



UNION GENERAL ORTHOPEDICS & SPORTS MEDICINE

AFFILIATE OF: UNION GENERAL HEALTH SYSTEM

Jacob B. Stirton, MD

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KNEE ARTHROPLASTY PHYSICAL THERAPY

Philosophy

This protocol is to be utilized as a guideline. There will always be individual differences amongst patients regarding progression and tolerance of specific activities. Progression through the protocol will depend on successful accomplishments of set milestones as assessed by the physician and the physical therapist/athletic trainer.

The physical therapist and patient must constantly be aware of changes in condition, including but not limited to signs and symptoms of joint irritation/pain, tendonitis, and effusion. The patient's home exercise program is of utmost importance and should be monitored and emphasized.

Rehabilitation should create the optimal environment for the natural process of healing to occur. Initially, there should be a strong emphasis on minimizing swelling and pain as well as motion restoration. If a patient's progress is significantly delayed, please contact the physician office to keep them informed.

If you have any questions regarding this protocol, please contact the UGH Orthopedics and Sports Medicine Department at (706) 439-6858.

CAUTION: Excessive warmth, redness, swelling, or pain lasting more than 2 days should necessitate a call to our office. Any excessive swelling should lead to slowing of PT. Any drainage from the wound after 7 days from surgery should necessitate a call to our office and no further PT until instructed.



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WEEKS 1-2 (Immediate POST-OP PHASE)

TREATMENT GOALS:

- Minimize swelling/pain
- ROM: 0-90 deg for first week, then gradually increasing over next week
- Gait training
- Achieve quad activation and improve quad set

Note: It is essential to monitor the incision during flexion. Excessive tension noted by blanching of the skin should be the upper limit of ROM. DO NOT PUSH PAST THIS POINT. The incision MUST be allowed to heal. This is of the utmost importance.

PRECAUTIONS:

- No impact.
- Gradually increase exercise ROM and weight as dictated by patient response including swelling and soreness response. Articular soreness should be less than 12 hours without medication needed to alleviate symptoms.

MANUAL THERAPY:

- Physiologic stretching flexion/extension.

SUGGESTED EXERCISES:

- Isometrics (quadriceps, gluteals, hamstrings).
- Ankle pumps-> heel raises.
- SLR's (supine with prop under heel as needed, advancing to standing next phase).
- Heel slides (seated or supine); can also do flexion over end of mat table.
- Long sit hamstring stretches (be mindful in patients with hamstring graft).
- AROM knee extension.
- Prone hangs working up to 30 minutes/day (3x10 minutes extension stretching daily).
- Prone flexion ROM assisting with opposite LE if needed.
- Prone TKE over ball.
- Prone hip extensions.
- Weight shifting with an active quad set.
- Side lying Abduction series (straight plane ABD, circles, swings) emphasizing neutral spine.
- Trunk stabilization exercises in supine/prone.

Note: High reps, low resistance with focus on proper muscle recruitment.

MODALITIES:

- NMES quadriceps until no lag sign with SLR, biofeedback with quadriceps exercise, cryotherapy, vasocompression.



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WEEKS 2-12 (STRENGTHENING PHASE)

TREATMENT GOALS:

- Work toward full flexion and symmetric to opposite side starting after week 1.
- Normal gait and reciprocal stair management without compensation, assistive devices as needed.
- Fully resolve knee swelling.
- Progression of independent gym/home exercise program.

PRECAUTIONS:

- No pivoting and twisting.
- Gradually increase exercise ROM and weight as dictated by patient response including swelling and soreness response. Articular soreness should be less than 12 hours without medication needed to alleviate symptoms.

MANUAL THERAPY:

- Patellar mobilizations at every session once incision is COMPLETELY healed (patient taught to do at home daily).
- Continue with mobilizations as needed to diminish soft tissue and joint restrictions to normal mobility.

SUGGESTED EXERCISES:

- **Frequency:** Alternate cardiovascular and leg strengthening days with goal of exercising 6 days/week.
- **Cardiovascular:** Start at 4 weeks when good ROM/muscular control: Bike, Stair stepper, Elliptical and Treadmill.
- **Strengthening:** Important to focus on quad, hip, and core strengthening. Increase as tolerated.
 - Squats.
 - Progressive step ups/downs (forward, side, back, 4-8" step).
 - Lunges and wall-sits in appropriate ROM not to aggravate patellofemoral joint.
 - Sport cord resisted walking forward/lateral/retro.
 - Swiss ball, planks, and trunk stabilization exercises.
 - Static balance exercises using balance cushions, BOSU ball, wobbleboard, half roller, etc.

FUNCTIONAL TRAINING (start at week 6)

- Intensify circuit training - Stepper, elliptical, treadmill.

MODALITIES: Cryotherapy, others PRN.