

KNEE PAIN, SPRAIN, AND MENISCUS TEAR

Nonoperative Physical Therapy Protocol · 6–12 Weeks

PATIENT

PHYSICIAN

Andrew L. Merritt, MD

DATE OF REFERRAL

PT START DATE

For the patient

This program is for a **sore, strained, or irritated knee**, including many **meniscus tears**, that does not need surgery. The goal is simple: **calm the knee down, get it moving fully, and make it strong**, so it can handle your normal life and sports again. Most people improve within **6–12 weeks**, and you can **move ahead faster as your pain allows**. For many meniscus tears, especially the wear-type tears common after age 40, physical therapy works as well as surgery. Some soreness with exercise is normal; follow the pain rules your therapist teaches you.

PROTOCOL AT A GLANCE

DIAGNOSIS · GOAL	Knee pain, sprain or strain, or a meniscus tear treated without surgery. Full motion, a strong leg, and a return to your activities
ACTIVITY	Full weight bearing. Stay active within the pain rules. Bike, walking, and pool are great; no deep squats, kneeling, or twisting under load until Phase 3
PHYSICAL THERAPY	2× a week for 4–6 weeks , then every 1–2 weeks as you move to a home or gym program
PAIN RULES	Exercise pain up to 3–4/10 is OK if swelling and pain settle by the next morning. If not, ease back the next session
PROGRESSION	Based on symptoms, not the calendar. Move ahead as fast as pain and swelling allow. Discharge as soon as the home program is solid
RECHECK	See Dr. Merritt if the knee locks, catches and won't straighten, gives way , or is not clearly better by 6 weeks

Recovery Timeline

Phase	When	PT visits	Focus
1	Weeks 0–2	2× a week	Calm the swelling, restore full straightening and bending, wake up the quad, normal walking
2	Weeks 2–6	2× a week	Progressive strength (quad, hip, hamstring), balance, bike and cardio; motion to full
3	Weeks 6–12	Every 1–2 weeks	Single-leg strength, agility, running and sport drills if needed; home program; discharge

Questions about PT? Call our office or ask at your next visit. We are glad to coordinate with your therapist.

For the Therapist

Check the surgeon notes first. They override anything else in this protocol. Questions or setbacks: call (425) 656-5060.

Surgeon notes and special instructions

General principles

- **Scope.** Knee pain without a surgical problem: sprains, strains, overuse irritation, and stable or degenerative **meniscus tears**. For degenerative tears, exercise works as well as surgery (METEOR, ESCAPE).
- **Symptom-guided, not time-based.** Phase timing is a guide only. All precautions are based on symptoms: patients may **advance through the protocol as quickly as pain and swelling allow**.
- **Pain rules.** Exercise pain up to **3–4/10** is fine if pain and swelling settle by the next morning; if not, ease back the next session.
- **Priorities.** Full extension first, then flexion; control swelling; progressive quad, hip, and hamstring strength (8–12 reps, 2–3 sets). Avoid deep loaded flexion, kneeling, and pivoting until symptoms allow.
- **Rules.** NMES at PT only. No band TKEs. Ice 20 min on, 20 min off. See Dr. Merritt for true locking, giving way, or no improvement by 6 weeks.

PHASE

1

Calm It Down and Get It Moving

Weeks 0–2

For the patient: what to expect

The first job is to **settle the swelling** and get your knee **fully straight and bending again**. You will learn how much discomfort is OK, start waking up your thigh muscle, and walk normally. Ice 20 minutes on, 20 minutes off after exercise or when it is swollen.

VISITS	2× a week. Visit 1: evaluation, baseline tests (KOOS JR, pain 0–10, motion, swelling), education, home program
ACTIVITY	Full weight bearing; short walks as tolerated. Crutches only if limping, until walking normally. Stationary bike with the seat high, rocking first, then full turns when the knee allows
SWELLING	Ice or cold compression 20 min on, 20 min off; elevate; compression sleeve

Goals

- Full extension (0°, equal to the other side)
- Flexion $\geq 110^\circ$
- Swelling trace or less; walking without a limp
- Good quad contraction, straight-leg raise without a lag

Move on when

- ☐ Pain and swelling settling session to session
- ☐ Full extension
- ☐ Normal walking

Exercises

Exercise	How
Heel slides · wall slides	2–3 × 10–15, gentle end-range hold
Heel prop · prone hang	3–5 min for extension if lacking
Quad sets · straight-leg raises	2–3 × 10–15, 5-sec hold on quad sets
Bridges · side-lying hip abduction · clamshells	2–3 × 10–15
Hamstring and calf stretches	3 × 30 sec
Mini squats (0–45°) · heel raises · weight shifts	2–3 × 10–15
Stationary bike	10–15 min, seat high, easy resistance

Precautions

- Based on symptoms: no deep squats, kneeling, or twisting on a planted foot while they are painful
- No running or jumping until Phase 3 goals allow

PHASE

2

Build Strength

Weeks 2–6

For the patient: what to expect

The exercises get harder: more weight, step work, and balance. Keep up your home program **2–3 times a week**, plus biking, walking, or the pool. By the end of this phase most people are back to normal daily life without pain.

VISITS	2× a week. Retest at week 6
LOADING	Progress resistance when 2 more reps are possible at the end of a set. Build to 8–12 reps at a hard effort, 2–3 sets
CARDIO	Bike, elliptical, pool, or walking, building to 20–30 min

Goals

- Full, pain-free motion
- Single-leg squat to 45° with good control (knee over foot)
- Single-leg balance 30 sec, eyes open
- Daily activities and stairs without pain

Move on when

- ☐ No swelling after harder sessions
- ☐ Quad strength about 80% of the other side

Exercises

Exercise	How
Squats to 90° · leg press (0–90°)	3 × 8–12, progress load
Step-ups and step-downs (forward, lateral)	4–8 in step, 3 × 8–12
Split squats · reverse lunges (to comfortable depth)	3 × 8–10
Leg extension (90°–45° arc) · hamstring curls	3 × 10–12
Romanian deadlifts · single-leg bridges · band walks	3 × 10–12
Balance	Single-leg stance, then on foam or with reaches, 3 × 30 sec

Precautions

- Based on symptoms: keep squats and lunges to 90° or less, and avoid pivoting and cutting, until they are pain-free

PHASE

3

Return to Activity

Weeks 6–12

For the patient: what to expect

You now do most of the program on your own. Visits drop to every 1–2 weeks to make the exercises harder and, if you want, get you back to **running and sports**. Many people finish at 6–8 weeks with a routine they keep.

VISITS	Every 1–2 weeks. Discharge as soon as the goals are met
RUNNING	Walk-jog program when there is no swelling, full motion, and quad strength about 80% of the other side
DEEPER MOTION	Gradually reintroduce deeper squats, kneeling, and twisting as symptoms allow

Goals

- Quad and hamstring strength $\geq$ 90% of the other side
- Single-leg hop tests $\geq$ 90% (if returning to sport)
- Pain-free running and sport drills (if needed)
- Independent home or gym program

Move on when

- ☐ Meets discharge criteria (below)

Exercises

Exercise	How
Single-leg squats · step-downs · deadlifts	3 × 8–10, progress load
Landing and jump training	Two-leg, then single-leg; land softly, knee over foot
Agility	Lateral shuffles, carioca, figure-8s, then cutting at increasing speed
Long-term program	Strength 2–3× a week plus cardio; a warm-up such as FIFA 11+ for field sports

Precautions

- Not improving, or new locking, catching, or giving way: send a note to Dr. Merritt before continuing

Discharge and When to Call

Finish PT as soon as the patient can run the program on their own.

Measure	Target
Motion	Full extension and flexion, equal to the other side
Swelling · Pain	No swelling after activity; pain $\leq 2/10$ with daily activities and exercise
Strength	Quad and hamstring $\geq 90\%$ of the other side ($\geq 80\%$ if not returning to sport)
Function	Stairs step over step without the rail; single-leg squat with good control
Sport (if needed)	Hop tests $\geq 90\%$; pain-free running and cutting drills
Home program	Independent, 2–3× a week, with a plan for flares

FLARE PLAN	Cut exercise intensity by 30–50% for a few days, keep gentle motion and the bike, ice 20 min on, 20 min off. Call if a flare lasts more than 1 week
REPORT TO DR. MERRITT	Baseline and discharge scores (KOOS JR, pain 0–10, motion, strength), number of visits, and the home program given
CALL SOONER IF	The knee locks or will not straighten , gives way, or swells a lot after a twist; no meaningful improvement by 6 weeks; hot or red joint, fever, or calf pain or swelling