

REHABILITATION GUIDELINES FOR TOTAL KNEE REPLACEMENT

PHASE I (0-2 WEEKS)

DATES:

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:

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:

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:

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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