



AKERE ATTE

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MENISCAL ALLOGRAFT TRANSPLANTATION

The rehabilitation guidelines are presented in a criterion based progression program. Specific time frames, restrictions, and precautions are given to protect healing tissues and the surgical repair/reconstruction. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status and rehab compliance. The therapist should closely communicate with the physician during all phases of rehabilitation.

* **Postop knee brace, TTWB (up to 10 lbs) in full extension for first ~6 weeks**

* Crutches x 10 weeks

* **Discard long leg brace after 6 weeks**

* **Start unloader brace at ~8 weeks**

(medial unloader for medial menisc, lateral unloader for lateral menisc)

* Weeks 6-10 50% partial weight bearing with 2 crutches (half body weight)

* After week 12: OK to use cane then progress to WBAT with unloader

* **UNLOADER BRACE TO BE WORN AT ALL TIMES EXCEPT SLEEP FOR 6 MONTHS FOLLOWING SURGERY**

* Range of motion:

Week 0 - 4: 0-70

Week 4 - 8: 0-90

Week 8: full R.O.M.

* Begin isometric quad sets in full extension immediately:

-straight leg raising with knee in full extension

-quad setting

Begin exercise bike and closed kinetic chain exercises at 6 weeks

Anti-inflammatory modalities prn

1000 leg raises per day

TM

PHASE I (Surgery to 4 weeks)

REHAB GOALS	<ol style="list-style-type: none"> 1. Protection of the post-surgical knee 2. Restore normal knee extension 3. Eliminate effusion 4. Restore leg control
BRACE	<ol style="list-style-type: none"> 1. ELS brace locked for all weight bearing activities for 4-6 weeks 2. ELS brace unlocked at weeks 5-8. Begin with PWB when first initialed the flexed weight bearing
ROM EXERCISES	<p>Knee extension on a bolster Prone hangs Supine wall slides to 0-90 degrees Heel slides to 0-90 degrees *** Do not flex the knee past 90 degrees***</p>
SUGGESTED THERAPEUTIC EXERCISE	<ul style="list-style-type: none"> • Quad sets • SLRs • 4 way leg lifts in standing with brace on for balance and hip strength
CARDIOVASCULAR EXERCISE	Upper body circuit training or UBE
PROGRESSION CRITERIA	<ol style="list-style-type: none"> 1. Pain free gait using unlocked brace without crutches 2. No effusion 3. Knee flexion to 90 degrees

PHASE II (begin at 6-8 weeks)

APPOINTMENTS	Meet with physician at 1 and 2 months post-op Physical therapy 1x every 1-2 weeks
REHAB GOALS	<ol style="list-style-type: none"> 1. Single leg stand control 2. Normalize gait 3. Good control and no pain with functional movements, including step up/down, squat, partial lunge (staying less than 60 degrees of knee flexion)
PRECAUTIONS	<ol style="list-style-type: none"> 1. No forced flexion – as in PROM flexion or weight bearing

	<p>activities that push past 60 degrees of knee flexion</p> <ol style="list-style-type: none"> 2. Avoid post activity swelling 3. No impact activities
SUGGESTED THERAPEUTIC EXERCISE	<p>Non-impact balance and proprioceptive drills</p> <p>Stationary bike</p> <p>Gait drills</p> <p>Hip and core strengthening</p> <p>Stretching for patient specific muscle imbalances</p> <p>Quad strengthening – closed chain exercises 0-45 degrees knee flex weeks 6-8 weeks and 0-75 degrees for weeks 8-10 weeks</p>
CARDIOVASCULAR EXERCISE	<p>Non-impact endurance training: stationary bike, Nordic track, swimming, deep water run, cross trainer</p>
PROGRESSION CRITERIA	<ol style="list-style-type: none"> 1. Normal gait on all surfaces 2. Ability to carry out functional movements with out unloading affected leg or pain, while demonstrating good control 3. Single leg balance greater than 15 seconds

PHASE III (begin after meeting phase II criteria ~ 4 months)

APPOINTMENTS	<p>Meet with physician at 14-16 weeks post-op</p> <p>Physical therapy 1x every 1-2 weeks</p>
REHAB GOALS	<ol style="list-style-type: none"> 1. Good control and no pain with sport and work specific movements, including impact
PRECAUTIONS	<ol style="list-style-type: none"> 1. Post-activity soreness should resolve within 24 hours 2. Avoid post activity swelling 3. Avoid posterior knee pain with end range flexion
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 – DEPENDENT ON PATIENT GOALS AND SURGEON COLLABORATION • Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities – DEPENDENT ON PATIENT GOALS AND SURGEON COLLABORATION • Strength and control drills related to sport specific movements • Sport/work specific balance and proprioceptive drills • Hip and core strengthening • Stretching for patient specific muscle imbalances
CARDIOVASCULAR EXERCISE	<p>Replicate sport or work specific energy demands</p>
RETURN TO LIGHT SPORT CRITERIA	<ol style="list-style-type: none"> 1. Dynamic neuromuscular control with multi-plane activities, without pain or swelling 2. Biodex scores at least 85-90% of opposite side 3. Surgeon clearance 4. At least 6 months post op