

Total Knee Arthroplasty

Dr Barton Branam

Pre-operative Rehabilitation

GOAL: The goal of preoperative physical therapy is to ensure that the patient's home environment is optimized such that the patient can properly recover from knee replacement as expeditiously as possible. The therapist will evaluate your home environment and make certain that you are comfortable with the activities of daily living (ADLs) that you will be required to do in the immediate postoperative period prior to surgery. It is imperative that the patient and the surgeon have colinear goals for the surgery. This will set the patient up for success postoperatively.

- 1) Full ROM: with an emphasis on full knee extension
- 2) Gait: fit/educate on use of assistive devices that may be needed after surgery
- 3) Quad activation: educate on importance of quad firing post operatively to assist with walking and knee extension

Post-operative Rehabilitation

GOAL: The goal of postoperative physical therapy is to restore full range of motion and eliminate or diminish pain. This will allow the patient to keep their functional goals. It is important to achieve the incremental milestones in order to properly progress. The implants are usually cemented to the bone so that interface is immediately stable. The patient will follow up with Dr Branam's office at post-operative week 2 for a wound check, week 6 for a ROM check and month 3 if needed. Outside of the regularly scheduled follow up appointments with Dr. Branam, he needs to know about outlier patients i.e. those that are well ahead or behind schedule.

PHASE I: Weeks 1-4

****By far the most important aspect of recovery in the first 2 weeks is wound healing. Therapy will progress slowly in the until the wound heals. The priorities in the immediate postoperative period are gentle range of motion, ADL's(these were practiced preoperatively), and swelling/edema control. You will use an assist device in the immediate postoperative period such as crutches or a walker.

- 1) Immediate post-operative PT visit: educate patients on precautions, check crutches for fit, review swelling and pain management, check wound
- 2) ROM: emphasis on full knee extension, knee flex to ~90deg the first 2 wks to allow the incision to heal. Once wound is healed, more aggressive ROM to avoid stiffness in the joint
 - a) Heel slides
 - b) Seated knee flex in a chair
 - c) Knee extension with heel prop
- 3) Gait training: WBAT, wean from assistive devices per therapist
 - a) Weight shifts
 - b) Cone walking
- 4) Exercises/therapy activities to include:
 - a) Quad sets, SLR
 - b) Hip Isometrics, core stability exercises

- c) Lower Chain Flexibility: hamstring and gastroc for knee extension
 - d) Strength
 - e) CKC (as tolerated)
 - f) Balance/proprioception
- 5) GOALS: manage pain/swelling, normalize gait and ROM

PHASE II: Weeks 4-8

- 1) Goal is to have full ROM at your 6 wk follow up with Dr Branam please reach out to Dr. Branam if there are significant barriers.
- 2) Continue to advance WB'ing and wean from the assistive devices– pain, limping and swelling are indicators of too much activity
- 3) Continue exercises with progressive strength and endurance training
 - a) Cardio: bike, elliptical, treadmill walking
 - b) CKC
 - c) Balance
- 4) GOALS: full ROM, minimal swelling/pain, normal gait

PHASE III: Weeks 8-12

- 1) Continue progressive strengthening and wean to indep with HEP

Return to sport/work: Return to sport or work after knee replacement is often the ultimate goal. This will be variable and determined by multiple factors including patient factors and the sport/job. It is important to make certain that the patient has the necessary ROM and strength to appropriately function as an athlete or in the work environment. The main complications we are concerned about are early implant loosening, instability(dislocation), and fracture next to the implants(periprosthetic fractures). Thus, we want you to safely return to all the things that give you outstanding quality of life.

***Patient's frequently ask when "can I go out of town and miss physical therapy". Typically for at least the first month we strongly recommend you make rehabilitating your knee a priority. This requires appropriate commitment to exercises and the appropriate supervision. Traveling significant distances puts the patient at risk for blood clots. Thus, we discourage significant travel until the patient is highly mobile. Upon being cleared to travel, the patient must be well educated regarding a home exercise program(HEP). The patient should check back in with the physical therapist immediately upon return.