

Patellofemoral Joint Osteoarthritis

Exercise program after your course of 3 PRP injections

This program guides your return to exercise after platelet-rich plasma (PRP) injections into the knee for osteoarthritis affecting the patellofemoral joint (the joint between the kneecap and the thigh bone). Progress through the phases at your own pace, and only move on when the current phase feels comfortable. Your treating physician may adjust the timing to suit you.

Phase 1: Settle and protect

Days 0-3 after final injection

Goal: Let the knee settle while keeping it gently moving.

Exercise	How to do it
Relative rest	Avoid prolonged standing, impact and heavy activity.
Heel slides and ankle pumps	Gently bend and straighten the knee within a comfortable range. Pump the ankle regularly to keep circulation moving.
Quad sets	Tighten the front thigh muscle with the leg straight and hold. Only if pain-free.
Straight leg raise	Lift the straight leg with the thigh muscle tight. Only if pain-free.
Medication and ice	Avoid anti-inflammatory medication and ice during this window, as advised by your doctor.

Phase 2: Isometrics and activation

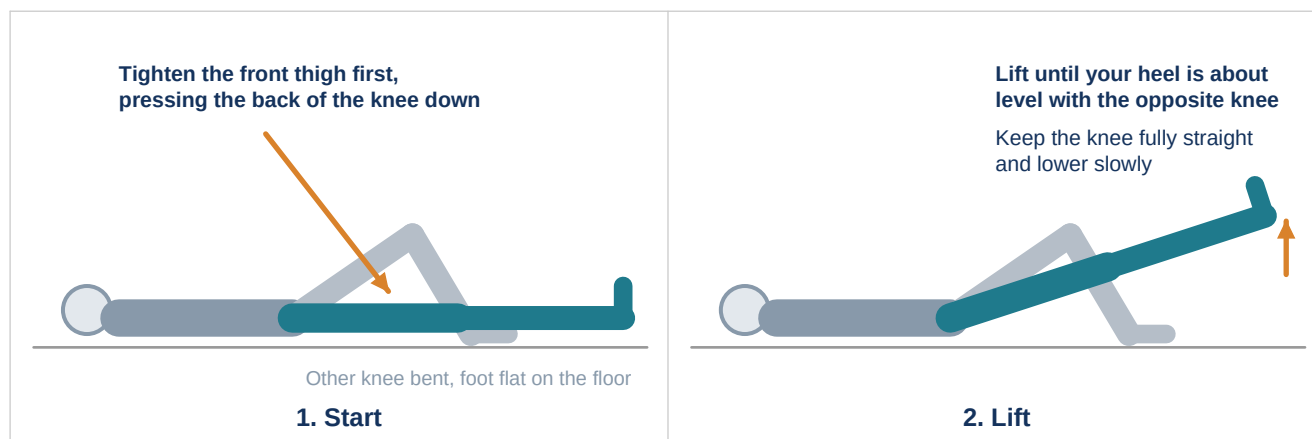
Days 3-14

Goal: Re-activate the thigh and hip muscles without stressing the joint.

Exercise	How to do it
Isometric quadriceps	Hold the knee bent at about 30-45 degrees against resistance. Options: wall sit, Spanish squat, or a seated hold against a belt.
Straight leg raise and terminal knee extension	Perform with a resistance band, focusing on the last few degrees of straightening.
Hip activation	Side-lying leg lift, clamshells and glute bridges.
Stationary bike	High seat, low resistance.
Pool walking	Aquatic exercise if available, which reduces joint load.

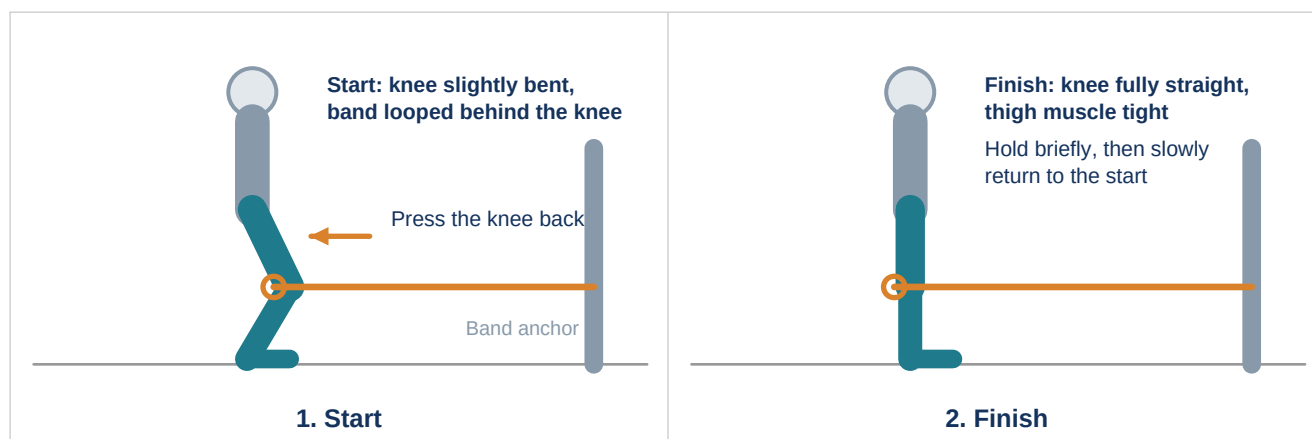
How to do the straight leg raise and terminal knee extension

Straight leg raise (lying on your back)



1. Lie on your back with the other knee bent and that foot flat on the floor.
2. Tighten the front thigh so the knee is fully straight and the back of the knee presses down.
3. Keeping the knee straight, lift the leg until the heel is about level with the opposite knee.
4. Lower slowly. Do not let the knee bend or the back arch.

Terminal knee extension (standing, with a band)



1. Anchor a resistance band at knee height and loop it around the back of the knee. Step back so the band is taut.
2. Stand with the knee slightly bent and the foot flat.
3. Squeeze the front thigh and press the knee back until the leg is fully straight. This is the last few degrees of straightening.
4. Hold briefly, then slowly allow the knee to bend slightly again.

Phase 3: Progressive strengthening

Weeks 2-6

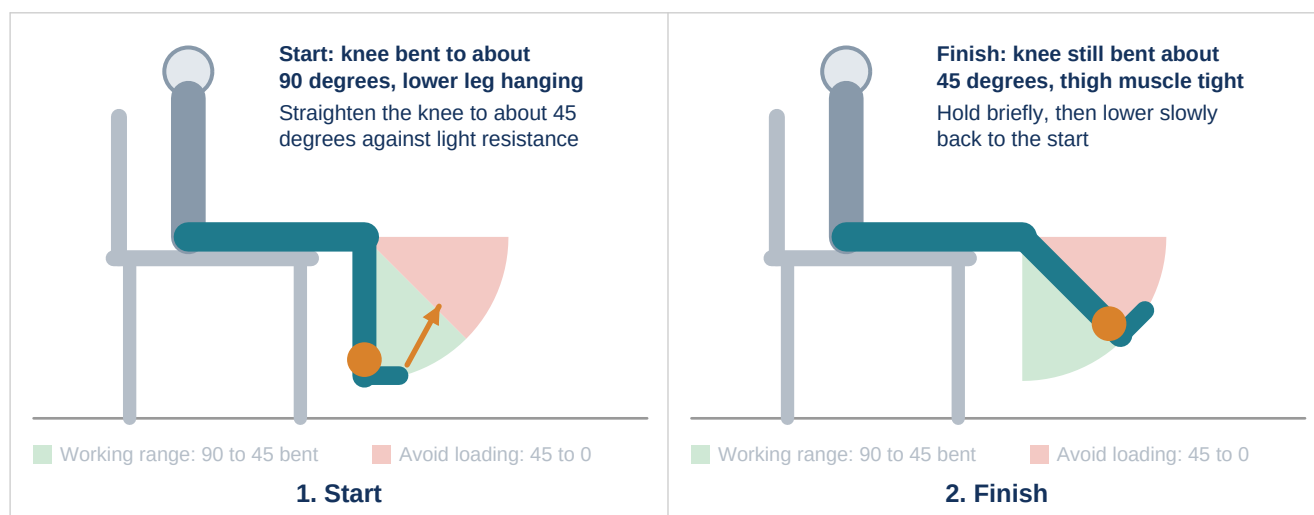
Goal: Build strength within the knee-friendly range of movement.

Exercise	How to do it
Mini squats and box squats	Squat to a high box, keeping the knee bend within 0-45 degrees.
Leg press	Limit the range to about 45 degrees of knee bend.

Exercise	How to do it
Light seated knee extension	Short-arc extension in the 90 to 45 degree bent range with light load. Avoid loaded straightening through the last 45 degrees, where kneecap joint stress is highest.
Low step-ups	Use a low step and lower slowly and under control.
Hip strengthening	Banded lateral walks, single-leg bridges and side planks.
Hamstrings, calves and balance	Hamstring curls, calf raises and single-leg balance work.
Flexibility	Stretch quadriceps, hamstrings, calves, hip flexors and the outer thigh (ITB/TFL).

How to do the light seated knee extension

Short-arc seated knee extension (90 to 45 degrees bent)



1. Sit tall with your back supported and the thigh resting on the seat. Use a light ankle weight or a light band.
2. Start with the knee bent to about 90 degrees and the lower leg hanging down.
3. Tighten the front thigh and straighten the knee to about 45 degrees bent, so the foot is halfway up.
4. Lower slowly back to the start. Do not add load or strongly push through the last 45 degrees of straightening (shaded red), where the kneecap joint is under the most stress.

Phase 4: Functional and sustained loading

Week 6 onward

Goal: Return to everyday and low-impact recreational activity.

Exercise	How to do it
Deeper squats	Gradually increase depth toward about 60 degrees as tolerated.
Single-leg squats and step-downs	Keep the knee tracking over the middle toes, without caving inward.
Walking program	Progress distance and pace gradually.
Low-impact activity	Cycling, swimming and elliptical trainer, if appropriate.

Exercise	How to do it
Heavy slow resistance	3 sets of 8-12 repetitions, about 3 times per week, with slow, controlled lifting and lowering.

Practical guidance

- **Pain guide:** Mild discomfort up to about 3-4 out of 10 during exercise is acceptable, provided it settles within 24 hours.
- **Step back if:** the knee swells or you have a flare that does not settle. Return to the previous phase and let your doctor know.
- **Early on, avoid:** deep loaded bending beyond 60-90 degrees, heavy downhill walking, stair descent, jumping and running.
- **Taping or bracing:** A patellar tape or knee brace may help control symptoms in the short term while you build strength.
- **Individual factors:** Your program may need adjusting for kneecap tracking, the shape of the joint, alignment and the severity of the cartilage changes.

This program is general information for patients of Sydney Sportsmed Specialists and does not replace individual medical advice. Post-PRP rehabilitation is guided largely by clinical experience and general knee osteoarthritis exercise evidence. Please check with your treating doctor or physiotherapist before starting, particularly if you have new swelling, increasing pain, or other concerns.