CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Meniscal root tear

What you're feeling

A meniscal root tear happens where the meniscus, a rubbery cushion in your knee, anchors to the bone. When that anchor tears, the cushion can no longer spread load across the joint the way it should. The pain usually sits along the joint line, the tender strip at the inner or outer edge of your knee, or deep at the back of the knee.

The symptoms can be easy to miss. Many people with this tear never get the classic signs of a meniscal problem, which is one reason it often goes undiagnosed for a long time. You might notice swelling that comes and goes, or swelling that builds up several hours after you hurt the knee. About half to two-thirds of people with a meniscal tear report swelling. Some feel catching, where the knee briefly snags as it bends, or locking, where it jams and will not straighten. Between 12% and 69% of people with a meniscal tear get these mechanical symptoms. Occasionally there is a pop you can hear or feel at the moment of injury.

The pain tends to flare with twisting on a loaded knee or deep bending, such as squatting to a low cupboard or kneeling in the garden. If the knee is swollen, deep bending can feel tight. Straightening the knee fully may be blocked if a loose flap of meniscus folds into the joint. Everyday tasks that load the bent knee, like getting up from a low chair, stepping down stairs, or lowering into a squat, often become the hard ones. Walking on flat ground is usually less of a problem, and knee movement is often normal between flare-ups.

If your injury came from a twist or a deep bend, the pain may have started at that moment. If it came on gradually without a clear injury, the tear may be wear-related, and swelling and catching may come and go over weeks. Either way, if these symptoms sound like yours, it is worth having the knee looked at properly.

What's actually happening

Your meniscus is a wedge-shaped cushion sitting between the two main bones of your knee. Each knee has two of them, one on the inner side and one on the outer side. They act like a gasket between the bones, spreading the load of your body weight evenly across the joint and keeping it steady as you move.

Each meniscus is anchored to the bone at its front and back by strong attachment points called roots. Think of these roots like the ends of a rope tied to a post. When a root tears, the rope comes loose from its post. The cushion can then slide out of place, and the whole structure stops working.

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That matters more than it might sound. The meniscus takes about half the load through your knee when your leg is straight, and up to 90% when your knee is bent. When the root tears, that load-sharing is lost, and the force lands directly on the smooth cartilage that lines the joint. The pressure on that cartilage rises sharply, similar to what happens if the whole meniscus were removed. Over time, that extra pressure wears the cartilage away and can lead to early arthritis.

Most root tears happen at the back of the meniscus, where it anchors to the bone. Tears on the inner side are more common than tears on the outer side. They often come on gradually in people over 40 as part of wear and tear, though a twist or deep bend can tear the root suddenly too. Tears on the outer side often happen alongside a torn ACL, the ligament deep in the centre of the knee.

These tears are easy to miss. They can be hard to spot on a scan even when they are complete, which is why many go undiagnosed for a long time. If a root tear is left untreated, the cushion can shift out of the joint and the cartilage damage builds, leading to a stiff, painful knee.

What we can do about it

Dr Kieran Hirpara, an orthopaedic 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 first visit we take a history, examine your knee, and arrange scans if they are needed to confirm the tear.

The first step is usually care without surgery. Simple measures such as ice can settle swelling, and anti-inflammatory medicines can ease pain. Physiotherapy works on restoring the range of movement in your knee and building strength in your leg muscles. We usually give this a fair trial before thinking about an operation, because surgery is generally only considered if these measures have not given you enough relief.

If non-operative care has not helped, surgery may be an option. The aim of a root repair is to re-anchor the torn meniscus back to the bone so the cushion can spread load across your knee again. Repair works best when the smooth cartilage lining the joint is still in good condition and the knee is not badly worn or misaligned. Repairing the root protects the cartilage and lowers the chance of needing a knee replacement later, compared with trimming the meniscus out. Where a repair is not possible, a meniscal transplant using donor tissue is sometimes considered for people who still have daily pain after previous meniscus surgery.

Surgery is a shared decision between you and us. We will talk through what the tear looks like on your scans, what your knee can still do, and what you want to get back to, and together we will settle on the plan that fits you.

What to expect

A root tear does not usually settle on its own. Because the anchor is torn, the cushion keeps taking uneven load, and the extra pressure wears the cartilage down over time. Left alone, a root tear can lead to early arthritis, with

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the cushion shifting out of the joint, the space between your bones narrowing, and long-term knee trouble. The damage builds slowly, so it can be tempting to put it off, but the wear does not pause while you wait.

With treatment, the outlook is different. Repairing the root protects the cartilage and lowers the chance of arthritis getting worse and of needing a knee replacement later, compared with leaving it alone or trimming the meniscus out. Repair works best when the cartilage lining your joint is still healthy. When it is, repair can slow or stop arthritis from progressing and improve how your knee feels and functions.

Recovery is gradual, and it is honest to say results vary. Some people feel their knee improve steadily over months. Others notice less change than they hoped for, and a proportion of people still report only modest improvement years after a repair. Healing also depends on the tear itself, since a root that has torn can affect how well the meniscus heals and how long the repair lasts. Your surgeon will talk you through what your scans show about your own knee, because that shapes what repair can realistically achieve.

There are a few things worth knowing as you weigh it up. Age on its own does not raise the risk of a repair failing within 5 years, so being over 40 is not a reason to rule it out. Scans taken years after successful repairs show little arthritis in many knees. And if a repair does fail, further surgery on the meniscus is uncommon, which speaks to how well repairs hold up over time.

When to see someone

Root tears are easy to miss, and they often go undiagnosed for a long time. That makes it worth knowing which signs point to this tear rather than a simple ache. See your GP if you have pain along the joint line or deep at the back of the knee that keeps coming back, especially with twisting or deep bending. Ask for a specialist review if the knee swells repeatedly, catches, or locks, or if it will not straighten fully. Swelling that builds up several hours after a twist is another sign the cushion may be torn. If your knee gave way with a pop at the moment of injury, or if the knee feels unstable alongside the pain, do not wait weeks to be seen. The sooner a root tear is found, the more options you have to protect the cartilage.

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