



REHAB PROTOCOL FOR KNEE ARTHROSCOPY

PHASE I (surgery to 2 weeks after surgery)

Appointments	<ul style="list-style-type: none"> Rehabilitation appointments begin within one week post-operatively and then approximately 1-2 times per week
Rehabilitation Goals	<ul style="list-style-type: none"> Protection of the post-surgical knee Restore normal knee extension Eliminate effusion (swelling) Restore leg control
Precautions	<ul style="list-style-type: none"> Use axillary crutches for normal gait Weight-bearing as tolerated Avoid impact exercises for the first 4-6 weeks if the articular cartilage was debrided Extension: Full Flexion: 90°
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> Quad sets, isometric knee extension at multiple angles in allowed range of motion and as tolerated at patellofemoral (PF) joint, open kinetic chain (OKC) knee extension 90° to 0° as tolerated at PF joint Isometric and OKC hamstring strengthening in pain free ROM Hip 4-way SLR (straight leg raise) Ankle and foot stretching and strengthening Scar and soft tissue massage, patella mobilizations BAPS board, weight shifting NMES (neuromuscular electrical stimulation) for quadriceps atrophy, strengthening as needed HVPC (high volt pulsed current) for effusion (swelling) reduction as needed Cryotherapy 6-8 times per day for 15 to 20 minutes each
Cardiovascular Exercise	<ul style="list-style-type: none"> Upper body circuit training or upper body ergometer
Progression Criteria	<ul style="list-style-type: none"> Ambulation without limp

	<ul style="list-style-type: none"> • ROM: Full extension, 90° of flexion • Ability to perform a straight leg raise in flexion without knee extension lag • Minimal effusion
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PHASE II (weeks 2-6, begin when Phase I criteria met)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments begin once every 1 to 2 times per week
Rehabilitation Goals	<ul style="list-style-type: none"> • Good control with single leg stand • Good control and no pain with functional movements, including step up/down, squat, partial lunge
Precautions	<ul style="list-style-type: none"> • Post-activity soreness should resolve within 24 hours • Avoid post-activity swelling • Full weight bearing without crutches • ROM: Progress to full
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Non-impact balance and proprioceptive drills • Stationary bike • Hip and core strengthening • Stretching for patient specific muscle imbalances • Quadriceps strengthening • Scar and soft tissue massage, patella mobilizations • SLS (single limb stance), BAPS, unstable surfaces • Joint repositioning • NMES for quadriceps atrophy, strengthening as needed • HVPC for effusion reduction as needed • Cryotherapy 6-8 times per day for 15 to 20 minutes each
Cardiovascular Exercise	<ul style="list-style-type: none"> • Non-impact endurance training; stationary bike; Nordic track; swimming; deep water run; and cross trainer
Progression Criteria	<ul style="list-style-type: none"> • Full and pain-free Knee ROM • No effusion

	<ul style="list-style-type: none"> • No pain • Isometric quad strength 70% of non-involved side at 60° knee flexion • Isometric hamstring strength 70% of non-involved side at 60° knee flexion • Isokinetic quad strength 70% of non-involved side tested at 300°/sec • Isometric hamstring/quad ratio $\geq 60\%$ tested at 60° knee flexion
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PHASE III (weeks 6-12, begin when Phase II criteria met)

Appointments	<ul style="list-style-type: none"> • Rehabilitation appointments are once every 1 to 2 weeks
Rehabilitation Goals	<ul style="list-style-type: none"> • Good control and no pain with sport and work specific movements, including impact
Precautions	<ul style="list-style-type: none"> • Post-activity soreness should resolve within 24 hours • Avoid post-activity swelling
Suggested Therapeutic Exercise	<ul style="list-style-type: none"> • Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other and then 1 foot to same foot • Movement control exercises beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities • Sport/work specific balance and proprioceptive drills • Hip and core strengthening • Stretching for patient specific muscle imbalances • SLS, BAPS, unstable surfaces • Joint repositioning • Perturbation training (balance against resistance) • Cryotherapy after activity for 15 to 20 minutes
Cardiovascular Exercise	<ul style="list-style-type: none"> • Replicate sport or work specific energy demands

	<ul style="list-style-type: none"> • UBE, stationary bike, elliptical, initiate treadmill running
Progression Criteria	<ul style="list-style-type: none"> • Full ROM • No effusion • No pain • Isokinetic quad strength 90% of non-involved side tested at 300 °/sec

PHASE IV (when Phase III criteria met)

In addition to ongoing strength, balance, agility, and cardio conditioning, initiate sport-specific plyometric activities as tolerated such as:

Soccer/Football: 2 foot ankle hop, double-leg hop, front barrier hop, lateral barrier hop, single-leg hop, power skip, backward skip, double-arm alternate-leg bound, and cycled split squat jump

Basketball/Volleyball: 2 foot ankle hop, double-leg hop, squat jump, double-leg vertical jump, single-leg hop, single-leg vertical jump, power skip, backward skip, double-arm alternate-leg bound, alternate-leg push off box drill, and side-to-side push-off box drill

Baseball/Softball/Overhead throwing sports: 2 foot ankle hop, double-leg hop, front barrier hop, lateral barrier hop, single-leg hop, power skip, backward skip, double-arm alternate-leg bound, cycled split squat jump, and return to throwing program