CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Distal femoral osteotomy

Why this operation has been suggested

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, starts with the least invasive options that suit your condition. 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 appointment we take your history, examine your knee, and arrange imaging where it is needed to work out what is causing your pain.

This operation, a distal femoral osteotomy, means cutting and reshaping the lower end of the thigh bone to change how weight passes through your knee. We usually suggest it for younger, active people whose knee pain comes from wear-and-tear arthritis (osteoarthritis) on the outer side of the joint, combined with a knock-kneed alignment (valgus). It can also help if your kneecap keeps dislocating or feels unstable. For long-standing problems like these we usually try non-operative care first, such as activity change and physiotherapy, and consider surgery when that has not given enough improvement. The aim is to straighten the limb so load moves away from the worn area, easing pain and letting you stay active and keep playing sport for 10 or more years.

Before the operation

To plan your operation we take X-rays of your knee while you stand, and sometimes an MRI or ultrasound scan as well. These show how much cartilage is left, how your kneecap moves, and how your whole leg lines up from hip to ankle. The measurements guide exactly where the bone is cut.

In the week before surgery, stop taking any anti-inflammatory medicine and check with us about any blood thinners. Do not eat or drink for seven hours before your operation. We ask for seven hours rather than six so we can bring you forward if the theatre list runs early. Arrange for someone to drive you home, and bring a list of your current medications with comfortable, loose clothing to change into. If you have other medical conditions, you may need blood tests or a review with the anaesthetist.

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On the day

You arrive at the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You will meet the anaesthetist there. 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.

What the operation involves

Your surgeon makes a cut on one side of your knee, over the lower part of your thigh bone. The exact side depends on which technique suits your knee. Through that cut, the bone is cut almost all the way through, then gently straightened so your leg lines up in a more even way. The V-shaped cut used in one common technique lets your surgeon make a large correction while the bone stays stable, and no wedge of bone needs to be removed.

Once the bone is in its new position, a metal plate and screws hold it there while it heals. The plate is placed carefully along the back part of the bone, a position that keeps the cut bone ends from moving against each other as your knee bends. Some techniques use a locking plate, where the screws grip the plate itself, making a stable frame that allows early weight on the leg.

The cut is closed with stitches and covered with a dressing. The whole operation is done through this one approach, and the technique keeps surgical time and blood loss low.

If your kneecap has been part of the problem, the same operation can also gently rotate the thigh bone so the kneecap glides in its groove rather than slipping to the outside. Sometimes other procedures are combined with the bone cut, such as a meniscus transplant (a donor cushion for the knee) or a cartilage graft to rebuild a worn area of bone. Your surgeon will tell you beforehand if any of these apply to you.

After the operation

You wake up in the recovery area, then move to the ward when you are ready. Nurses keep an eye on you and give you pain relief so you stay comfortable. Your leg will have a dressing over the wound, and you can start putting weight on it early with a frame or crutches. Someone should stay with you for the first 24 hours after you get home. Your team will tell you whether you go home the same day or stay one night in hospital. 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.

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Recovery

Your knee will be sore and swollen for the first few days. Pain relief keeps you comfortable, and the swelling settles gradually over the following weeks. Resting with your leg raised helps, as does ice and the pain medication your team prescribes.

In the early days you will walk with a frame or crutches, putting some weight on your leg as your surgeon allows. A physiotherapist will guide you through exercises to keep your knee moving and your thigh muscles strong. You can move around the house and do light daily tasks, but avoid pushing through pain. Sleeping on your back with the leg comfortable and supported works well at first.

As the swelling settles and movement returns, you will progress from crutches to walking on your own. Once your surgeon clears you to drive, you can get back behind the wheel; our driving guide explains the rules that apply. When your knee feels strong and steady again, you can return to work and sport in stages. Most people get back to work and the activities they enjoy, and many return to their pre-injury level of sport.

Recovery varies from person to person. Your timeline may differ, and your surgeon and physiotherapist will guide you at each step.

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.

Sometimes the bone does not heal as planned, or heals in a slightly different position than intended. You might notice ongoing pain at the site of the cut, or a feeling that your leg still is not straight. The metal plate and screws can also cause irritation, or a screw can break. If you feel new clicking or grinding in the knee, or pain that returns after settling, bring it up at your next review.

The wound can cause trouble too. Watch for redness spreading out from the wound, fluid leaking through the dressing, or a deep, throbbing pain that does not ease with simple painkillers. These can be signs of infection or a collection of blood under the wound. Call the clinic if you notice any of these. If you feel unwell with fever, or the redness is spreading quickly, go to the emergency department.

Rarely, swelling in the leg can become dangerous. If you notice sudden swelling and tenderness in the calf, or the lower leg becomes tense, painful and numb, go to the emergency department straight away. The same applies if your toes turn pale or cold.

During the operation there is a small chance of injury to a blood vessel or nerve near the knee, or a small crack in the bone while it is being straightened. Your surgeon watches for these during surgery and treats them if they happen.

Sometimes the correction does not hold, or the knee does not bend as freely as hoped. If pain or stiffness persists, your surgeon will discuss what options remain, which can include further surgery or, years later, a knee replacement if arthritis progresses.

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

When to call us

Trust your instincts. If you feel unwell, call us. Call the clinic if you notice fever, increasing redness or discharge from the wound, or pain that keeps getting worse. Go to emergency if you have sudden severe pain, swelling in your calf, or shortness of breath. Go to emergency as well if your leg becomes numb, cold, pale, or you cannot move it. These symptoms need urgent assessment. If in doubt, call us and we will guide you.

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