

REHABILITATION AFTER ACL RECONSTRUCTION

ACL reconstruction recovery: crutches 1–2 weeks, running from about 3 months if criteria are met, sport not before 9 months.

PATIENT NAME

DATE OF SURGERY

WHAT IS INSIDE

- What was done, and what to expect week by week
- Weight bearing, walking aids and precautions
- Your exercises, with a diagram and a dosage for each
- Warning signs, and exactly who to call
- Getting back to driving, work and sport
- A progress chart to fill in and bring to appointments

26 minutes to read. Reviews: Wound review at about 2 weeks. Clinical review with an X-ray at 6 to 8 weeks. Then reviews at 3, 6, 9 and 12 months, with the 9-month visit carrying return-to-sport testing.

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This is a general guide. Your operation record and the instructions you are given always take precedence over anything written here. Last reviewed 5 August 2026.

This guide is for an ISOLATED ACL reconstruction: an ACL graft with no meniscal repair. Your operation record says which operation you had. If your meniscus was repaired at the same time, you follow a different, more protected programme: see the guide "ACL reconstruction with meniscal repair" instead. The two programmes are different, and following the wrong one matters. If you are not sure which applies to you, call the rooms before you start.

An ACL reconstruction is a long game. The graft is strong enough for daily life quickly, but turning it into a knee you can trust on a netball court or a football field takes nine months and more, not because the rehabilitation is slow, but because the biology is. Every timeframe in this guide is typical, not a rule, and Dr Broadhead's instructions for you always override the general figures here.

The work starts before surgery. Prehabilitation: getting the knee straight, the swelling settled and the quadriceps working before the operation, is part of the programme, not a warm-up act for it. A quiet, strong knee going in predicts a better knee coming out. If you are reading this before your operation, that is your job now.

AT A GLANCE

WEIGHT BEARING

Full weight bearing as tolerated with crutches from day one

BRACE

No routine brace after an isolated ACL reconstruction

DRIVING

Typically 4–6 weeks for a right knee; often earlier for a left knee in an automatic

PHYSICAL WORK

Typically 6–12 weeks, depending on the job

REVIEWS

Wound review at about 2 weeks. Clinical review with an X-ray at 6 to 8 weeks. Then reviews at 3, 6, 9 and 12 months, with the 9-month visit carrying return-to-sport testing

WALKING AIDS

Crutches for balance and comfort, usually gone by 1–2 weeks

PRECAUTIONS

Full extension is the daily priority; swelling is the brake; no running before criteria are met

DESK WORK

Typically 1–2 weeks

SPORT & ACTIVITY

Running from about 3 months if criteria are met; pivoting sport not before 9 months, and only after passing testing

WHAT WAS DONE IN YOUR OPERATION

The anterior cruciate ligament (ACL) runs through the centre of the knee and stops the shin bone sliding and rotating forward under the thigh bone. A torn ACL does not heal reliably, so in a reconstruction the torn ligament is replaced with a graft: a piece of your own tendon, taken from the hamstrings, the patellar tendon (with a small block of bone at each end, called BTB), or the quadriceps tendon. Your operation record says which graft you had.

The graft is passed through tunnels drilled in the shin and thigh bones and fixed in place. The fixation is strong from day one, which is why you can put weight on the leg immediately. The graft itself then spends months remodelling into a living ligament, and for much of that time it is weaker than it feels. That gap between how the knee feels and how strong the graft is runs through everything in this guide.

At the same operation, the rest of the knee was inspected. In your case the meniscus did not need a repair, which is why this guide, and not the meniscal-repair version, applies to you.

THE IDEAS THAT MAKE EVERYTHING ELSE MAKE SENSE

1. Dates are guides; tests are gates

Best practice after ACL reconstruction is criteria-based progression. Time sets the earliest possible date for each step; objective criteria decide whether you actually move. Each phase in this guide lists both. Feeling good is not a criterion: the graft cannot be felt.

2. Get it straight, keep it dry, switch the quads on

The first fortnight has four jobs: full extension (a completely straight knee), minimal swelling, quadriceps activation without a lag, and normal walking. Everything downstream depends on these four. If you do nothing else in the first two weeks, do these.

3. Swelling is the brake

Increasing swelling after a session means the load was too high. A knee that is bigger the next morning means you did too much yesterday. Use the knee's response, not the calendar, and not enthusiasm, to set the pace.

4. No brace does not mean no protection

You will notice other ACL patients in braces and wonder why you are not. Routine post-operative bracing after an isolated ACL reconstruction does not improve laxity, range of movement, pain, graft survival or function, so it is not used routinely. Braces are used where the meniscus was repaired, where other ligaments were involved, or where quadriceps control is poor. Your protection is the programme itself: criteria before progression, and time before sport.

5. Time protects the graft in a way tests cannot

Returning to pivoting sport before nine months substantially increases re-injury risk. Each additional month of delay up to nine months meaningfully reduces that risk, and passing a full discharge test battery reduces it further. The two together are far stronger than either alone. This is why the answer to "my knee feels great at six months" is still nine months.

6. Which graft you had changes the details

Hamstring graft: avoid heavy resisted hamstring curls and end-range hamstring stretching for about 4–6 weeks; some posterior thigh ache and a numb patch below the incision are common. Patellar tendon (BTB): expect more front-of-knee and kneeling discomfort; kneecap mobilisation and graded loading of the front of the knee matter more, and kneeling tolerance is a late milestone. Quadriceps tendon: expect a slower start to quadriceps activation, be patient with early strength numbers; front-of-knee tenderness settles. Your operation record says which you had.

WEIGHT BEARING AND WALKING AIDS

WEIGHT BEARING

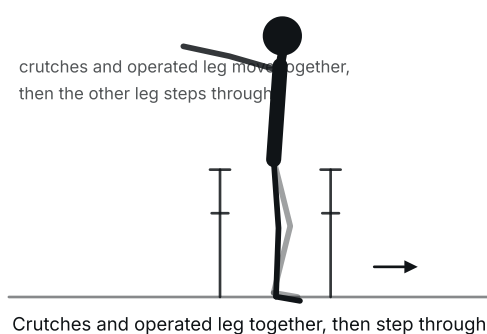
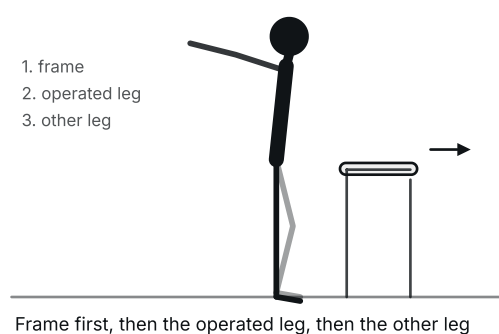
FULL WEIGHT BEARING AS TOLERATED WITH CRUTCHES FROM DAY ONE

You can put as much weight through the leg as comfort allows from the day of surgery. The graft fixation tolerates walking immediately, protected weight bearing is not needed after an isolated ACL reconstruction.

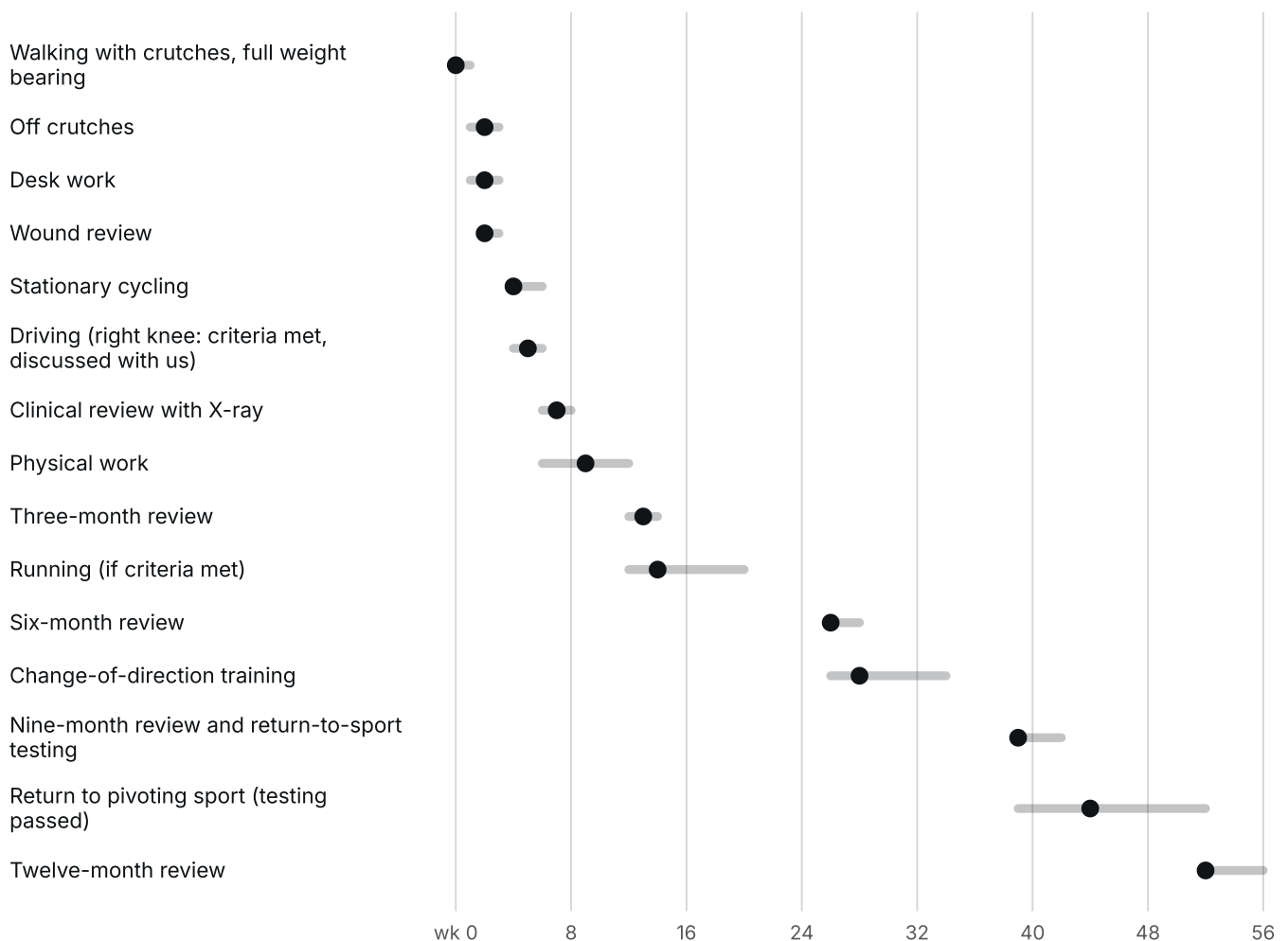
The crutches are for balance, comfort and a normal walking pattern, not to keep weight off. Most people put them down between one and two weeks after surgery. The test for losing them is quality, not the calendar: you walk without them when you can walk without a limp.

Walking with a limp on a bent knee trains a pattern you will spend weeks unlearning. Short, frequent, tidy walks beat long ragged ones.

STAGE	TYPICAL TIMING	MOVE ON WHEN
Two crutches	Day 0 to about 1 week	Comfortable weight bearing; knee reaching full extension in the stance phase
One crutch (opposite hand)	About week 1-2	Level walking with a near-normal pattern
No aid	About 1-2 weeks	Walking without a limp; swelling not increasing with walking



YOUR RECOVERY TIMELINE



Bars show the earliest-to-latest normal window; the dot is typical. Your own dates are set with us, not by this chart.

THE PHASES, ONE BY ONE

You move to the next phase by meeting its exit criteria, not by the calendar. The week numbers are typical, nothing more.

PHASE 1: PROTECT AND ACTIVATE

WEEKS 0–2

Full extension, minimal swelling, a working quadriceps and a normal walk: the four jobs everything else depends on.

GOALS: TICK THEM OFF

- ☐ Extension (straightness) equal to the other side
- ☐ Flexion (bend) of at least 90 degrees
- ☐ Straight leg raise with no lag (no sag at the knee)
- ☐ Swelling settling rather than building
- ☐ Walking without crutches
- ☐ Wound healed

DO THIS

- Heel props and prone hangs several times daily, full extension is the number one priority.
- Quadriceps sets and straight leg raises to switch the thigh muscle back on.
- Ankle pumps every waking hour, and short frequent walks.
- Kneecap (patellar) mobilisation in all four directions once the dressing allows.
- Calf work, ice 15–20 minutes several times a day, and proper elevation: lying down, foot above heart.

AVOID THIS

- A pillow under the knee: comfortable now, costly later. It teaches the knee to rest bent.
- Prolonged sitting with the leg hanging down.
- Forcing the bend through sharp pain, flexion comes; extension is the one that gets away.
- Hamstring stretching if you had a hamstring graft: leave the donor site alone for 4–6 weeks.

READY FOR THE NEXT PHASE WHEN...

- No crutches and no limp
- Full extension, matching the other side
- Effusion (fluid in the knee) trace or less
- Straight leg raise with no lag

PHASE 2: RANGE AND BASE STRENGTH

WEEKS 2–6

Build the bend, walk normally everywhere, and lay down the double-leg strength base the later phases stand on.

GOALS: TICK THEM OFF

- ☐ Full extension maintained every single day
- ☐ Flexion of at least 120–130 degrees
- ☐ Normal walking pattern on all surfaces
- ☐ Stationary cycling from about 4 weeks, once the bend allows a full revolution
- ☐ Single-leg stance control on the operated leg
- ☐ Gym-based double-leg strength work established

DO THIS

- Keep the daily extension work: it still leads.
- Add sit-to-stands, mini squats, heel raises and inner-range quadriceps work.
- Start the stationary bike around 4 weeks, saddle high at first.
- Begin single-leg balance work.
- Start scar massage once the wound is fully healed and dry.

AVOID THIS

- Running, jumping, twisting: nothing in this phase involves impact or pivot.
- Heavy resisted hamstring curls and end-range hamstring stretching until about 4–6 weeks if you had a hamstring graft.
- Loading through a swollen knee: if it puffs up after a session, the session was too big.

READY FOR THE NEXT PHASE WHEN...

- Full extension held
- Flexion within 10 degrees of the other knee
- Effusion 1+ or less
- Controlled single-leg squat to 45 degrees

PHASE 3: STRENGTH AND NEUROMUSCULAR CONTROL

WEEKS 6–12

Turn a settled knee into a strong one: progressive gym strength, single-leg control, and the landing mechanics that protect the graft.

GOALS: TICK THEM OFF

- ☐ Progressive squat, leg press, hip and hamstring strength work
- ☐ Single-leg strength building week on week
- ☐ Landing mechanics: quiet, knee-over-toes, no collapse inward
- ☐ Preparation for plyometrics (jumping work)
- ☐ Quadriceps strength at least 70–80% of the other leg

DO THIS

- Progress step-ups, step-downs and single-leg strength work under your physiotherapist's guidance.
- Add hamstring strengthening, by now the donor site tolerates it, whichever graft you had.
- Practise landing mechanics before you ever practise landing at speed.
- Keep cycling and add swimming or other low-impact endurance work.

AVOID THIS

- Running before the gates below are met. The date does not open the gate, the criteria do.
- Cutting, pivoting and kicking sports of any kind.
- Chasing gym numbers through a swollen knee.

READY FOR THE NEXT PHASE WHEN...

- Return-to-running gates: pain 2/10 or less, no effusion, full range of movement
- Quadriceps limb symmetry at least 70–80%
- Good single-leg squat control
- Pain-free double-leg, then single-leg, hopping

PHASE 4: RUNNING AND LOADING

MONTHS 3–6

Progressive running volume, heavier strength work, and the first jumping and agility work: all of it pre-planned, none of it reactive yet.

GOALS: TICK THEM OFF

- ☐ Running volume building progressively from straight lines
- ☐ Bilateral then unilateral plyometrics (two-leg, then one-leg jumping work)
- ☐ Heavy strength work continuing
- ☐ Pre-planned agility drills: you know the pattern before you run it

DO THIS

- Follow a graded return-to-running programme rather than "seeing how it feels".
- Keep two to three strength sessions a week, strength is the currency of the next phase.
- Begin the hop-test battery with your physiotherapist as strength allows.

AVOID THIS

- Reactive, unplanned change of direction. That is next phase's work.
- Competitive sport of any kind, including "just training".
- Increasing running volume and intensity in the same week.

READY FOR THE NEXT PHASE WHEN...

- Strength symmetry at least 80–90%
- Hop-test battery commenced
- Sound landing mechanics on video or physiotherapist assessment

PHASE 5: CHANGE OF DIRECTION AND SPORT-SPECIFIC WORK

MONTHS 6-9

Cutting, pivoting and reactive agility, then non-contact and finally contact team training, building the knee you will actually play on.

GOALS: TICK THEM OFF

- ☐ Cutting and pivoting drills, progressing from pre-planned to reactive
- ☐ Sport-specific skills reintroduced
- ☐ Non-contact team training, then contact training
- ☐ Strength and hop symmetry closing on 90%

DO THIS

- Train movement quality under fatigue. The graft is most at risk when you are tired.
- Rehearse your sport's specific demands: marking, landing, side-stepping, tackling technique.
- Start a structured neuromuscular warm-up programme now and keep it permanently.
- Talk honestly with your physiotherapist about confidence, psychological readiness is measured, not assumed.

AVOID THIS

- Match play, including "friendly" games and social sport: a friendly game asks the same of the graft as a real one.
- Skipping the boring strength work because the fun drills are back.

READY FOR THE NEXT PHASE WHEN...

- Strength and hop symmetry at least 90%
- Movement quality holding up under fatigue
- Psychological readiness (ACL-RSI) improving

PHASE 6: RETURN TO SPORT AND SECONDARY PREVENTION

FROM 9 MONTHS

Full training, then match play, and the permanent habits that protect both knees from here on.

GOALS: TICK THEM OFF

- ☐ Pass the full return-to-sport test battery
- ☐ Full training without reaction from the knee
- ☐ Graduated return to match play
- ☐ Structured prevention warm-up embedded: permanently

DO THIS

- Complete formal return-to-sport testing before match play: strength, hop battery, movement quality and the ACL-RSI questionnaire.
- Return through full training first: weeks of it, before your first game.
- Keep the neuromuscular warm-up: twenty minutes, three times a week, forever.
- Continue periodic strength testing out to 24 months.

AVOID THIS

- Returning on a date instead of a test result.
- Dropping the prevention warm-up once the season starts. That is exactly when it earns its keep.

READY FOR THE NEXT PHASE WHEN...

- Return-to-sport testing passed and reviewed with Dr Broadhead and your physiotherapist
- Playing full matches with no swelling, no giving way and growing confidence

YOUR EXERCISES

Little and often beats one heroic session. Each exercise lists what you should feel, sharp pain that lingers afterwards means ease off and, if it persists, call.



ANKLE PUMPS

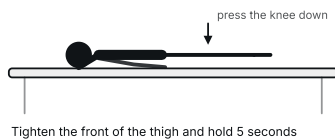
PHASE 1

Keep blood moving in the calf: your main clot-prevention exercise.

10 firm pumps, every waking hour, for the first 2 weeks

1. Lie or sit with the leg supported.
2. Pull your foot up towards you as far as it goes.
3. Point it away as far as it goes.
4. Repeat briskly.

Feel: You should feel the calf muscles working. Move through the full range each time.



STATIC QUADRICEPS SETS

PHASE 1

Switch the thigh muscle back on: swelling turns it off, and everything else depends on it.

10 holds of 5 seconds, 3–4 times daily

1. Lie with the leg straight.
2. Push the back of the knee down into the bed by tightening the front of the thigh.
3. Watch the kneecap draw upward slightly.
4. Hold, then fully relax.

Feel: You should feel this in the front of the thigh. A quadriceps tendon graft makes this harder at first, persist; a slow start here is expected, not a problem.

Harder: Your physiotherapist may add muscle stimulation (NMES) over the quadriceps if activation is slow.

HEEL SLIDES

PHASE 1

Restore the bend, gently and often.

10 slow slides, 3–4 times daily

1. Lie on your back.
2. Slide the heel towards your bottom as far as comfortable, letting the knee bend.
3. Hold 5 seconds at the top of the bend.
4. Slide slowly back to straight.

Feel: A firm stretching feeling is right; sharp lingering pain means ease off. A towel or plastic bag under the heel makes it slide easier.

Easier: Loop a towel around the ankle and assist the slide with your arms.



STRAIGHT LEG RAISE

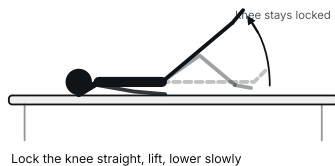
PHASE 1

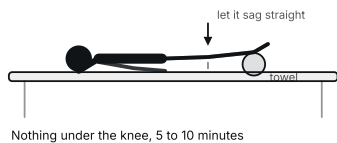
Quadriceps strength with the knee locked straight. The milestone is lifting without a lag.

10 lifts, hold 3 seconds, 3 times daily

1. Lie on your back, other knee bent, operated leg straight.
2. Tighten the thigh first, locking the knee straight.
3. Lift the whole leg about 30 cm.
4. Lower slowly with the knee still locked.

Feel: If the knee sags as you lift (a "lag"), keep working the static quads. The lag going is the sign of progress.





HEEL PROP (EXTENSION STRETCH)

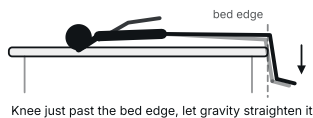
PHASE 1

Full straightening: the highest-priority exercise in this entire guide.

5–10 minutes, 2–3 times daily

1. Lie or sit with the heel propped on a rolled towel or the arm of a couch, nothing under the knee.
2. Let the knee sag towards straight under its own weight.
3. For extra effect, rest a small weight (a bag of rice) above the kneecap.

Feel: A firm stretch behind the knee is exactly right. Never put a pillow under the knee to “rest” it afterwards.



PRONE HANG

PHASE 1

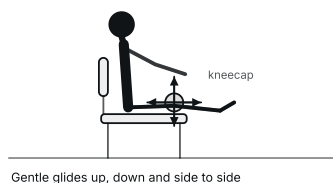
Gravity-assisted full extension: the partner exercise to the heel prop.

3–5 minutes, 2–3 times daily

1. Lie face down on a bed with both legs from the kneecap down hanging off the end.
2. Let the operated knee sag towards straight under the weight of the lower leg.
3. Stay relaxed and let gravity do the work.

Feel: A firm stretch behind the knee is the goal. If you had a hamstring graft and feel a pull in the back of the thigh rather than the knee, shorten the time and build up.

Harder: A light ankle weight increases the stretch.



KNEECAP MOBILISATION

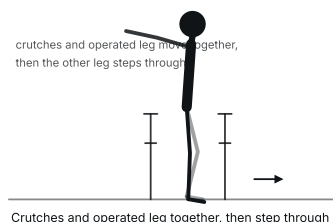
PHASE 1

Keep the kneecap gliding freely so the bend and the scar do not tether: extra important after a patellar tendon (BTB) graft.

1–2 minutes in each direction, twice daily, once the dressing allows

1. Sit with the leg straight and thigh relaxed.
2. With thumbs and fingers, glide the kneecap gently up, down, left and right.
3. Small movements: this is a glide, not a push.

Feel: It should feel odd, not painful.



WALKING WITH CRUTCHES

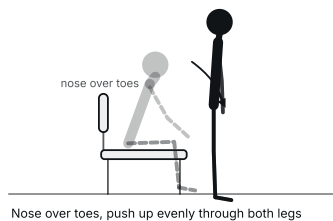
PHASE 1

A normal walking pattern from day one: heel down, knee straight at foot-strike, no limp.

Short walks every waking hour for the first 2 weeks

1. Crutches and the operated leg move forward together.
2. Land heel first with the knee straight.
3. Take weight through the leg as comfort allows. The crutches are for balance, not to carry you.
4. Step the other leg past, not just up to, the operated one.

Feel: Slow and tidy beats fast and ragged. You are practising the walk you will keep: make it a good one.



SIT-TO-STAND

PHASE 2

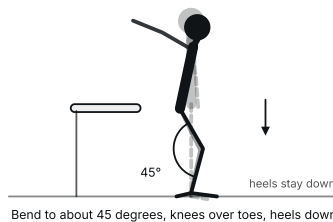
Real-world double-leg strength: the base the single-leg work is built on.

2–3 sets of 8–10, once or twice daily

1. Sit on a firm chair.
2. Feet back, lean forward, push up through both legs evenly.
3. Lower back down slowly with control.

Feel: Share the load evenly, no swinging, and no cheating onto the good leg.

Harder: Lower the chair height, then move more weight onto the operated leg.



MINI SQUAT

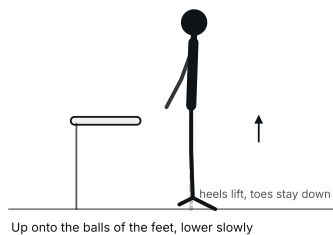
PHASE 2

Thigh and hip strength through a small, safe range.

2–3 sets of 10 to about 45 degrees, once or twice daily

1. Stand holding the bench, feet hip-width.
2. Bend both knees to about 45 degrees, as if starting to sit.
3. Keep the heels down and knees over the toes.
4. Push back up.

Feel: Knees track over the toes, no diving inward. That habit matters more after an ACL reconstruction than after any other knee operation.



HEEL RAISES

PHASE 2

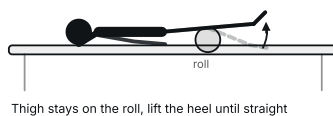
Calf strength for a normal push-off when walking and, later, running.

2–3 sets of 10, once or twice daily

1. Stand tall holding the bench or rail.
2. Rise up onto the balls of both feet.
3. Lower slowly.

Feel: Even weight through both feet.

Harder: Progress to single-leg raises on the operated side.



INNER-RANGE QUADRICEPS OVER A ROLL

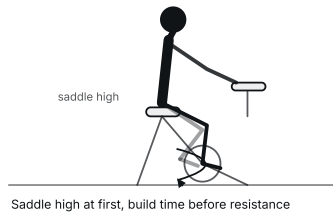
PHASE 2

Strengthen the last few degrees of straightening. The range the quadriceps loses first and needs most.

2–3 sets of 10, hold 3 seconds, once or twice daily

1. Lie with a firm roll (a rolled towel) under the knee.
2. Keeping the thigh on the roll, lift the heel until the knee is fully straight.
3. Hold, then lower slowly.

Feel: All the movement happens below the knee. Push through to completely straight every repetition, nearly straight does not count.



STATIONARY CYCLING

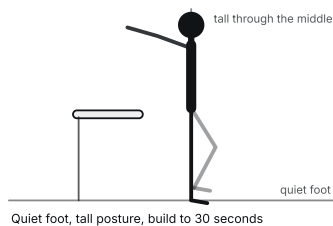
PHASE 2

Range, circulation and endurance with almost no strain on the graft.

10–20 minutes, most days, from about 4 weeks once the bend allows a full revolution

1. Saddle high at first: a higher seat needs less bend.
2. Start with gentle half-revolutions back and forth if a full turn is not there yet.
3. Progress time before resistance.

Feel: Mild stretch at the top of the pedal stroke is useful; lower the saddle gradually as the bend improves.



SINGLE-LEG BALANCE

PHASE 2

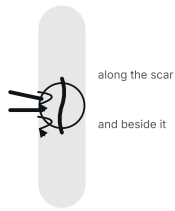
The knee's position sense (proprioception). The reflexes that protect the graft when the ground surprises you.

Build to 3 holds of 30 seconds each leg, daily

1. Stand near the bench, fingertips hovering.
2. Lift the other foot and balance on the operated leg.
3. Progress: eyes tracking side to side, then a gentle head turn, then no hands, then an unstable surface.

Feel: Quiet foot, soft knee, tall posture.

Harder: Add ball catches or small knee bends while balancing.



Firm small circles, 2 to 3 minutes twice daily

SCAR MASSAGE

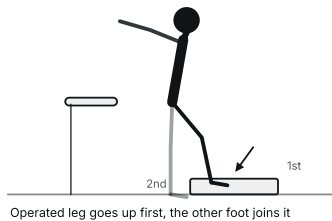
PHASE 2

Soften and desensitise the scars, including the graft donor site: once fully healed.

2–3 minutes, twice daily, from about 3 weeks once healed and dry

1. Use a bland moisturiser.
2. Firm, small circles along and beside each scar.
3. Include the skin around them, which is often more sensitive than the scars themselves.

Feel: Firm enough to blanch the skin slightly; it should not be painful. A numb patch near the incision is common: massage the edges of it; it usually shrinks with time.



STEP-UPS

PHASE 3

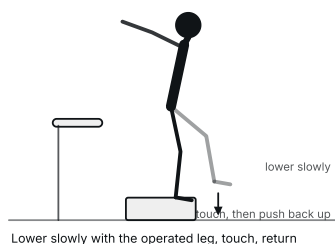
Single-leg strength for stairs, slopes and: eventually: running.

2–3 sets of 8 each leg, once daily

1. Stand facing a low step, hand on the rail.
2. Step up with the operated leg, bringing the other foot up to join it.
3. Step down leading with the non-operated leg.

Feel: Push through the whole foot; keep the knee tracking over the toes, not diving inward.

Harder: Raise the step height, then reduce hand support, then add load.



STEP-DOWNS (CONTROLLED LOWERING)

PHASE 3

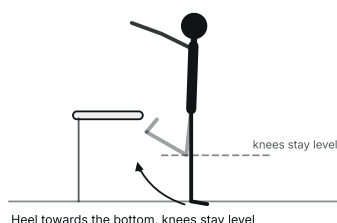
The controlled lowering strength that landing, decelerating and cutting are built on.

2–3 sets of 8 each leg, alternate days

1. Stand on a low step on the operated leg, hand on the rail.
2. Slowly lower the other heel towards the floor by bending the operated knee.
3. Touch, then push back up.

Feel: Slow and controlled beats deep; keep the pelvis level and the knee over the toes.

Harder: Raise the step, slow the lowering, remove hand support.



STANDING KNEE BEND (HAMSTRING WORK)

PHASE 3

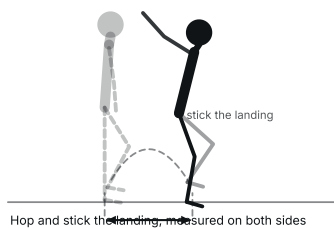
Rebuild hamstring strength: the muscle group that actively protects the ACL graft.

2–3 sets of 10, once daily, from 6 weeks

1. Stand holding the bench.
2. Bend the operated knee, bringing the heel towards your bottom.
3. Lower with control.

Feel: If you had a hamstring graft, this is deliberately delayed until about 6 weeks. Some donor-site ache when you start is normal and settles.

Harder: Add an ankle weight, then progress to gym-based hamstring work with your physiotherapist.



HOP-TEST BATTERY

PHASE 5

The measuring stick for return to sport: performed and scored with your physiotherapist, not alone.

Testing sessions with your physiotherapist from Phase 4 onward, not a daily exercise

1. Single hop for distance on each leg.
2. Triple hop for distance.
3. Crossover hop for distance.
4. Timed 6-metre hop.
5. Each score on the operated leg is compared with the other side.

Feel: The target is at least 90% of the other leg on every test. How you land is scored as well as how far you hop. A long, ugly hop does not pass.

SWELLING, ICE AND ELEVATION

WHAT IS NORMAL

- Swelling is the single biggest brake on progress. It peaks about 6–8 days after surgery, then settles gradually.
- Most of the swelling resolves over the first two to three months, but it is normal for the limb to puff up after a long day or a burst of activity for some months after that, measurable swelling is still present at 7 weeks in most knee replacement patients.
- A limb that is bigger the morning after activity means you did too much the day before, not that something is wrong.
- Warmth and mild redness around the wound settle over weeks.

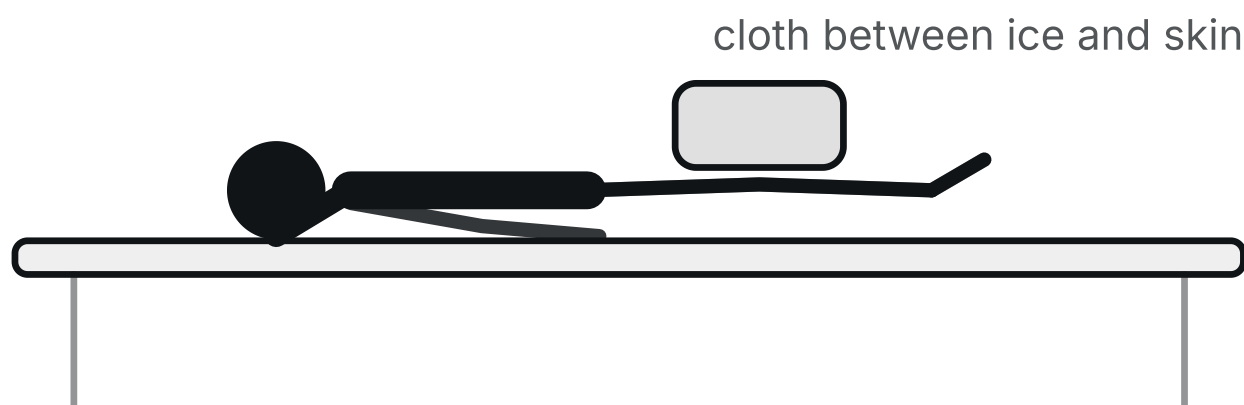
ICE

- Ice is safe, cheap and comfortable, and probably gives a small benefit for pain and swelling in the first few days.
- Use it for 15–20 minutes at a time, 4–6 times a day for the first 2 weeks, then as needed after activity and physiotherapy. It is particularly useful in the hour after exercise.
- Always place a thin cloth between the ice and your skin. Never sleep with ice on. Never ice over numb skin or a fresh wound dressing without checking with the rooms first.

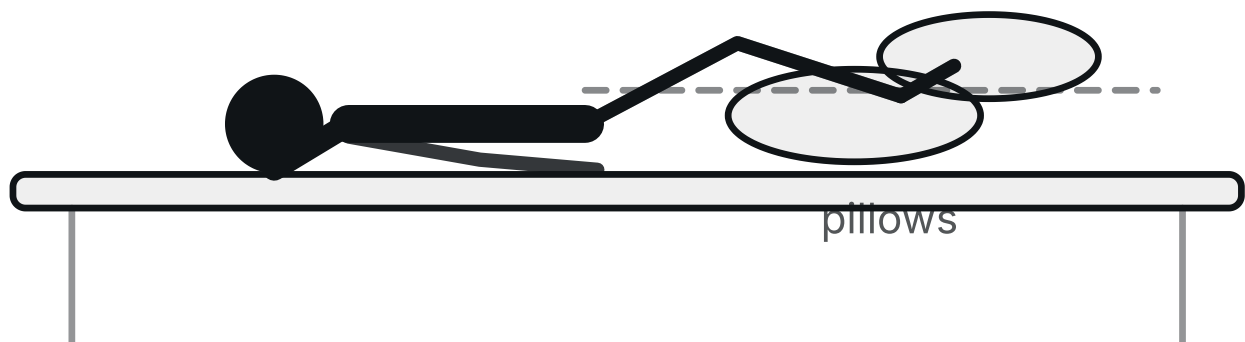
- Stop and call the rooms if the skin becomes white, mottled or numb.
- An honest note about the evidence: the 2025 Cochrane review of icing after knee replacement (22 trials, 1,839 patients) found small improvements: pain at 48 hours better by 1.6 points out of 10, about 8 degrees more bend at discharge, and less blood loss: all on low-certainty evidence. The reviewers concluded the benefits may be too small to justify routine use. Use ice because it is harmless and makes you more comfortable, not because it changes the final result.
- There is no good evidence that expensive cold-compression machines work better than a bag of ice or a gel pack. The trials have never been analysed in a way that answers that question. Please do not spend money on one on our recommendation.

ELEVATION & COMPRESSION

- Elevate the limb above heart level for 20–30 minutes several times a day: foot higher than the knee, knee higher than the hip, hip higher than the heart.
- Lie down to do this: a recliner does not raise the leg above your heart.
- Avoid sitting with the leg hanging down for long periods.
- A graduated compression stocking or sleeve helps control swelling, wear it as advised.



15 to 20 minutes, 4 to 6 times daily



Foot above knee, knee above hip, lying flat

WOUND AND SCAR CARE

- Keep the dressing dry and intact until it is reviewed. Most modern waterproof dressings allow showering, but do not soak, scrub, or put soap directly on the wound.
- No baths, spas, pools or ocean swimming until the wound is fully healed and has been reviewed, usually 2–3 weeks at a minimum.
- Do not apply creams, powders or antiseptics unless you have been told to.
- Clips or stitches are removed or checked at your first appointment.
- Tell the rooms about any dressing that becomes soaked, loose or soiled.
- From about 3 weeks, once the wound is fully healed and dry: massage the scar with a bland moisturiser for 2–3 minutes, twice a day, using firm circular pressure. This softens the scar and desensitises the skin around it.
- Silicone gel or sheeting can improve the appearance of prominent scars.
- Protect the scar from the sun for 12 months. It burns easily and can darken permanently.
- Scars take a full 12–18 months to fade and flatten.

- Numbness in the skin around and below the scar is normal and often permanent, small skin nerves are unavoidably divided during surgery.

SLEEP AND POSITIONING

Sleep in whatever position is comfortable. There are no positional restrictions after an isolated ACL reconstruction.

Never sleep with a pillow under the knee. If you want support, place a pillow under the whole lower leg from calf to heel, so the knee rests straight.

For the first week or two, many people sleep better on their back with the leg elevated on pillows. It helps the morning swelling.

PAIN, MEDICATION AND WHAT TO EXPECT

Expect real pain for the first week or two, needing regular pain relief: take it as prescribed and ahead of exercise sessions rather than chasing pain afterwards.

Wean the strongest medications first as things settle; most people are down to simple pain relief within a couple of weeks.

Donor-site pain is its own story: hamstring grafts commonly ache in the back of the thigh for some weeks, patellar tendon (BTB) grafts at the front of the knee, especially with kneeling, and quadriceps tendon grafts above the kneecap. All of it settles; none of it means something is wrong with the graft.

Aches, clicking, warmth and the odd twinge continue for months and are normal. Pain that is increasing week on week is not, call the rooms.

PREVENTING BLOOD CLOTS

- Get up and move at least hourly while you are awake.

- Do ankle pumps: 10 firm up-and-down pumps of the ankles: every waking hour for the first 2 weeks.
- Stay well hydrated.
- Take any prescribed blood thinner exactly as directed, and wear stockings as advised.
- Avoid long-haul flights for 6 weeks after joint replacement: discuss any earlier travel with the rooms.

DRIVING: THE CRITERIA THAT ACTUALLY MATTER

You may drive when **all** of the following are true:

- You are off opioid painkillers and any other sedating medication.
- You can sit comfortably in the driver's seat.
- You can perform an emergency stop at full force, without hesitation and without pain.
- You are not using a walking aid in the car, and not wearing a brace that limits the movement needed to work the pedals.
- You have practised the movements in a stationary car first.

What the driving research does and doesn't show

What the research actually measures is braking reaction time on a simulator. Those studies show braking performance returns to its pre-operative level at about 2 weeks after a right hip replacement and about 4 weeks after a right knee replacement, with movement time back to normal by 6 weeks. After knee arthroscopy the simulator evidence is more conservative than common practice: in the one study that measured it directly, braking was still slower one week after surgery than before it, and had recovered by four weeks, and a 2021 review of eight studies put the average return at about six weeks. Most people having a simple arthroscopy are driving well before that, which is why the criteria above matter more than the date. But these are averages, in one study, about one in three right-hip patients still could not meet an emergency-stop benchmark at six weeks. Treat the timeframes in this guide as targets for discussion with us, not as permissions.

No published study has compared automatic and manual cars. The logical point is simply that a manual needs the left leg for the clutch, so left-sided surgery is the relevant caution in a manual. Advice about driving earlier with a left-leg operation in an automatic is clinical judgement, not trial evidence.

In Australia, your treating doctor's advice governs: under the Austroads "Assessing Fitness to Drive" standards, temporary post-operative impairment is a matter of clinical judgement, and commercial drivers are held to a higher standard. Driving while impaired may invalidate your insurance, check your insurer's position. Do not drive for at least 24 hours after any general anaesthetic or sedation.

GETTING BACK TO WHAT YOU DO

ACTIVITY	TYPICAL	WHEN IT'S RIGHT	NOTES
Walking for exercise	From the outset	No limp; swelling stable	Short and frequent at first; build distance gradually
Desk work	1–2 weeks	Comfortable sitting; able to elevate the leg; travel sorted	Get up and move hourly
Swimming (straight-line, no breaststroke kick early)	From wound healing, about 2–3 weeks	Wound fully healed and reviewed	Flutter kick first; breaststroke kick waits until the knee is strong and settled
Stationary cycling	About 4 weeks	Enough bend for a full revolution	Saddle high at first

ACTIVITY	TYPICAL	WHEN IT'S RIGHT	NOTES
Driving	4–6 weeks (right knee); often earlier for a left knee in an automatic	All the driving criteria below, discussed with us	The left-knee-in-an-automatic advice is clinical judgement, not trial evidence
Physical work	6–12 weeks	Strength and endurance for the actual duties	Modified duties in between where available: raise it at the 2-week review
Running (straight line)	From about 3 months: if criteria are met	Pain $\leq 2/10$, no effusion, full range, quadriceps symmetry $\geq 70\text{--}80\%$, good single-leg squat, pain-free hopping	The criteria open the gate, not the date
Gym strength and pre-planned agility	Months 3–6	Progressing under physiotherapist guidance	Bilateral then unilateral plyometrics
Change of direction and sport-specific training	Months 6–9	Strength and hop symmetry approaching 90%	Pre-planned first, reactive later; non-contact before contact
Pivoting sport (netball, football, soccer, basketball, skiing)	Not before 9 months	Full return-to-sport test battery passed: strength $\geq 90\%$, hop battery $\geq 90\%$, movement quality under fatigue, psychological readiness	Time plus testing together protect the graft far better than either alone
Kneeling	When comfortable: later after a BTB graft	Wound healed; tolerance built gradually on padding	Kneeling discomfort after a patellar tendon graft is common and improves; it is a late milestone, not a danger sign

Flying after joint replacement: an honest note

You will often hear "no flying for six weeks" after joint replacement. Be aware that this is a convention, not a proven rule: a 2025 review found limited data and no demonstrated difference in clot risk between people who did and did not fly after hip or knee replacement: mostly within the first week.

The six-week convention reflects practical realities rather than trial evidence: managing airports and cramped seating, being past the highest-risk clot window while still on prevention, the higher baseline clot risk of long-haul flights over four hours, and individual airline and travel-insurance rules, check both, as some airlines impose their own restrictions.

If you need to travel long-haul in the first six weeks, talk to the rooms first so clot prevention, an aisle seat, stockings and on-board movement can be planned.

WARNING SIGNS: ACT, DON'T WATCH

None of these should be watched overnight to see how they go. Early treatment of a problem is simple; late treatment is not.

EMERGENCY: 000 Emergency department / call 000

- Sudden shortness of breath
- Chest pain
- Coughing blood, or feeling faint

GP TODAY See your GP today

- New, one-sided calf pain, tenderness or firmness
- Calf or whole-leg swelling out of proportion to the rest of your recovery

CALL THE ROOMS Call the rooms: same day

- Pain that is increasing rather than decreasing after the first week
- New redness spreading out from the wound
- Wound discharge, particularly cloudy, thick or offensive fluid, or wound edges opening
- Fever of 38°C or higher, or shaking chills, or feeling generally unwell
- The knee gives way, or a sudden "pop" with new swelling at any stage of rehabilitation
- The knee locks: gets stuck and will not fully straighten
- Extension not equal to the other side by the 2-week review, or bend stuck despite doing the work

For joint replacement patients, a wound problem is never something to "wait and see". Early treatment of an infected joint replacement is vastly more successful than late treatment, call the rooms the same day.

ARRANGING PHYSIOTHERAPY IN AUSTRALIA

- Most privately insured patients self-fund private physiotherapy or use extras cover. A GP Chronic Disease Management plan subsidises only five allied-health visits per calendar year, not enough for a major reconstruction, so plan for this.
- Compensable patients (workers compensation, CTP) follow an insurer-approved plan.
- Tele-rehabilitation and app-supported home programmes are reasonable additions, but a sports knee reconstruction still needs periodic in-person objective strength testing.

COMMON QUESTIONS

How do I know if this is the right guide for me?

This guide is for an isolated ACL reconstruction, no meniscal repair. Your operation record says which operation you had. If your meniscus was repaired at the same time, you follow the guide "ACL reconstruction with meniscal repair" instead: it uses a brace, restricted bending and a slower return to running and sport. The two programmes are genuinely different. If you are unsure which applies, call the rooms before starting.

Do I need a brace after ACL reconstruction?

Not for an isolated ACL reconstruction. Routine bracing does not improve laxity, range of movement, pain, graft survival or function, so it is not used routinely. Braces are reserved for particular situations: a meniscal repair done at the same time, other ligaments involved, or poor quadriceps control. If you see other ACL patients in braces, that is usually why. Your protection is the programme: criteria before progression, and time before sport.

Can I put weight on my leg after ACL surgery?

Yes: full weight as tolerated from day one, with crutches for balance and comfort. The graft fixation tolerates walking immediately. Most people are off crutches within one to two weeks. The test for losing them is walking without a limp, not a date on the calendar. A limp trains a bad pattern you then have to unlearn.

When can I drive after ACL reconstruction?

Typically 4–6 weeks for a right knee, and often earlier for a left knee in an automatic. The date matters less than the criteria: off strong painkillers, comfortable in the seat, and able to perform an emergency stop at full force without hesitation: practised in a stationary car first. Confirm your own timing with us at review; your insurer's position is worth checking too.

When can I go back to work after ACL reconstruction?

Desk work typically at 1–2 weeks, once you are comfortable sitting and can get there safely: set the leg up elevated under the desk and move hourly. Physical work typically takes 6–12 weeks depending on the duties, sometimes with modified duties in between. Raise your job's actual demands at the two-week review so a plan is in place early.

When can I run after ACL reconstruction?

From about three months, but only if the criteria are met, and they are the real gate: pain no more than 2 out of 10, no fluid in the knee, full range of movement, quadriceps strength at least 70–80% of the other leg, a good single-leg squat, and pain-free double-then single-leg hopping. Some people meet those at three months; many need longer. The date does not open the gate.

When can I play netball or football again?

Not before nine months, and only after passing formal return-to-sport testing, for some people it is closer to twelve. Returning to pivoting sport earlier substantially increases the risk of re-injuring the graft, and each extra month up to nine meaningfully lowers that risk. Netball, football, soccer and basketball are exactly the pivoting sports the rule exists for. Time plus testing together protect the graft far better than either alone.

My knee feels completely normal at six months. Why can I not play?

Because the graft cannot be felt. At six months it is still remodelling and is weaker than your knee feels. Returning to pivoting sport before nine months substantially increases re-

injury risk, and each additional month of delay up to nine months reduces it. A knee that feels great at six months is the plan working. It is not evidence the plan can be skipped.

What is return-to-sport testing?

A formal test battery before you are cleared: quadriceps and hamstring strength at least 90% of the other leg (nearer 100% for high-demand pivoting sport); a hop battery: single, triple, crossover and timed 6-metre hops, at 90% or better; movement quality on drop-jump and single-leg squat, ideally tested under fatigue; and the ACL-RSI questionnaire for psychological readiness. Passing reduces re-injury risk but does not eliminate it, which is why time and ongoing prevention still apply.

What are the chances of tearing my ACL again?

Honest numbers: among athletes under 25 who return to sport, roughly one in four sustains a further ACL injury, to either knee, and the other knee is at least as vulnerable as the reconstructed one. In patients operated under 20, graft rupture alone reached 18% by five years, and almost half of those ruptures happened in the first year. Those numbers are exactly why this guide insists on nine to twelve months, full testing, and a permanent change to how you warm up.

How do I stop this happening again?

Structured neuromuscular warm-up programmes roughly halve the risk of ACL injury, with the largest effect in female athletes. Ready-made versions exist for the sports that matter here: Prep-to-Play for AFL and AFLW, the Netball Australia KNEE Program, and FIFA 11+ for football. The dose is simple: twenty minutes, three times a week, forever. It is the single cheapest insurance policy in sports medicine.

Which graft did I have, and does it matter?

Your operation record says: hamstring, patellar tendon (BTB) or quadriceps tendon, and it changes the details, not the plan. Hamstring: no heavy hamstring curls or end-range hamstring stretching for about 4–6 weeks; posterior thigh ache and a numb patch below the incision are common. BTB: more front-of-knee and kneeling discomfort; kneeling

tolerance is a late milestone. Quadriceps tendon: a slower start to quadriceps activation, be patient with early strength numbers.

Is the back of my thigh supposed to ache?

If you had a hamstring graft, yes. The tendon was taken from there, and the donor site commonly aches for some weeks, especially with stretching or resisted bending of the knee. That is why hamstring stretching and heavy curls are held back for about 4–6 weeks. A numb patch of skin below the incision is also common and usually shrinks with time. Neither means anything is wrong with the graft.

THE EVIDENCE BEHIND THIS GUIDE 15 sourced statements

CLAIM	SOURCE
Return to pivoting sport before 9 months increases re-injury; each month of delay up to 9 months reduces it, and passing discharge criteria reduces it further	Grindem et al., Br J Sports Med 2016, Delaware-Oslo cohort (PMID 27162233)
Roughly 1 in 4 athletes under 25 who return to sport sustain a further ACL injury to either knee	Wiggins et al., Am J Sports Med 2016, systematic review and meta-analysis (PMID 26772611)
In patients reconstructed under 20, graft rupture alone was 18% at a mean 5 years, highest at 28.3% in males under 18; 47% of ruptures occurred in the first postoperative year	Webster & Feller, Am J Sports Med 2016 (PMID 27390346)
The other knee is at least as vulnerable as the graft: contralateral injury 8% against ipsilateral 7%	Wiggins et al., Am J Sports Med 2016, systematic review and meta-analysis (PMID 26772611)
Routine post-operative bracing after isolated ACL reconstruction does not improve laxity, range, pain or function	Wright & Fetzer, Clin Orthop Relat Res 2007, systematic review of bracing after ACL reconstruction (PMID 17279043)
Rehabilitation evidence supports early weight bearing, early extension and no routine brace or	Kruse, Gray & Wright, J Bone Joint Surg Am 2012, systematic review of

CLAIM	SOURCE
CPM after ACL reconstruction	rehabilitation after ACL reconstruction (PMID 23032584)
Criteria-based (not purely time-based) progression is best practice after ACL reconstruction	van Melick et al., Br J Sports Med 2016, evidence-based clinical practice update (PMID 27539507)
Athletes not meeting discharge criteria before return had about four times the graft rupture rate	Kyritsis et al., Br J Sports Med 2016, discharge criteria and graft rupture risk (PMID 27215935)
Hop-test battery (single, triple, crossover, timed 6-metre) with $\geq 90\%$ limb symmetry as a return-to-sport criterion	Noyes, Barber & Mangine, Am J Sports Med 1991, hop-test origin (PMID 1962720), applied in the Grindem 2016 test battery (PMID 27162233)
ACL-RSI scale measures psychological readiness to return to sport	Webster, Feller & Lambros, Phys Ther Sport 2008, ACL-RSI development and preliminary validation (PMID 19083699)
Fear of re-injury is the most common reason athletes do not return to their sport; only about two-thirds return to pre-injury level	Ardern et al., Br J Sports Med 2014, meta-analysis of return to sport after ACL reconstruction (PMID 25157180)
Structured neuromuscular warm-up programmes roughly halve ACL injury risk, with the largest effect in female athletes	Webster & Hewett, J Orthop Res 2018, meta-analysis of meta-analyses of ACL injury-reduction programmes (PMID 29737024)
FIFA 11+ structured warm-up reduces lower-limb injuries in football	Thorborg et al., Br J Sports Med 2017, FIFA 11 and 11+ systematic review and meta-analysis (PMID 28087568)
Pre-operative rehabilitation (extension, swelling control, quadriceps activation) predicts better post-operative outcomes	Failla et al., Am J Sports Med 2016, Delaware-Oslo versus MOON preoperative rehabilitation comparison (PMID 27416993)
Braking performance after right-knee ACL reconstruction returns around 4–6 weeks	Brake response time after right ACL reconstruction, Arthroscopy 2000 (PMID 10705325)

This guide is general information for patients of Dr Matthew Broadhead (Harbour Orthopaedics & Sports Medicine) and is not a substitute for the specific advice given to you by Dr Broadhead, your physiotherapist or your hospital team.

Surgical findings vary, and your protocol may differ from what is written here: your operation record and your surgeon's instructions always take precedence.

If in doubt, call the rooms on (02) 9052 1883. In an emergency, call 000.

Last reviewed: 2026-08-05 by Dr Matthew Broadhead, FRACS (Orth).

YOUR PROGRESS TRACKER

Fill this in once a week: it shows your trend at a glance and makes reviews far more useful.
Bring it to every appointment.

Week	1	2	3	4	5	6	7	8	9	10	11	12
Exercises done (sessions)												
Walking distance / time												
Pain score (0–10)												
Knee bend (degrees)												
Swelling (less / same / more)												

QUESTIONS FOR DR BROADHEAD
