



Microfracture Post-Operative Protocol

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Phase I: 0 – 6 weeks

Weightbearing status and ROM

Patella trochlear lesions: weightbearing as tolerated from 0-30 flexion for 6 weeks

Femoral condyle, tibial plateau lesions: non-weightbearing for 6 weeks

Exercises

Passive knee ROM exercises

Extension

Passive extension – sit in a chair and place your heel on the edge of a stool or chair; relax thigh muscles and let the knee sag under its own weight until maximum extension is achieved.

Heel props – place rolled up towel under the heel and allow leg to relax

Prone hangs – lie face down on a table/bed with the legs hanging off the edge of the table; allow the legs to sag into full extension.

Flexion

Passive flexion – sit on chair/edge of bed and let knee bend under gravity; may use the other leg to support and control flexion

Wall slides – Lie on your back with the involved foot on the wall and allow the foot to slide down the wall by bending the knee; use other leg to apply pressure downward.

Heel slides – Use your good leg to pull the involved heel toward the buttocks, flexing the knee.

Hold for 5 seconds; straighten the leg by sliding the heel downward and hold for 5 seconds.

Quadriceps sets in full extension

Straight leg raises (with brace locked in extension if patella-trochlear lesion)

Hamstring isometric sets in full extension

Patella mobilization

Hip abduction, adduction

Ankle ROM and gastroc-soleus strengthening with tubing/Therabands

Phase II: Weeks 6 – 12

Patella trochlear lesions: progress to full ROM, then weaned off as tolerated

Weightbearing status

Gradual increase to weightbearing as tolerated

Exercises

Full active knee ROM

Stationary bicycling – begin with no resistance, with goal of 45 minutes for endurance training; then may gradually increase resistance

Treadmill walking / elliptical trainer (slow speed, no incline) – begin with 5-10 minute duration; advance 5 minutes/week

Standing Hamstring curls

Standing toe raises

Closed chain exercises for hamstring; for quadriceps, may begin squats to chair and wall slides (back against wall) at week 8 with knee flexion limited 0 -45 if patella-trochlear repair, avoid until week 12

Elastic resistance cord exercises (avoid open chain knee extension)

Phase III: Weeks 12 – 16

Exercises

Continue previous exercises with progressive resistance

Begin running program – begin on treadmill or soft track; start with 1 minute running, 4 minute walking intervals;

increase running by 1 minute/week (with decrease in walking interval) with goal of 20 minutes of continuous

running after 5 weeks

Seated leg press; avoid if patella-trochlear repair

For patella-trochlear repair, may begin may begin squats to chair and wall slides (back against wall) with knee flexion 0 -30

Phase IV: Weeks 16 – 24

Exercises

Continue to increase lower extremity strength and endurance

Advance running program

Begin agility and plyometric training

Phase IV: Weeks 24+

Exercises

Return to sports that involve contact, cutting, pivoting or jumping