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ORTHOPAEDIC SPORTS MEDICINE

PEDIATRIC PROTOCOL · AGES 12+

POST-OPERATIVE INSTRUCTIONS

MPFL Reconstruction

Pediatric Post-Operative Instructions · Ages 12+

FOR PARENTS AND PATIENTS

This guide is for **both you and your parent or guardian**. Medication instructions are directed to your parent or another adult caregiver — please make sure they have read this carefully before you leave the hospital. Activity instructions speak to you directly. Recovery is a team effort, and the more you both understand the plan, the better your outcome will be.

What was done

You had an **MPFL reconstruction** — a procedure to reconstruct the medial patellofemoral ligament, which is the primary soft-tissue restraint preventing the kneecap (patella) from dislocating. After one or more patellar dislocations, this ligament is stretched or torn and cannot heal on its own. A graft is used to recreate it and restore patellar stability.

Weight bearing and brace

Weight bearing	Weight bearing as tolerated with crutches. Most patients wean off crutches within 2–3 weeks as quad strength and comfort allow.
Brace	Wear your hinged knee brace locked in extension for walking for the first 2 weeks, then progressive unlocking as directed by your PT. Worn during the day; may remove for hygiene and exercises.

Medications *(for the parent or caregiver)*

Your child's post-operative pain plan uses scheduled non-opioid medications as the foundation, with oxycodone available for breakthrough pain only. **All doses below are weight-based** — calculate each dose based on your child's current weight. Take with food when possible. Do not exceed the maximum dose per administration.

DOSE CALCULATOR — DO THIS BEFORE YOUR CHILD'S FIRST DOSE

MEDICATION	DOSE	MAX PER DOSE	FREQUENCY
Ibuprofen (Advil / Motrin)	10 mg/kg	600 mg	Every 6 hours with food · Days 1–14
Acetaminophen (Tylenol)	15 mg/kg	1,000 mg	Every 6 hours, **offset 3 hours from ibuprofen** · Days 1–14
Ondansetron (Zofran) — for nausea	0.15 mg/kg	4 mg	Every 8 hours as needed for nausea · Days 1–5
MiraLAX — for constipation	17 g (1 capful)	17 g	Once daily as needed · while taking oxycodone

Example (40 kg child): Ibuprofen = 400 mg every 6 hrs · Acetaminophen = 600 mg every 6 hrs, starting 3

hours after ibuprofen. A 60 kg teenager reaches the adult maximum dose.

STAGGER IBUPROFEN AND ACETAMINOPHEN — DO NOT GIVE AT THE SAME TIME

Give ibuprofen at hours 0, 6, 12, 18 and acetaminophen at hours 3, 9, 15, 21. This keeps a consistent level of pain relief around the clock and reduces the need for oxycodone.

BREAKTHROUGH OXYCODONE — 5 TABLETS PRESCRIBED

Dose: 0.1 mg/kg per dose · maximum 5 mg per dose · every 4–6 hours as needed. Many patients do not need any oxycodone. Give only if your child's pain rises above a 4 despite the scheduled ibuprofen and acetaminophen. Use for as short a time as possible — opioids cause constipation and drowsiness. **Lock up unused tablets and dispose of extras safely** — do not flush. Many pharmacies offer free medication disposal.

IMPORTANT — DO NOT GIVE ASPIRIN

Do not give aspirin or any aspirin-containing product (Excedrin, Pepto-Bismol, etc.) to anyone under 18. Aspirin use in children and teenagers with a viral illness is associated with a rare but serious condition called Reye's syndrome.

DRIVING AND OPERATING MACHINERY

Your child must not drive while taking **oxycodone**, which can cause drowsiness, dizziness, or impaired coordination. If your child is 16 or older and has a license, remind them this applies even at low doses — they should not drive or operate machinery until they are off oxycodone.

Diet *(for the parent or caregiver)*

Start with clear liquids — water, Gatorade, broth, Jell-O — then advance to light foods (crackers, toast, rice) as tolerated. Return to a normal diet once your child is keeping food down comfortably, usually by the next day. Ibuprofen and oxycodone can upset the stomach — always give with food.

Ice and elevation

Keep the leg elevated above heart level as much as possible for the first 3–5 days — this is the single most effective thing you can do to control swelling. Use pillows under the entire leg, not just the ankle.

Ice: Bagged ice or gel packs — 20 minutes at a time, no more than once per hour, with a cloth between the ice and your skin. Cold-therapy devices (Game Ready, Polar Care, Breg): 20–30 minutes up to 4 times per day with a thin cloth between the pad and skin. If you had a nerve block, your leg may be numb for 12–24 hours — set a timer and do not leave ice on longer than 20 minutes regardless of whether you can feel it.

Wound care

You will leave the operating room with a multi-layer dressing. From the outside in: a stretchy tan elastic bandage (ACE wrap), then a soft white cotton wrap (Webril), then white gauze pads and a yellow ointment-coated mesh (Xeroform), and small white tape strips (Steri-Strips) directly on the skin. Keep this dressing clean and dry for the first **3 days**.

On day 3, remove the dressing in this order:

1. Unclip or remove the brace if wearing one.

2. Unwrap or cut off the stretchy tan outer wrap.
3. Pull apart the soft white cotton wrap — it tears easily with your fingers.
4. Remove and discard the white gauze pads and yellow mesh beneath them.
5. **Leave the small white tape strips on the skin.** They will lift off on their own over 1–2 weeks. Do not pick at them.

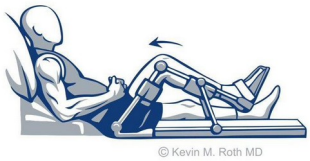
Once incisions are dry for 24 hours, you may shower — let water run over them, pat dry, do not scrub. **No baths, pools, hot tubs, or ocean until cleared at follow-up.**

Home exercises

Begin these exercises about 24 hours after surgery and do them at least **3 times per day.** Try to perform 3 sets of 10 repetitions initially; you may increase to 15 repetitions if tolerated. Your knee will feel stiff and sore at first — that is normal. The goal by your first post-op visit is a knee that fully straightens and bends to about 90°. Do ankle pumps throughout the day to keep blood moving.

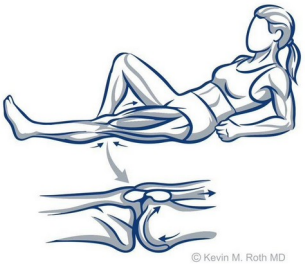
Continuous passive motion (CPM)

Use your continuous passive motion (CPM) machine about 4 hours per day. It is fine to sleep in it — remove the brace before getting in. Start at 30° and advance about 10° per day; once you reach 90° you may return the unit. When you are not in the CPM, keep the leg elevated to reduce swelling.



Quadriceps sets

Lie down or sit with your leg fully extended. Tighten and hold the muscle on the front of your thigh to flatten the knee against the bed or floor. The kneecap should slide upward toward the thigh.



Heel props

Lie on your back with your heel propped on a rolled towel or the armrest of a couch. Leave nothing behind the back of the knee and let it relax and straighten. If you cannot get fully straight, place a 2–5 lb weight on the thigh just above the kneecap.

Prone heel hangs

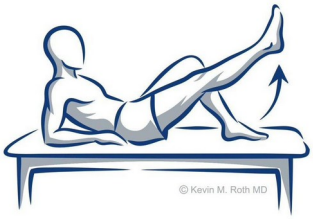
Lie on your stomach on a bed and slide down so your knee is at the edge and your foot hangs off. Let gravity straighten the knee. A 2–5 lb weight can be hung from the heel if needed.

Heel slides

Sitting or lying down, gently slide your heel toward your thigh to bend the knee. Hold a few seconds, then slowly straighten. A towel looped around the foot can help pull into more bend.

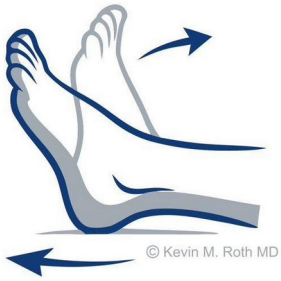
Straight leg raises

Master the quadriceps set first — if the knee bends during this exercise you are not ready. Tighten the quad hard, lift your heel 4–6 inches off the floor keeping the knee completely straight, then lower slowly while keeping the quad tight.



Ankle pumps

Move your foot up and down like pressing a gas pedal — 20–30 times every few hours. This circulates blood through the leg and reduces clot risk.



Physical therapy and return to sport

PT begins within the first week. Quad strengthening and VMO activation are particularly important after MPFL reconstruction — the quad is the primary dynamic stabilizer of the patella. Return to sport typically takes 4–6 months. Return to contact sports requires full strength, dynamic stability, and clearance from Dr. Roth.

> **NO PE OR SPORTS UNTIL CLEARED**
> Returning before adequate quad strength and dynamic stability are restored significantly increases the risk of re-dislocation.

School and activity

Most students can return to school within a few days of surgery, depending on pain levels and mobility. Notify the school nurse and PE teacher — **no PE, sports, or unstructured physical activity until cleared by Dr. Roth, his PA or his NP.** If your school requires a note, call the office and we will provide one.

When to call *(for the parent or caregiver)*

Call **(650) 853-2943** any time, day or night, for any concern. Specifically call if your child experiences:

- Pain that is not controlled by the medication regimen, or that is getting worse rather than better after the first 48 hours
- Fever above 101 °F (38.3 °C)
- Increasing redness, warmth, or swelling around the wound
- Drainage from the wound that is cloudy, yellow, or foul-smelling
- Numbness or tingling lasting longer than expected from any nerve block
- Any concern about the cast, splint, or brace

EMERGENCY — CALL 911

Call 911 immediately if your child develops sudden shortness of breath, chest pain, or a rapid or irregular heartbeat. These can be signs of a blood clot in the lung, which is a medical emergency.

Follow-up appointment

Your first post-operative appointment is typically within 7–14 days of surgery. If you have not already scheduled this, call **(650) 853-2943**. Bring all your medications to the appointment. At this visit, Dr. Roth, his PA or his NP will check the incision and review your child's progress. Physical therapy will be scheduled at or shortly after this visit.

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Board-Certified Orthopaedic Surgeon · Subspecialty Certification in Sports Medicine

Dr. Roth completed his orthopaedic surgery residency at Harvard Medical School and his sports medicine fellowship at the Kerlan-Jobe Orthopaedic Clinic in Los Angeles. In practice since 2013, he specializes in advanced arthroscopic techniques and sports medicine procedures, and sees patients at Palo Alto Medical Foundation's Palo Alto and Dublin offices.

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