

Meniscus Root Repair

Physical therapy protocol

Patient: _____ Surgery / procedure date: _____

This is the full Pacific Bone & Joint postoperative protocol. Patient-specific operative and discharge orders take precedence over this default pathway.

Selected by surgeon _____ PT start _____ Next review _____

Protection and early recovery

Use after medial or lateral meniscus root repair. Record repair location, fixation, and any associated ligament, cartilage, or bone procedure. This protocol protects the attachment while restoring motion and muscle control. The signed surgical order overrides this schedule; combined procedures follow the most restrictive applicable limits.

Time: Weight bearing - Motion and brace

Weeks 0-6: Non-weight bearing with two crutches or a walker. Do not support body weight on the operated leg. - Brace locked at 0 deg for transfers and walking. Assisted motion 0-90 deg. Remove or unlock only for prescribed exercise and hygiene; follow discharge instructions for sleep.

After 6-week review: After surgeon review, advance approximately 25% body weight every 3-4 days toward full loading. Slow down for swelling, pain, or limp. - Gradually increase flexion beyond 90 deg. Wean brace only after clearance, reliable quadriceps control, and safe gait.

Weeks 9-12: Full weight bearing only with normal gait and a quiet knee. - Work toward full comfortable motion. Avoid forceful flexion and loaded bending beyond 90 deg.

Protect the repair

- Do not actively pull the heel backward with the hamstrings during the first 6 weeks. Use assisted knee bending.
- No isolated resisted hamstring curls before week 12. No deep loaded flexion beyond 90 deg, kneeling, jumping, or twisting for at least 4 months.
- Maintain neutral extension early without forcing hyperextension. Do not rest for prolonged periods with a pillow directly under the knee.
- Do not advance because pain has improved. Repair protection depends on healing time, examination, and the operative findings.

Begin PT within the first postoperative week unless the surgical order specifies otherwise. At each visit check swelling, wound concerns, extension, flexion, quadriceps activation, and adherence to the walking limits. Teach safe stairs and transfers before increasing activity.

Clinical basis: NWB for 6 weeks follows the 2024 meniscus consensus. The 6-week flexion cap and 12-week resisted-hamstring restriction are conservative clinic defaults and may be modified in the signed order.

Exercise progression

Weeks 0-6

- Use ankle pumps, quadriceps sets, gentle patellar mobility when appropriate, and frequent short sessions of assisted knee motion within 0-90 deg.
- Add neuromuscular electrical stimulation if quadriceps activation is poor. Perform straight-leg raises only without extension lag; use the locked brace if needed.
- Train hip and trunk muscles without loading the operated leg or recruiting forceful knee flexion. Avoid hamstring curls, heel digs, and resisted knee-bending exercises.
- Use elevation and protected cold therapy for swelling. Pool exercises require a closed incision and clearance; water does not cancel the weight-bearing restriction.

After the 6 week review through week 12

- Begin the loading progression only after the 6-week review. Teach partial loading with a scale; retain crutches until walking is controlled without a limp.
- Restore flexion gradually and begin active knee bending without resistance. Continue extension work, quadriceps activation, and hip strength.
- Introduce a stationary bicycle with a high seat and minimal resistance when motion and loading permit safe use. Do not force a full pedal revolution.
- Add balance, supported calf raises, low step-ups, and shallow squats or leg press. Start around 0-45 deg and advance toward 60-70 deg only without joint-line pain or swelling.

Months 3-6

- After week 12, introduce light hamstring resistance and progress gradually. Build bilateral then unilateral quadriceps, hip, and calf strength.
- Keep loaded knee bending at or below 90 deg through month 4. Deeper squats or kneeling require surgeon release; delay longer for complex repair, poor tissue, or cartilage symptoms.
- Advance cycling, walking, and elliptical exercise as tolerated. Build controlled step-downs and single-leg balance. Running and hopping remain restricted until the separate clearance criteria are met.

Progress only when the current exercise dose produces no meaningful increase in pain, swelling, stiffness, or limp the next day. If the knee reacts, return to the last tolerated level and reassess. Persistent loss of extension, recurrent effusion, or mechanical symptoms require surgical review.

Running and return to sport

Running readiness at 6 months or later

- Obtain surgeon clearance. Require full comfortable motion, no joint-line pain, no more than trace effusion, and normal walking and stair control.

- Document quadriceps strength at least 80% of the comparison limb and controlled single-leg squat or step-down performance. Assess absolute strength as well as symmetry.
- Start level walk-jog intervals on alternate days. Increase duration before speed, with symptoms returning to baseline by the following day. Add landing and hop work only after successful progression.

Sport readiness usually 6-9 months or later

- Full motion; no recurrent swelling, locking, catching, or giving way; tolerance of progressive sport practice.
- Quadriceps and hamstring strength at least 90% of the comparison limb. When relevant to the activity, hop tests at least 90% with controlled landing and direction changes.
- Satisfactory endurance, movement quality, confidence, and surgeon clearance. High-demand pivoting sports may require greater symmetry and a longer progression.
- Any associated BEAR, ACL, osteotomy, or cartilage procedure may delay return. A calendar date or a strength score alone does not demonstrate repair healing.

When to seek help

Contact the surgical team promptly for increasing calf pain or swelling, wound redness or drainage, fever, uncontrolled pain, new persistent numbness, or loss of motion. New locking, recurrent effusion, or instability also requires review. Call 911 for chest pain, trouble breathing, or a suddenly cold or pale foot.

Sources: Pujol et al. EU-US Meniscus Rehabilitation Consensus Part I, 2025.

<https://doi.org/10.26603/001c.137095> ; Prill et al. Part II, 2025.

<https://doi.org/10.26603/001c.140661> ; Ohio State Sports Medicine, Advanced Meniscus Repair Clinical Practice Guideline.

<https://medicine.osu.edu/-/media/files/medicine/departments/sports-medicine/advanced-meniscus-repairfinal.pdf>

The running and strength gates are practical clinical progression criteria. They require interpretation alongside tissue healing, examination, and the patient's activity goals.