



212 East Central Ave., Suite 365  
Spokane, Washington 99208

**Phone: (509) 435-0973**

**Fax: (509) 435-0978**

**AlpineOrthoSpine.com**

## **REHABILITATION GUIDELINES FOR ACL RECONSTRUCTION WITH MENISCUS REPAIR OR CHONDRAL REPAIR PROCEDURE:**

### Stage 1(Day 1-4 weeks):

ROM: hinged spint with intermittent active assisted and passive ROM as tolerated (extension to flexion and patellar mobilization) prone heel hangs, post-op brace locked at 0 degrees full extension when not ranging; brace in full extension during sleep for the first 6 weeks.

May take brace off for range of motion exercises.

Strength: quad sets and SLR (without weights), isometric hamstrings, ankle pumping; heel slides

Weight bearing: 0%

Modalities: EMG biofeedback to hamstrings and quadriceps prn; EMS prn; cryotherapy

Sports: none.

CPM(ONLY IF CHONDRAL REPAIR): If there is a chonrdral repair procedure(microfracture, autologous chondrocyte implantation, or osteochondral autograft transfer), then the CPM is used for a cumulative of 6 hours per day for the first 6 weeks post-operative(1-2 hours at a time) with a ROM of 15-50 degrees. Patient may take brace off for CPM.

### Stage 1(Day 5-4 weeks):

ROM: hinge unlocked for active and passive ROM, prone heel hangs. May take brace off for range of motion exercises.

Strength: quad and hamstring active exercises ranging against gravity, PRE(light weights with quadricep and hamstring stations)-quads 90 degrees-60 degrees and hamstrings within available ROM, continue SLR without weights.

### Stage 2(4 weeks-6 weeks):

ROM: as above; gastrosoleus stretching.

Strength: PRE and SLR as above

Weightbearing: 25% with brace on 0-45 degrees.

Modalities: as above.

Sports: none.

CPM:As noted above for CPM. Patient may take brace off for CPM.

### Stage 3(6 weeks-4 months):

ROM: as above; may remove brace for sleep and range of motion exercises.

Strength: SLR without weight, PRE-quads 90 degrees- 60 degrees only, hamstrings full range, squats, hip exercises, stationary bicycling, ½ squats, step-ups(Stair-Master), rowing machine, swimming, and slide board.

Weightbearing: 6<sup>th</sup> week-50%; 7<sup>th</sup> week-75%; 8<sup>th</sup> week-100%

Modalities: prn

Sports: steps-ups, rowing machine, swimming, and slide board

Stage 4(4 months-6 months):

ROM: as above; no brace except for functional braces as necessary.

Strength: PRE-quad PRE in FROM; closed kinetic chain exercises; continue above as well.

Weight bearing: WBAT; may wean from ACL brace if still in brace; may need to use ACL brace for running and agility exercises.

Sports: initiate straight jogging to ½ speed running with the ACL brace on after 65% strength is achieved.

Stage 5(6 months and beyond):

ROM and Strengthening: as above. No bracing Except for functional braces as necessary.

Sports: progress through graduated running program such as “functional rehabilitation program”

Resume main sports if patient has obtained near full ROM and has obtained at least 80% of quad and hamstring strength as compared to the other extremity.

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