

PATELLOFEMORAL CARTILAGE RESTORATION (MACI)

Your Instructions After Surgery



SCAN FOR THE
ONLINE VERSION



Stanford
MEDICINE



Medications

MEDICATION	WHAT IT IS FOR	HOW TO TAKE IT
Acetaminophen (Tylenol)	Baseline pain control	1,000 mg every 8 hours , on a schedule. No more than 3,000 mg in 24 hours.
Oxycodone 5 mg	Breakthrough pain not managed by other medications. Most people need it for the first few days to week after surgery.	1 to 2 tablets as needed every 4 to 6 hours.
Ondansetron (Zofran)	Nausea	As needed, as directed on the label.
Docusate (Colace)	Stool softener	Take while you are taking oxycodone, as directed on the label.
Aspirin	Blood clot prevention	As directed for 2 weeks , starting the morning after surgery.
Anti-inflammatory	Pain and swelling	May be an option for some patients. Take one only if Dr. Tummala recommends it and you can tolerate it.

Your medications may vary slightly from this list based on your current medications and health history. Any changes will be reviewed with you before surgery.

Example of a day in the first week

TIME	ACETAMINOPHEN	OXYCODONE
8 am	1,000 mg	Take 1 to 2 tablets as needed every 4 to 6 hours
4 pm	1,000 mg	
12 am	1,000 mg	

- **Acetaminophen is the base of your pain control.** Oxycodone is only for pain that breaks through.
- Tell us if you have a history of stomach ulcers, GI bleeding, kidney problems, or an NSAID allergy.
- Do not drive or drink alcohol while taking oxycodone.
- All medications are sent to your pharmacy. Pick them up before your surgery date or after surgery.
- If you had a **nerve block**, your leg will feel heavy and numb for many hours, sometimes more than a day. **Start your pain medication before the numbing wears off**, because it usually goes from numb to painful quickly.



Weight Bearing and Brace

- For the **first week**, you may only rest your **foot flat** on the ground for balance, using crutches. Keep the brace **locked straight** whenever you walk, sleep, or rest; take it off only for exercises and bathing.
- In **weeks 2 and 3**, you may increase to **half your weight** on the leg, with the brace locked straight when walking.
- From **week 4**, you will increase from half weight to **full weight by 6 weeks**, still with the brace locked straight when walking. The crutches come off once you are at full weight and walking normally.
- From **7 to 12 weeks**, the brace is unlocked for walking, and it can come off once you are able to walk well without it. Your therapist will guide this.



Dressing and Showering

Your incision care at a glance

Days 0 to 3

Keep the dressing **on and dry. No showering**; sponge bathe.

Day 3

Remove the dressing and **shower**. Put **clean, dry gauze** back on; change daily or when wet.

Day 5

Leave the incisions **open to air** if they are dry.

4 to 6 weeks

Once fully healed, you may **soak** in a bath, pool, or hot tub.

- Under the dressing you may see some old blood and small white strips (steri-strips) over the incisions. Leave the steri-strips in place.
- When you shower, let soapy water run over the incisions. Do not scrub, and pat them dry afterward.
- Clean around the incisions with a clean washcloth and soap and water only. Do not put alcohol, lotion, ointment, or Neosporin on the incisions.
- The compression wrap helps with swelling. If it feels too tight, you can loosen it.
- Some blood-tinged or clear drainage is normal. If you see thick, yellow, pus-like drainage, send us a photo through the patient portal.



Icing and Elevation

- Ice at least **4 times a day for 20 minutes at a time**, especially for the **first 3 days**. Many patients continue beyond that if they find it helpful.
- Always keep a towel or cloth between the ice and your skin.
- Cold therapy unit: use as directed. If yours has compression, you may start the compression setting the day after surgery as pain allows.
- For the **first 2 days**, keep the knee raised above the level of your heart whenever you are sitting or lying down.
- **Keep the leg straight when you raise it.** Put the pillow under your foot and ankle, never under a bent knee, so you do not lose the ability to fully straighten it.



Home Exercises

- Start the **day after surgery**. Do these **3 to 4 times a day, for 5 to 10 minutes** each session. After therapy starts, you can keep doing this home program under your therapist's supervision, along with the exercises your therapist adds.
- Pump your ankles up and down **often throughout the day**. This helps circulation and lowers the risk of a blood clot.

EXERCISE	PICTURE	HOW TO DO IT
Elevate		Raise the leg whenever you are sitting or lying down. Keep the leg completely straight, with a cushion lengthwise under the leg and an extra cushion under the foot. Do not put cushions under a bent knee. Keep the knee above the level of your heart.
Knee straightening stretch		Lie on your back with a rolled towel under your ankle. Relax and let the knee sink down toward full straightening.
Ankle pumps		Sit on a firm bed with the legs straight and the ankles past the edge. Bring the toes up toward you, then point them away, alternating.
Calf stretch		Sit with the operated leg straight and the other leg bent. Loop a strap around the ball of the foot, hold the ends, and pull back until you feel a stretch in the back of the leg. Hold, then repeat on the other side.
Quad sets		Sit with the knee resting on a rolled towel. Tighten the thigh muscle to press the knee down into the towel without lifting the foot. Relax and repeat.
Gravity-assisted bending		Sit on the side of the bed with your good foot under the heel of the operated leg. Let the operated knee bend down, supported by the good leg, and hold 10 seconds. Use the good leg to lift it back to straight, and repeat. Bend only to your limit for that week (see below).

- **Getting the knee fully straight is the top priority.** Your bending limit goes up each week: **0 to 30 degrees in week 1, 0 to 45 degrees in week 2, 0 to 60 degrees in week 3, and 0 to 90 degrees in week 4, working toward 0 to 125 degrees by 6 weeks.** In week 1 the knee is only moved for you; from week 2 you may also bend it yourself within these limits.
- Avoid any motion that causes a significant increase in pain.



CPM (Optional)

- A CPM (continuous passive motion) machine moves the knee for you to prevent excess joint stiffness and scarring after surgery.
- **The CPM is optional.** It is typically not covered by insurance. If you do not use one, your therapist and your home exercises will move the knee within the same limits.
- If you use a CPM, you can begin for a short time on the **day of surgery** if tolerated; otherwise begin the **day after surgery**. Use it **1 to 2 hours per day** for the first 3 weeks, split into shorter sessions. From **week 4**, use it only as needed to reach your motion goals.
- Keep the CPM within your limits for each week: **0 to 30 degrees in week 1, 0 to 45 degrees in week 2, 0 to 60 degrees in week 3, and 0 to 90 degrees in week 4**, working toward **0 to 125 degrees by 6 weeks**. Do not set it past these limits.



Physical Therapy

- Formal therapy begins **within the first few days after surgery**. Do your home exercises until then. After therapy starts, you can always continue your home program under your therapist's supervision.
- You may go to any therapy clinic that is convenient for you. Book prior to surgery or as early as possible, and call to confirm your appointment.
- Bring the therapy protocol for your therapist.



Motions to Avoid

- Only rest your foot flat on the ground for the **first week**, and put no more than **half your weight** on the leg in **weeks 2 and 3**.
- Keep the brace locked straight when walking for the **first 6 weeks**.
- Do not bend the knee past your limit for each week (**30, 45, 60, then 90 degrees**, working toward 125 degrees by **6 weeks**).
- No squats, lunges, or other exercises that bend the knee under your body weight until about **10 to 12 weeks**, and then gently.
- No leg extension (straightening against resistance) exercises until about **3 months**, starting with short arcs.
- Running can begin at about **6 months**. Return to sport is around **12 months**, once you meet strength and hop testing goals and Dr. Tummala clears you.



Activity

- Alternate sitting, reclining, and lying down as you can tolerate. Get up and move around regularly during the day.
- An elliptical and stationary bike may be added at about **7 weeks**, and an outdoor bike or rowing machine after about **3 months**, as your therapist directs.



Driving

- Not until you are out of the brace and off crutches, off narcotic pain medication, and able to control the car comfortably, including an emergency stop.
- If you are at all unsure whether you are safe to drive, do not for your safety.



Work

- Desk work is often possible within **1 to 2 weeks**, once you are comfortable on crutches.
- Physical or manual work often takes about **6 to 12 months**, depending on the labor involved, and is cleared by Dr. Tummala.



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When to Call

- This handout is for education only and does not replace medical advice. Always follow the instructions Dr. Tummala and the care team give you for your specific situation.*

NOTES AND QUESTIONS