



Knee Replacement Rehabilitation Protocol



Total and Partial knee replacement are surgical procedures where damaged parts of the knee joint are replaced with artificial components. This protocol provides a general outline of the rehabilitation process to help you regain strength, mobility, and function after surgery with Dr Lambers.

See Also

[Knee arthritis](#)

[Total knee replacement](#)

[Partial knee replacement](#)

Rehabilitation Goals

- Reduce pain and swelling
- Restore knee range of motion
- Improve strength and flexibility
- Regain balance and coordination
- Resume daily activities safely
- Prevent complications



Expected Recovery Time

Milestone	Timeframe
Walk with walker or crutches	1-2 weeks
Walk with cane or no aid	4-6 weeks
Resume most daily activities	6-12 weeks
Resume low-impact sports	3-6 months
Full recovery	6-12 months

Phase 1: Early Post-op (0-2 weeks)

Goals

- Control pain and swelling
- Protect the surgical site
- Begin gentle movement
- Prevent blood clots and complications

Instructions

- Apply ice packs (15-20 minutes, several times daily)
- Elevate the leg above heart level
- Perform breathing exercises to prevent lung complications
- Attend physiotherapy sessions as scheduled
- Use a walker or crutches for walking

Exercises

- Ankle pumps (20-30 repetitions per hour)
- Quadriceps sets (hold for 5 seconds, 10 repetitions)
- Gluteal squeezes (hold for 5 seconds, 10 repetitions)
- Heel slides to gently bend the knee
- Passive knee extension using a towel under the heel
- Short, assisted walks several times per day

Phase 2: Sub-Acute Recovery (2-6 weeks)

Goals

- Increase knee range of motion
- Improve walking ability
- Build basic strength
- Reduce reliance on walking aids



Instructions

- Gradually increase walking distance
- Transition from walker to cane as advised
- Avoid kneeling or twisting the knee
- Continue icing after exercises as needed

Exercises

- Continue Phase 1 exercises with more repetitions
- Stationary cycling with minimal resistance
- Seated knee extensions
- Standing hip abductions and extensions
- Gentle mini-squats (as tolerated)
- Heel raises for calf strength
- Balance exercises (e.g. standing on one leg with support)

Phase 3: Strengthening and Functional Recovery (6-12 weeks)

Goals

- Achieve near-full knee range of motion
- Restore normal walking pattern
- Improve lower body strength
- Resume most daily activities

Instructions

- Walk without assistive devices as tolerated
- Avoid high-impact activities
- Continue home exercises and physiotherapy sessions

Exercises

- Leg press (light weight, short range initially)
- Step-ups and step-downs
- Side-lying hip strengthening
- Stationary cycling with more resistance
- Swimming or water walking (if wound healed)
- Low-resistance elliptical training
- Gentle hamstring stretches



Phase 4: Advanced Strengthening and Return to Activity (3-6 months)

Goals

- Return to recreational activities
- Build endurance and stamina
- Maximize strength and flexibility

Instructions

- Gradually resume recreational activities such as golf, hiking, or dancing
- Avoid high-impact sports like running or jumping

Exercises

- Progressive resistance training (leg press, squats, lunges)
- Treadmill walking or light jogging (if advised)
- Water aerobics
- Balance and proprioception drills
- Core strengthening exercises

When to Contact Your Surgeon

- Increased redness, swelling, or warmth around the incision
- Persistent fever above 38°C
- Severe pain not relieved by medication
- Drainage or unusual discharge from the wound
- Calf pain or swelling (may indicate blood clots)
- Difficulty breathing or chest pain (seek emergency care)

Disclaimer

This is a general guideline. Your physiotherapist or Dr Lambers may adjust the protocol based on your specific condition and progress.