Partial Knee Replacement Rehab Protocol

Rehabilitation after unicompartmental knee replacement

Physiotherapy after unicompartmental, or partial, knee replacement, phase by phase. Associate Professor Chinmay Gupte, PhD, FRCS (Tr & Orth).
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Recovery from a partial knee replacement is quicker than from a total replacement, and the targets are 0 to 90 degrees at three weeks and 0 to 120 degrees by six weeks. Only the worn compartment is resurfaced, your own ligaments are kept, and the knee usually feels more like your own. You walk on the leg from the day of surgery and there is no brace.

> **There are no positional precautions after a knee replacement.** Unlike a hip replacement, there is no list of forbidden positions and nothing to dislocate. You weight bear fully from the start and there is no brace. The whole job of the first three months is bend, straightening and swelling.
>
> If you had a total knee replacement, see the total knee replacement rehab protocol, which progresses more gradually.

Physiotherapy after knee replacement: what to expect

The problem after a knee replacement is stiffness, not instability. That inverts how the protocol reads compared with ligament surgery: nothing here is about protecting a repair, and almost everything is about pushing range and load while swelling is controlled.

Most of the work is yours. A structured home programme, done several times a day, does more than a weekly appointment. [LIT] Supervised physiotherapy is targeted at people whose recovery stalls, rather than delivered at the same intensity to everyone, because that is what the trial evidence supports.

> **Cryotherapy is used as standard** for swelling and pain through the early phases, alongside elevation and compression.
>
> **Continuous passive motion is not routine.** It is used only where there is concern about stiffness in the knee before surgery.

Range of movement targets

These are the numbers your recovery is measured against. Full straightening matters as much as bend, because a knee that does not fully straighten gives a limp that persists.

Timing	Target
Day one	Straight leg raise and active bending begun the same day
2 weeks	Working towards full extension, bend building quickly
3 weeks	**0 to 90 degrees**
6 weeks	**0 to 120 degrees**
3 months	Maximum range usually reached by 3 months [CONFIRM TARGET]

> **What the numbers mean in practice.** Around 10 to 95 degrees is enough for walking and stairs. Roughly 115 degrees is needed to tie your shoelaces while seated. Kneeling for prayer or sitting cross legged needs more than 130 degrees. If any of these matter to you, say so early, because the target is set with your activities in mind.

Recovery timeline at a glance

Phase	Timing	Focus	Milestone
1	Day 0 to 2 weeks	Swelling, straightening, walking, quadriceps activation	Walking safely, wound healing
2	2 to 6 weeks	Range to 90 by 3 weeks then 120 by 6, gait normalising	0 to 120 degrees by 6 weeks
3	6 weeks to 3 months	Strength, endurance, stairs, return to work and driving	Normal gait, stairs reciprocally, maximum range
4	3 to 12 months	Consolidation, activity for life	Continued gains through the first year

Before surgery: prehabilitation

[LIT] Going into the operation stronger and more mobile makes the first three months easier.

- Quadriceps and gluteal strengthening, within what your pain allows
- Keep whatever bend and straightening you have
- Cycling or pool work for conditioning
- Practise using crutches or sticks before you need them
- Tell us if your knee is already stiff, since that changes how the early phase is run

Phase 1: day 0 to 2 weeks

FOR YOU

You will be up and walking on the day of surgery, taking full weight through the leg. Because only one compartment has been resurfaced and your own ligaments are intact, the knee usually settles faster than after a total replacement. Get it fully straight, keep the swelling down with cryotherapy and elevation, and do not rest a pillow under the knee.

FOR YOUR PHYSIOTHERAPIST

- Mobilise day of surgery, full weight bearing, crutches for confidence
- Cryotherapy, compression and elevation for swelling
- Static quadriceps, inner range quadriceps and straight leg raise
- Active assisted flexion, heel slides, seated knee bends. Bend usually progresses faster than after a total replacement
- Heel props and prone hangs for extension
- Ankle pumps and calf work
- Gait retraining on level ground and stairs
- [CONFIRM: length of stay and whether day case surgery applies]

Phase 2: 2 to 6 weeks

FOR YOU

The range targets come round quickly. Aim for 0 to 90 degrees by three weeks and 0 to 120 degrees by six.

FOR YOUR PHYSIOTHERAPIST

- Progress towards 0 to 90 degrees by 3 weeks and 0 to 120 degrees by 6 weeks
- Static bike from early, once range allows partial revolutions
- Closed chain strengthening: sit to stand, mini squats, step ups and controlled step downs
- Progressive gluteal and hip abductor work
- Wean crutches early as gait allows
- Scar mobilisation once healed
- Balance and proprioception, progressing to single leg

Phase 3: 6 weeks to 3 months

FOR YOUR PHYSIOTHERAPIST

- Progressive resistance training through the whole limb
- Single leg progression: step downs, single leg balance, controlled squats
- Endurance work: walking distance, cycling, cross trainer, and swimming freestyle but not breaststroke in order to avoid excessively twisting the knee once the wound is fully healed
- Stairs reciprocally, up and down
- Return to sport specific preparation where relevant, favouring the lower impact activities listed below

Phase 4: 3 to 12 months

Partial replacement patients are often more active than total replacement patients and return to more demanding recreation. Keep a maintenance programme going and follow the activity guidance below.

If the knee is stiffening

Stiffness after knee replacement affects a small minority of patients and is far easier to treat early than late.

> **Tell us promptly if you are not tracking towards the targets above.** [LIT] Do not wait for the next routine appointment. Physiotherapy is intensified first. If bend remains restricted despite that, a manipulation under anaesthetic may be discussed, and it works considerably better when done within the first three months than after. [CONFIRM: your threshold and timing for discussing manipulation.]

Everyday milestones

Activity	Typical timing
Walking with crutches	Day of surgery
Crutches discarded	Usually 1 to 3 weeks [CONFIRM]
Walking aids fully discarded	Usually by 3 to 4 weeks [CONFIRM]
Stairs one foot over the other	Usually 4 to 8 weeks
Driving	Self certified. See the driving section below
Desk based work	Usually 2 to 4 weeks [CONFIRM]
Manual or standing work	Usually 6 to 12 weeks [CONFIRM]
Swimming	Once the wound is fully healed, usually 3 to 4 weeks. Freestyle but not breaststroke, in order to avoid excessively twisting the knee
Golf, doubles tennis, hiking	Usually 2 to 4 months, once strength allows
Kneeling	From 3 months. See below

[CONFIRM: flying and any venous thromboembolism precautions, which depend on practice policy.]

Driving after surgery

Driving is self certified. There is no fixed date at which you are allowed to drive. You may drive when you can perform an emergency stop and any evasive manoeuvre without your operated knee hindering the movement. Only you can judge that, and it varies considerably between people.

As a guide:

- **Operated right knee:** we would not usually advise driving before 6 weeks
- **Manual car, either knee:** we would not usually advise driving before 6 weeks

- **Operated left knee in an automatic car:** often possible earlier, once you can meet the test above

You should also be off opioid painkillers and anything else affecting your reactions, and able to get in and out of the car independently. Try the emergency stop in a stationary car first, then in a quiet car park before driving on the road.

Tell your insurer. Driving before you are medically fit can invalidate your policy if you are involved in an accident. **The DVLA usually does not need to be told** about recovery from surgery, unless you are still unable to drive three months afterwards or your surgeon advises it.

Activity for life after knee replacement

Most people have no permanent restrictions and return to full, active lives. The guidance below favours lower impact activity for your regular exercise, which is the way to get the longest service from the implant.

Encouraged	Acceptable, higher risk	Best avoided
Walking, hiking, cycling, swimming freestyle but not breaststroke, low resistance rowing, low resistance weights, calisthenics, golf, bowling, doubles tennis, table tennis, dancing, elliptical trainer	Downhill skiing, skating, horse riding, low impact aerobics, activities carrying a risk of a heavy fall	Jogging and distance running, repetitive jumping, high impact court and contact sport, high impact aerobics

[LIT] Grouped along the lines of published joint replacement activity guidance. Two caveats worth stating on the page: recommendations vary widely between surgeons, and there is little large scale evidence on which activities actually affect how long an implant lasts.

Kneeling

Kneeling does not damage the implant. The obstacle is comfort rather than safety, because the skin over the front of the knee is often numb or tender after surgery. It usually improves over the first several months, a cushion helps, and starting with short periods works better than testing it once and giving up. Some people never find it fully comfortable, and that is not a sign anything is wrong.

Frequently asked questions

How much should my knee bend after a partial knee replacement?

The targets are 0 to 90 degrees at three weeks and 0 to 120 degrees by six weeks. That is both faster and further than after a total replacement, because only one compartment is resurfaced and your own ligaments are kept.

Is recovery quicker after a partial knee replacement?

Yes. Crutches are usually discarded within one to three weeks, stairs return between four and eight weeks, and most people are back to their usual activities sooner than after a total replacement.

What is the difference between a partial and a total knee replacement?

A partial replacement resurfaces only the worn compartment and keeps your own cruciate ligaments. A total replacement resurfaces the whole joint. The partial usually feels more like your own knee and recovers faster, which is why the range targets here are more ambitious.

Is there anything I am not allowed to do?

There are no positional precautions. The lasting guidance is to favour lower impact activity for regular exercise, which means walking, cycling, swimming freestyle but not breaststroke in order to avoid excessively twisting the knee, golf, hiking and doubles tennis rather than running and repetitive jumping.

Can I kneel after a partial knee replacement?

Yes, and it will not damage the implant. The difficulty is comfort, because the skin at the front of the knee is often numb or tender after surgery. It usually improves over several months and a cushion helps.

What if my knee will not bend enough?

Tell us promptly rather than waiting for the next routine appointment. Physiotherapy is intensified first, and if bend remains restricted a manipulation under anaesthetic may be discussed. It works considerably better within the first three months than later.

References

1. National Institute for Health and Care Excellence. Joint replacement (primary): hip, knee and shoulder. NICE guideline NG157, 2020.
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3. Medical Advisory Secretariat. Physiotherapy rehabilitation after total knee or hip replacement: an evidence-based analysis. *Ontario Health Technology Assessment Series* 2005.
4. American Academy of Orthopaedic Surgeons. Activities after total knee replacement. OrthoInfo.

About this protocol

Rehabilitation protocol for unicompartmental, or partial, knee replacement, used by Associate Professor Chinmay Gupte, PhD, FRCS (Tr & Orth), MA (Oxon), BMBCh (Oxon), consultant knee and sports injury surgeon, London. Version 2026. Last reviewed [MONTH] 2026. Next review due [MONTH] 2027.

Range of movement targets, cryotherapy and continuous passive motion policy are set by the operating surgeon. Pathway, stiffness thresholds, milestones and activity guidance draw on published joint replacement literature and national guidance.

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This protocol is a general guideline and does not replace the specific instructions given by your own surgeon and physiotherapist. If you are being treated elsewhere, please share this document with your physiotherapist together with your operation note.