# Bucket Handle Meniscus Repair Rehab Protocol

Rehabilitation after repair of a bucket handle meniscal tear

Physiotherapy after repair of a bucket handle meniscal tear. Associate Professor Chinmay Gupte, PhD, FRCS (Tr & Orth). Version 2026. Last reviewed: [MONTH] 2026.

**A bucket handle repair is protected more than a simple tear and less than a root repair.** You take half your weight through the leg for three weeks and wear a brace that opens in stages, reaching full weight bearing without crutches or brace by two months. Deep loaded bending and twisting wait until three months, and running follows on testing.

> **Why the protocol depends on your tear.** The meniscus works as a ring. Circumferential fibres run around it and convert the load passing through the knee into tension around that ring, which is called hoop stress. A simple longitudinal tear leaves the ring intact, so the meniscus still carries load and rehabilitation can move quickly. A radial tear or a root detachment breaks the ring, so load is no longer converted safely and the repair has to be protected from weight bearing for much longer. A bucket handle tear sits between the two.
>
> [LIT] This is the biomechanical rationale set out in the published evidence based meniscal repair protocols, which recommend accelerated rehabilitation where hoop tensile stress is preserved and a restricted protocol where the circumferential fibres are disrupted.

> **This protocol is for a repaired bucket handle tear.** If you had a simple longitudinal tear repaired, see the accelerated protocol. If you had a radial tear or a root repair, see the radial and root repair protocol.

## Weight bearing and bracing

| Timing | Weight bearing | Brace |
|---|---|---|
| Weeks 0 to 2 | 50% with crutches | 0 to 30 degrees |
| Weeks 2 to 3 | 50% with crutches | 0 to 60 degrees |
| Weeks 3 to 4 | Full weight bearing | 0 to 60 degrees |
| At 4 weeks | Full weight bearing | **Brace reviewed** |
| By 2 months | Full, no crutches | None |

Weight bearing progresses to full after three weeks. The brace runs on its own schedule: 0 to 30 degrees for the first two weeks, 0 to 60 degrees for the next two, and reviewed at four weeks.

**Precautions for the first 3 months, whatever your tear**

- **No deep loaded flexion.** Deep squatting, lunging below 90 degrees and kneeling into deep bend all compress the repair
- **No loaded twisting or torsion.** Pivoting on a planted foot is the movement that undoes meniscal repairs
- Full extension is a priority from the outset. If you have not achieved it by 4 weeks, tell your surgeon [LIT]
- Avoid weight bearing with the knee bent beyond 90 degrees in the early phases

## Phase by phase

### Weeks 0 to 3

**Goals:** protect the repair, full extension, quadriceps activation, swelling control.

- 50% weight bearing with crutches, brace on for walking
- Ice, compression, elevation
- Patellar mobilisations
- Quadriceps sets and straight leg raise within the brace range
- Heel slides within the permitted range
- Calf, ankle and gluteal work

### Weeks 3 to 6

**Goals:** full weight bearing, normal gait, range progressing, brace reviewed at 4 weeks.

- Progress to full weight bearing, weaning crutches as gait normalises
- Static bike as range allows, low resistance
- Closed chain work within 60 to 90 degrees
- Step ups and controlled step downs
- Single leg balance

### 6 weeks to 3 months

**Goals:** out of the brace and off crutches by 2 months, progressive strength within the flexion and torsion restrictions.

- Progressive resistance training, staying above 90 degrees of flexion under load
- Single leg progression
- Swimming and cycling from 2 months. Avoid breaststroke
- Balance and proprioception with perturbation

### From 3 months

The restrictions on deep loaded flexion and loaded twisting lift. Introduce deeper loading and rotation gradually, then progress towards impact on meeting the criteria below.

For the national guidance on when meniscus surgery is recommended, see our summary of the BASK meniscal surgery guidelines.

## Shared milestones

These apply to every meniscal repair, on top of the weight bearing and bracing specific to your tear.

| Milestone | Timing |
|---|---|
| Full weight bearing, no crutches, no brace | By 2 months |
| Swimming and cycling | By 2 months. Avoid breaststroke |
| Deep loaded flexion, loaded twisting and torsion | Not before 3 months |
| Impact loading and treadmill running | When the limb symmetry criteria below are met, usually 4 to 6 months |
| Return to sport | On passing the return to sport battery |

## Return to impact and return to sport

Impact loading and treadmill running begin when the limb symmetry criteria are met, which is usually somewhere between four and six months. The date is the consequence of the testing, not the trigger for it.

**Criteria to start impact loading and treadmill running**

- Full pain free range of movement
- No effusion
- Quadriceps and hamstring strength at the required limb symmetry index [CONFIRM THRESHOLD]
- Good single leg control on squat and step down, with no knee collapsing inwards
- Past the 3 month restriction on deep loaded flexion and loaded torsion

**Return to sport battery**

- **Strength:** quadriceps and hamstrings at 90% or more of the other leg by dynamometry [CONFIRM THRESHOLD]
- **Hop tests:** 90% or more across single hop, triple hop, crossover hop and timed hop, with good landing mechanics
- **Balance:** Y-Balance composite, assessed for side to side difference
- **Clinical:** full range of movement, no effusion, no joint line pain on loading
- **Functional:** pivoting and cutting drills completed without pain or swelling
- **Surgeon clearance** before returning to pivoting or contact sport

## 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

In addition, you cannot drive at 50% weight bearing or while the brace is limiting your knee, so driving does not start before 3 to 4 weeks at the very earliest.

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.

## Frequently asked questions

### How long does recovery take after a bucket handle meniscus repair?

Half weight bearing for three weeks, full weight bearing after that, and out of the brace and off crutches by two months. Deep loaded bending and twisting wait until three months, and running and sport follow on testing, usually between four and six months.

### How long do I wear a brace after a bucket handle repair?

The brace is set at 0 to 30 degrees for the first two weeks and 0 to 60 degrees for the next two, then reviewed at four weeks. Most people are out of it well before two months.

### How much weight can I put through my leg?

Half your body weight with crutches for the first three weeks, then full weight bearing. Crutches are weaned as your walking pattern normalises.

### Why can't I squat deeply or twist for three months?

Deep loaded bending compresses the repair and loaded twisting shears it. Those are the two movements most likely to undo a meniscal repair, so the restriction runs for three months whatever the knee feels like.

### When can I run after a bucket handle repair?

Impact loading and treadmill running start when the limb symmetry criteria are met, usually between four and six months.

## References

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2. Mueller BT, Moulton SG, O'Brien L, LaPrade RF. Rehabilitation following meniscal root repair: a clinical commentary. *Journal of Orthopaedic and Sports Physical Therapy* 2016;46(2):104 to 113. doi:10.2519/jospt.2016.6219
3. O'Donnell K, Freedman KB, Tjoumakaris FP. Rehabilitation protocols after isolated meniscal repair: a systematic review. *American Journal of Sports Medicine* 2017;45(7):1687 to 1697.
4. Perkins B, Gronbeck KR, Yue RA, Tompkins MA. Similar failure rate in immediate post-operative weight bearing versus protected weight bearing following meniscal repair on peripheral, vertical meniscal tears. *Knee Surgery, Sports Traumatology, Arthroscopy* 2018;26(8):2245 to 2250.
5. British Association for Surgery of the Knee. Meniscal surgery guideline. *Bone and Joint Journal* 2019;101-B:652 to 659.

## About this protocol

Rehabilitation protocol for repair of a bucket handle meniscal tear, 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.

Weight bearing, bracing and range restrictions are set by the operating surgeon. Progression criteria and the return to sport battery draw on published meniscal repair rehabilitation literature.

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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.