

REHABILITATION GUIDELINES FOR TOTAL KNEE REPLACEMENT

PHASE I (0-2 WEEKS)

DATES:

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| Appointments | Begin physical therapy 3 x week for the first 2-4 weeks |
| Rehabilitation Goals | <ul style="list-style-type: none"> • Active quadriceps muscle contraction • Safe isometric control for ambulation • Passive knee ROM 0-90° • Control swelling, inflammation, and protect incision |
| Precautions | <ul style="list-style-type: none"> • WBAT- wean from walker to crutches to cane; avoid torque or twisting forces • Safe transfers • Micro current dressing to stay on 7 days • Use of continuous passive motion (CPM) machine is not standard care at Mammoth Hospital. Use will only be indicated if MD deems appropriate in special circumstances • Observe for signs of DVT or infection • Patient education to avoid putting a pillow under the knee, emphasize extension |
| Suggested Therapeutic Exercises | <ul style="list-style-type: none"> • Ankle pumps with leg in elevation, quad sets, passive knee extension, AAROM knee flexion, SLR, TKE, gentle hamstring sets, hamstring stretching, calf stretching, patella femoral mobilizations • NMES for quad disuse/atrophy PRN • Day 5-14: add hip ABD/ADD, knee extension 90-0° if available |
| Cardiovascular Exercises | <ul style="list-style-type: none"> • Short crank stationary bike if ROM is available, begin with partial revolutions and progress to full revolutions as able |
| Progression Criteria | <ul style="list-style-type: none"> • Leg control, able to perform SLR without lag • ROM 0-90° • Minimal pain or swelling • Independent ambulation/transfers |

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PHASE II (2-6 WEEKS)

DATES:

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| Appointments | Continue physical therapy 2-3 x week |
| Rehabilitation Goals | <ul style="list-style-type: none"> ROM 0-120° flexion Enhance muscular strength/endurance Dynamic joint stability Diminish pain and swelling Establish return to functional activities Improve general health |
| Precautions | <ul style="list-style-type: none"> WBAT- wean from assistive devices when patient has adequate strength and balance No flexion past 125-130° degrees Status reports at 5 weeks- if 120° of flexion will not be achieved by week 6, MUA is considered; after 6 weeks arthrofibrosis may require arthroscope versus MUA |
| Suggested Therapeutic Exercises | <ul style="list-style-type: none"> Continue phase 1 exercises Hamstring curls, ¼ squats, stretching HS, quad, gastroc, soleus, knee extension stretching, perturbation exercises if stability is present, front and lateral steps up at minimal height, ¼ front lunge Balance and stability progressions |
| Cardiovascular Exercises | <ul style="list-style-type: none"> Can start regular stationary bike once patient has available ROM, begin with partial revolutions and progress to full as able, no or minimal resistance Walking Swimming or aquatic therapy if incision is fully closed |
| Progression Criteria | <ul style="list-style-type: none"> ROM 0-120° flexion Good voluntary quad contraction in standing Independent ambulation Minimal pain/inflammation |

PHASE III (6-12 WEEKS)

DATES:

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| Appointments | Physical therapy 2 x week |
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| (Phase III continued) Rehabilitation Goals | <ul style="list-style-type: none"> Progression of ROM to 125° max Good patella femoral mobility Enhancement of strength and endurance Eccentric/concentric control of the limb Cardiovascular fitness Functional activity performance |
| Precautions | <ul style="list-style-type: none"> Do not push motion greater than 125° especially with weight bearing/squatting |
| Suggested Therapeutic Exercises | <ul style="list-style-type: none"> Continue all exercises in phase II Initiate progressive walking program, lunges, step ups, ½ squats, emphasize concentric and eccentric strength, begin work on transfers from floor to standing Progress balance/proprioception, uneven surfaces, perturbation, core and hip strength |
| Cardiovascular Exercises | <ul style="list-style-type: none"> Stationary bike Walking Swimming or aquatic therapy if incision is fully closed |
| Progression Criteria | <ul style="list-style-type: none"> Full non painful ROM 0-125° Strength 4+/5, good eccentric control Minimal to no swelling and pain |

PHASE IV (3-5 MONTHS)

DATES:

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| Appointments | <ul style="list-style-type: none"> Physical therapy 1-2 times per week progress to HEP based program at therapist's discretion |
| Rehabilitation Goals | <ul style="list-style-type: none"> Return to prior level of function Enhance strength and endurance Allow selected patients to return to advanced activity |
| Precautions | <ul style="list-style-type: none"> Do not push motion greater than 125 especially with weight bearing/squatting |

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| (Phase IV continued) Suggested Therapeutic Exercises | <ul style="list-style-type: none">• Continue with progression of exercises for eccentric quad control• Integrate return to golf, tennis, hiking, cardiovascular program• Advance balance and proprioception |
| Cardiovascular Exercises | <ul style="list-style-type: none">• Bike riding• Walking• Swimming |

References: Dr. Karch's TKA protocol from 2015, Brigham and Women's Hospital TKA protocol

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