEASE TALK TO DR. PATEL OR DR. WEGGE**

**Phase I – Immediate Post Surgical Phase (Day 0-Week 2): Precautions for Day 0 – Week 2 (or until drains are removed):**

- No rolling/twisting of trunk.
- No heavy lifting greater than 2 lbs.
- No pushing/pulling with the affected arm, no pulling out of bed.
- No upper extremity range of motion greater than 90 degrees (level of shoulders) on the affected side.
- No pressure over central chest.
- No heating pad or ice over flap at anytime.

Goals:

- Patients will be independent with:
  - Functional mobility, including bed mobility, transfers, ambulation, and stair negotiation or as per pre-admission status.
  - All surgical and activity precautions.
  - Maintaining oxygen saturation > 95% on room air. Home exercise program per patient handout. Activities of daily living (ADL’s) with modifications.
- Promote healing of soft tissue/Maintain viability of flap
- Promote AROM to affected shoulder within precautions
- Restore active range of motion (AROM) of elbow/wrist/hand

Criteria for progression to the next phase (Phase II):
• Tolerates shoulder AROM in all shoulder planes within precautions.
• Demonstrate independent functional mobility within above listed precautions.
• Adequate pain control.

Deep Inferior Epigastric Perforator Breast Flap Reconstruction Inpatient Protocol:

PERIOPERATIVE AND POSTSURGICAL LINES AND TUBES:

• Flap checks: Check doppler, color, turgor, capillary refill, warmth, swelling - Call immediately if changes - White or Purple is BAD!

• Supplemental Oxygen: Patient will be on 6 liters of supplemental oxygen from day of surgery until time of discharge to promote increased DIEP flap oxygenation and tissue healing. Patient may be removed from supplemental oxygen beginning on POD #2 during physical therapy treatment sessions only if patient is hemodynamically stable, if the patient is able to maintain their oxygen saturation > 95% throughout treatment session, and if their vitals are monitored throughout treatment session.

• Exparel will be injected intraop and will last for the patient until POD #2

• Foley Catheter: Patient will have a Foley catheter placed peri-operatively and removed POD #2 Early AM. The RN will remove the Foley catheter once the patient has demonstrates appropriate ambulation to/from the bathroom.

• PCA: Patient is connected to a PCA immediately post-operatively and disconnected from the PCA on POD #2. The purpose is for improved post-operative pain management.

DAY ONE TO FIVE: ACTIVITY PRECAUTIONS

• Day of Surgery – Strict bedrest, HOB elevated > 45 degrees, knees flexed > 45 degrees, continuous pulse oximetry, flap/Doppler checks Q 15’ x 1 hr then Q 30’ x 1 hr for the duration of PACU stay. Patient’s room will be kept > 75 degrees F to promote blood flow to the flap with a Bair hugger on the flaps.

• POD #1 – HOB elevated > 45 degrees, knees flexed 45 degrees, OOB to chair w/ assistance. Physical Therapy is consulted before or after the patient has been OOB to the chair with nursing and found to be hemodynamically stable. Physical Therapy evaluation completed POD #1. The flap should be checked before and after every change in position.

• POD #2 – HOB elevated > 45 degrees, knees flexed 45 degrees, flap monitoring Q 4 hrs, Foley catheter and PCA are discontinued. Patient is cleared to ambulate short distances with physical therapy and nursing staff while monitoring vitals. The flap should be checked before and after every change in position.

• POD #3 – Ambulation of household distances; stair negotiation if appropriate, and perform gentle range of motion of the shoulders and upper extremity. See Appendix D for exercises. Flap is checked via Doppler Q 4 hours. Patients are allowed to shower; discharge home, usually with 2 abdominal drains and Home rolling walker and shower chair if cleared by surgeon.