

MPFL Reconstruction + TTO — Pre-Operative Patient Guide

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Kneecap Instability with Malalignment — MPFL Reconstruction and Tibial Tubercle Osteotomy

Your Condition & Procedure

The condition

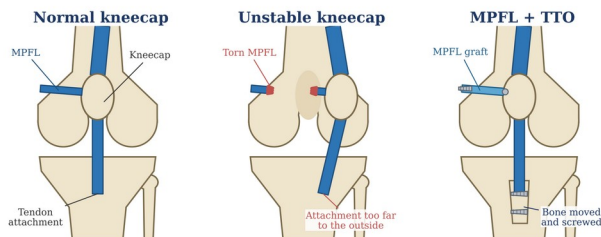
The kneecap (**patella**) glides in a groove at the end of the thigh bone, held on the inner side by the **MPFL** ligament, which tears when the kneecap dislocates. In some knees, the kneecap tendon attaches too far to the outside or the kneecap sits too high, making it more likely to slip again.

The surgery

Two procedures are done together, typically as an outpatient. A **tibial tubercle osteotomy (TTO)** moves the bump on the shin bone where the kneecap tendon attaches into a better position, fixed with screws, and the MPFL is rebuilt with a cadaver tendon graft. The final plan is determined during surgery.

Risks & benefits

Benefits: Most patients have a stable, better-aligned kneecap and return to activity. **Risks** are uncommon and include infection, blood clots, the kneecap slipping again, the bone cut healing slowly or not healing, shin bone fracture, hardware irritation that may require removal, injury to nearby structures (such as nerves, blood vessels, or cartilage), stiffness, persistent pain, and the need for further surgery. These will be reviewed with you in detail before surgery.



Kneecap instability with MPFL reconstruction and TTO (illustration)

Before Surgery

- **Medications:** We will tell you what to stop and when (e.g., blood thinners, anti-inflammatories, some supplements, weight-loss injections).
- **Fasting:** Follow the instructions from your surgery coordinator/facility. In general, you should have nothing to eat or drink starting at midnight the night before surgery.
- **Nicotine:** Stop all nicotine products—they slow healing.
- **Equipment:** A knee brace and crutches are typically arranged beforehand. Practice with crutches.
- **Physical therapy:** Schedule your first visit for within about a week after surgery.
- **Home:** Plan for a helper and remove trip hazards; a shower chair can help.
- **Medical history:** Let us know if you or anyone in your family has a history of blood clot disorders or a malignant hyperthermia reaction to anesthesia.
- **Health:** Call us if you develop a fever, illness, or skin problem near the knee.

Day of Surgery

- If instructed, take blood pressure/heart medications with a small sip of water.
- Arrive at the time given by your surgery coordinator.
- Bring your medication list, insurance card, photo ID, and brace/crutches if you have them.
- Wear loose clothing; leave jewelry and valuables at home.
- A responsible adult must drive you home. You may **not** drive yourself.

Immediately After Surgery

- You will recover in the recovery area; most patients go home the same day.
- Your surgeon will discuss the procedure with you and your support person.
- Your care team will review wound care, restrictions, medications, follow-up, and warning signs before discharge.

Milestone	What to Expect After Surgery (General Timeline)
Weight-bearing	Crutches and a brace locked straight for walking and sleep: touch-down weight for 4 weeks, then up to half. Full weight after the 6-week x-rays, typically by 8 weeks.
Motion	Gentle bending right away: 90° by 2–3 weeks and 120° by 6 weeks. No active straightening out of the brace for 6 weeks.
Daily life	Desk work often within 2 weeks. No kneeling on the front of the shin until healed. No driving while taking narcotic pain medication.
Running	After x-rays confirm the bone has healed, typically 4–6 months.
Sports	Cutting no sooner than 6 months; full return typically 6–12 months.
► Please note: This is a general guide only. Detailed post-operative instructions will be provided on the day of surgery, and your restrictions and timeline may change based on the findings and procedures performed.	

Learn More

We **strongly recommend** reading these pages from the American Academy of Orthopaedic Surgeons (OrthoInfo) before your surgery:

- **Your condition and procedure: Unstable Kneecap (Patellar Instability)** — <https://orthoinfo.org/en/diseases--conditions/unstable-kneecap/>

Video: You may find a video demonstrating an example (not the exact technique) of your surgery at

<https://patient.orthopedica.com/student/path/2088175/activity/4482450> and <https://patient.orthopedica.com/student/path/2088175/activity/2974938>

Questions before surgery? Call our office at (972) 378-1438. For a medical emergency, call 911.