

## Total Knee Replacement

### General Considerations:

- Regardless of type of prosthesis, knee is immobilized for 1-2 days, although cementless arthroplasty may require longer immobilization (ask physician)

### Phase I

- Ankle pumps as soon as possible after surgery
- Quad sets, ham sets, SLR in all directions, heel slides
- Retrograde massage (distal to proximal) to operated leg
- CPM as directed by physician
- PROM/AROM knee extension/flexion; contract relax works well with these patients as guarding is often seen; vigorous passive flexion is not advised as tissues are healing
- Gait training with or without assistive device
- Weight bearing varies dependent upon type of prosthesis used:
  - Cementless/biologic fixation requires NWB for up to 6 weeks, FWB and ambulation without assistive devices is prohibited for up to 12 weeks
  - Cemented prosthesis usually allow WBAT immediately after surgery, progressing to FWB by 6 weeks

### Phase II

- Progress to light resistance of quad and hamstring as well as to the hip musculature
- PROM goal 0-110
- As weight bearing permits partial squats and short-arc lunges for functional control of knee
- Continue with gentle, low intensity, prolonged stretch or contract/relax to increase knee flexion
- Begin stationary bicycle with seat positioned as high as possible, gradually decreasing seat height to standard level
- Progress to balance and proprioception exercises
- NOTE: use of joint mobs may or may not be appropriate depending upon type of prosthesis – discuss with physician

### Phase III

- By week 12 the emphasis is on functional strength and conditioning
- Ambulation activities including stair climbing are progressively increased
- Stationary bicycle and aquatic exercise are excellent no-impact conditioning activities
- Return to full activity; it takes 3 months to regain pre-op quad and hamstring strength; hamstring returns faster than quad. Although most gains in ROM, strength and endurance are seen in the first three months after surgery, small gains in functional status continue until 12-24 months