

Unicompartmental knee replacement

Why this operation has been suggested

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, recommends treatment based on what is happening inside your knee. This operation replaces one worn part of the knee with an artificial surface. The name means replacement of one compartment, one of the three areas where the knee bones meet. We usually suggest it when wear-and-tear arthritis, called osteoarthritis, is limited to that one area and the rest of your knee is healthy.

Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. At your visit we take a history, examine your knee and arrange imaging if needed. For long-standing problems we usually try non-operative care first, such as changing your activities or physiotherapy. Surgery comes into the conversation when those steps have not given you enough improvement. The operation aims to relieve pain and restore function so you can stay active. Recent reports show 94% implant survival at 10 years and 90% at 18 years. We will weigh this option with you and decide together whether it suits your knee.

Before the operation

Once surgery is planned, we arrange imaging to map the worn part of your knee. This usually starts with standing X-rays, and sometimes an MRI scan, which shows the cartilage and soft tissues in more detail. These pictures help us plan the operation and confirm this procedure suits your knee.

In the days before surgery, you will get clear instructions from our team. You will need to stop eating and drinking seven hours beforehand. We ask for seven hours so you can be brought forward if the theatre list runs early. Some medications may need to be paused, and we will tell you which ones and when. Bring a list of everything you take, including tablets, drops and supplements. Arrange for someone to drive you home, as you will not be able to drive yourself. Wear loose, comfortable clothing on the day. If you have other medical conditions, you may also need blood tests or a review with the anaesthetist, the doctor who gives the anaesthetic.

On the day

You arrive at the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You meet the anaesthetist, the doctor who gives the anaesthetic. This operation is done under general anaesthetic. A regional nerve block is sometimes added for post-operative pain relief; the anaesthetist will discuss this with you on the day. You are then taken into the operating theatre, where the operation is performed.

You wake up in the recovery area, where nurses monitor you while the anaesthetic wears off. Once you are stable, you either go to the ward or go home, depending on the procedure and your recovery. Many people having this operation go home the same day.

What the operation involves

This operation replaces the worn surface in one part of your knee with metal and plastic parts. Your surgeon works through a small cut at the front of the knee, shorter than the cut used for a full knee replacement. Working through this smaller opening disturbs the muscle and tendon straightening your knee far less, which helps you recover sooner.

Inside the knee, your surgeon removes the worn-out joint surfaces in the affected compartment only. The healthy cartilage, ligaments and bone in the rest of your knee are left alone. The metal and plastic parts are then fitted to restore smooth movement between the thigh and shin bones. Special instruments guide their position, and the aim is to line the parts up with a slight undercorrection of the original deformity, so the knee keeps its natural shape. A working anterior cruciate ligament, one of the main straps inside the knee, matters for how the replacement performs over time, and part of the assessment before surgery checks this.

Some practices use a robotic assistant to help plan and carry out the operation. The robot does not perform the surgery itself. It helps your surgeon measure and position the parts precisely, and to reach the planned targets reliably.

The layers of tissue are closed with stitches, and a dressing covers the wound. Many people having this operation go home the same day, as mentioned above. Your knee will be swollen and sore at first, and this settles over the following weeks.

After the operation

You wake up in the recovery area, where nurses watch you as the anaesthetic wears off. Your knee will be sore, and you will be given pain relief to keep you comfortable. The knee will be swollen and covered with a dressing. We leave the dressing on for about 10 days; please do not take it off before then unless we tell you to. We change or remove it when we see you. Most people stand and take a few steps on the day of surgery, with a nurse or physiotherapist close by. Some people go home the same day, and others stay one night. Your team will tell you whether you go home the same day or stay one night in hospital. Please arrange for someone to stay with you for the first 24 hours after you get home.

Recovery

Your knee will be sore and swollen at first. This is normal and settles over the following weeks. Pain relief keeps you comfortable in the early days, and keeping the knee raised when you rest helps the swelling go down. Some people notice the swelling is worse by evening; this usually eases as the days pass.

You will be up and walking on the day of surgery, with help close by. A physiotherapist will guide your exercises, and you will keep doing these at home. The exercises rebuild movement and strength in the knee. You will not wear a brace or cast for this operation. Once the dressing comes off at your review, you can shower normally and get on with light daily tasks around the house. Stairs, short walks and gentle bending of the knee all become part of your routine as comfort allows.

Many people find their knee feels steadier and less painful than before the operation within the first few weeks. Sleep can be restless early on because the knee is tender; finding a comfortable position with a pillow under or between your legs often helps. As the swelling settles and your movement returns, you will manage more on your feet. Driving can come back once you can react quickly in an emergency stop and you are off strong pain medication; our driving guide has the details.

Recovery varies from person to person. Your surgeon and physiotherapist will guide your timeline, and most people return to work and low-impact activities within a short timeframe.

What can go wrong

Most patients do well, but problems can occasionally happen. Your surgeon and the team monitor you closely to spot any issue early.

Infection is the main concern after any joint replacement. Watch the wound for redness that spreads out from the edges, warmth, oozing fluid or a deep, throbbing pain that does not ease with simple painkillers. You may feel feverish or generally unwell. If you notice any of these signs, call our clinic the same day. If you feel very unwell, go to the emergency department. An infection around a replacement needs prompt treatment, and we will see you quickly to work out the next step.

The artificial parts can loosen or wear over time, or arthritis can develop in the rest of your knee. This usually feels like the old pain coming back, with aching that builds over months rather than days. Some people notice new clicking, grinding or a feeling that the knee is not steady. If this happens, bring it up at your next review. We will examine the knee and arrange imaging. Sometimes the answer is another operation to change the worn part or convert to a full knee replacement, and we will talk that through with you if it comes to that.

The knee can also develop instability, where the joint feels like it gives way or shifts side to side. A plastic spacer inside the knee can occasionally move out of place, which often causes sudden catching or a locked feeling. Tell us promptly if your knee locks, gives way or feels different from day to day.

If you have had keyhole surgery in this knee before your replacement, mention it at review, as it can affect how the replacement performs. Steroid injections into the joint after a replacement raise the risk of infection, so check with us before having one anywhere else.

The complications table on this page lists typical rates if you want the specifics.

When to call us

Most problems show up in ways you can spot early. Call us if you have a fever, or the wound becomes more red, warm or starts oozing fluid. Call us if you have calf pain or swelling, or sudden shortness of breath. Go to the emergency department if you feel very unwell, have severe pain that does not ease with painkillers, or cannot feel or move your leg. If your knee locks or gives way, call us promptly.