

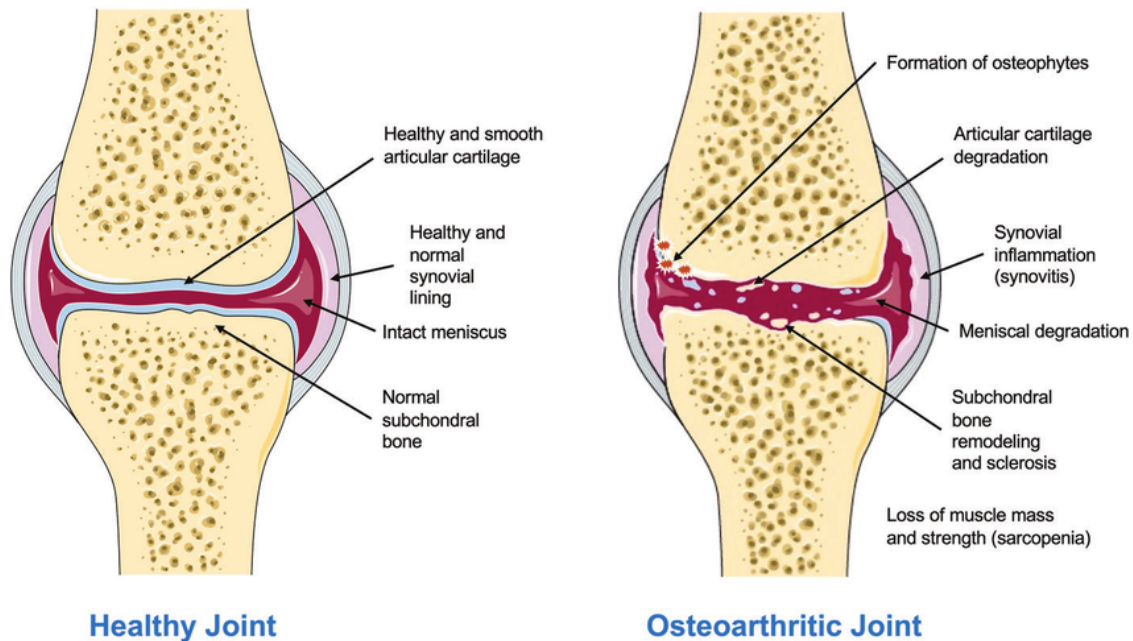
Total Knee Replacement

Patient Information Sheet

What is Osteoarthritis?

Osteoarthritis is the most common form of arthritis. It occurs when the smooth cartilage cushioning the knee joint gradually wears down, so bone begins to rub on bone — causing pain, swelling, stiffness and reduced movement.

- A slow, progressive ‘wear and tear’ condition
- Also commonly affects the hips and spine



A healthy knee joint compared with an osteoarthritic knee joint, showing cartilage loss, osteophyte (bone spur) formation, synovial inflammation, meniscal degradation and subchondral bone changes.

What Are the Causes?

Osteoarthritis usually develops from a combination of factors:

- Age — cartilage naturally wears over time
- Genetics — family history increases risk
- Previous knee injury — ligament/meniscus tears, fractures involving the joint
- Excess body weight — increases joint load
- Joint alignment — bow-legged/knock-kneed alignment increases wear on one side
- Repetitive heavy loading — occupations/sports with repeated squatting, kneeling, heavy lifting
- Inflammatory conditions — e.g. rheumatoid arthritis

Non-Operative Treatments

Surgery is usually considered only after non-surgical options have been tried:

- Weight management — reduces joint load
- Activity modification — reduce high-impact/aggravating activities
- Physiotherapy — strengthen knee muscles, improve flexibility
- Simple/anti-inflammatory pain relief — as advised by your doctor

- Walking aids or bracing — offload joint, improve stability
- Corticosteroid/other injections — temporary relief for some patients

These measures do not reverse osteoarthritis, but can meaningfully improve pain and function and may delay the need for surgery.

Role of Physiotherapy in Preparation for Surgery

‘Prehabilitation’ (physiotherapy before surgery) helps optimise your knee and general fitness ahead of a total knee replacement:

- Strengthens quadriceps and surrounding muscles → faster post-op recovery
- Improves pre-op range of motion — a strong predictor of post-op range of motion
- Teaches exercises/movement patterns used immediately after surgery
- Practises walking aids (frame, crutches) before they are needed
- Addresses general fitness, balance, other lower-limb issues

Patients who are stronger and fitter before surgery generally recover more quickly and with fewer complications.

Indications for Surgery

Total knee replacement is generally considered when:

- Significant, ongoing knee pain limiting daily activities, walking, sleep or quality of life
- Imaging (X-ray/MRI) confirms significant cartilage loss / advanced osteoarthritis
- Non-operative treatments have failed to give adequate relief
- Significant stiffness, deformity or instability of the knee
- Medically fit for surgery/anaesthesia and understands the recovery process

The decision is made jointly with your surgeon, weighing the severity of your symptoms against the risks of the operation.

What is a Total Knee Replacement?

A total knee replacement (TKR), also called total knee arthroplasty, is an operation to resurface a knee joint damaged by arthritis. Worn cartilage and a little underlying bone are removed from the femur, tibia and (often) the patella, and replaced with durable implants:

- A metal component on the femur
- A metal and high-grade plastic (polyethylene) component on the tibia
- Sometimes a plastic patella button

Together, these recreate a smooth, pain-free gliding joint surface.



The three main components of a total knee replacement: the femoral component (top), the polyethylene insert (middle), and the tibial baseplate (bottom), which together recreate a smooth gliding joint surface.

What is the Recovery?

Recovery is a gradual process and varies between individuals. The following is a general guide:

Timeframe	What to expect
1–2 weeks	Hospital stay (typically 1–3 nights) or early days at home. Walking with a frame or crutches, wound care, swelling control, and beginning knee bending and straightening exercises with physiotherapy.
2–4 weeks	Progressing from a frame to a stick/cane. Wound review and suture/staple check. Increasing walking distance and knee range of motion. Swelling and bruising remain common.
4–6 weeks	Most patients are walking independently without a stick around this time. Return to light daily activities and, for many, driving once reaction time and knee control are adequate (surgeon clearance required).
6–12 weeks	Continued strengthening and gait normalisation. Many patients return to light or sedentary work. Swelling continues to settle but may still be present, especially by end of day.
3–12 months	Ongoing improvement in strength, endurance and confidence. Most of the final recovery in swelling, stiffness and muscle strength occurs over this period — it can take up to 12 months (occasionally longer) to feel the full benefit of surgery.

Inpatient vs Outpatient Rehabilitation

After the initial hospital stay, ongoing rehabilitation can take place either as an inpatient or as an outpatient. The right pathway depends on your individual circumstances:

- **Outpatient rehabilitation:** most patients — good home support, reasonable pre-op mobility, no major comorbidities. Home a few days post-op; physio sessions in clinic or via home visits.
- **Inpatient rehabilitation:** for patients living alone with limited support, significant comorbidities, a more complex procedure, or not yet safe to mobilise independently. Short stay (typically 1–2 weeks) in a rehabilitation facility with daily supervised therapy.

Outcomes at 12 months are generally comparable between the two pathways — the choice is mainly about safety and support during early recovery.

Risks of Surgery

As with any major surgery, total knee replacement carries risks, including (but not limited to):

- Infection (superficial or deep)
- Blood clots (DVT or pulmonary embolism)
- Stiffness or reduced range of motion
- Ongoing pain of uncertain cause
- Nerve or blood vessel injury
- Implant loosening, wear or instability over time
- Leg length or alignment changes
- Anaesthetic risks; medical complications (cardiac, respiratory)
- Possible need for further (revision) surgery

Expected Outcomes

Overall, total knee replacement has high rates of patient satisfaction, but it is important to have realistic expectations:

Proportion	Outcome	What this means
~80%	Excellent outcome	Substantial pain relief, restored function, and high satisfaction with the new knee
~10–15%	Moderate outcome	Meaningful improvement but with some residual stiffness, ache or functional limitation
~5%	Poor outcome	Feel little better — or occasionally worse — than before surgery

Poor outcome group (~5%): many have pain/stiffness with no identifiable surgical cause — the implant is well-positioned and fixed, with no infection or mechanical problem. Without a clear, treatable cause, further surgery is unlikely to help and may add risk. Management focuses on physiotherapy and pain optimisation rather than repeat surgery.

Longevity of Knee Replacements — Australian Joint Registry Data

The Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) covers almost all joint replacements performed in Australia, and provides the most reliable long-term data available on how long knee replacements last.

Measure	Registry data
Average age at primary knee replacement	Around 68 years, though surgery is performed across a wide age range depending on symptoms and joint damage
10-year risk of needing revision surgery	Approximately 4–6 in every 100 patients (around 95–96% of knee replacements are still functioning well at 10 years)

Measure	Registry data
15-year risk of needing revision surgery	Approximately 7–8 in every 100 patients
Main reasons for revision	Infection, loosening of the implant, instability, and ongoing pain of uncertain cause
Effect of age	Younger patients (especially under 55–60) have a higher lifetime chance of eventually needing a revision, mainly because the implant is subjected to more years of use

In practical terms, the great majority of knee replacements are still functioning well at 10–15 years. Revision is usually related to infection, loosening or instability rather than simple ‘wearing out’. Younger, more active patients have a somewhat higher lifetime chance of revision, since the implant is subjected to more years of use.

Figures above are approximate, rounded values based on published AOANJRR data and may vary slightly between annual reports; your surgeon can discuss the most current figures relevant to your specific implant and circumstances.