CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Osteochondritis dissecans of the knee

What you're feeling

Osteochondritis dissecans is a mouthful, so let's break it down. A small patch of bone just under the smooth surface of your knee joint loses its blood supply. The patch of bone and its cartilage covering can soften, loosen, or in some cases break away as a fragment inside the joint.

The tricky part is that the symptoms are often vague and hard to pin down. You might have a dull ache deep in your knee rather than one sore spot you can point to. Many people notice swelling, and the knee may feel stiff or not bend as far as it used to. Some people walk with their foot turned outward to avoid pain on the inner side of the knee.

Certain movements tend to stir things up. Twisting the lower leg while bending the knee often brings on pain over the inner part of the knee, where the problem patch usually sits. Sport, especially running and jumping, commonly makes it worse. The knee can also give way without warning, or briefly lock if a loose fragment jams in the joint.

Day to day, this can affect simple things. Squatting down to unload a dishwasher, kneeling to tie a shoelace, or getting up from the floor may all hurt. Stairs can be uncomfortable, particularly going down. Some people notice the knee grumbles after activity rather than during it, and settles with rest.

It's worth knowing that this condition is usually picked up in the teenage years, and it's most common in young people who play a lot of sport. Early on there may be no symptoms at all, which is one reason the diagnosis can take time. If the patch does not heal, the joint surface can wear out earlier than it should, so it's worth getting a sore, swollen or locking knee checked rather than pushing through.

What's actually happening

Think of your knee joint surface as a smooth, hard-wearing cap covering the ends of the bone. Under that cap sits a layer of bone that needs a steady blood supply to stay strong. In this condition, that blood supply fails in one small patch. The patch of bone softens, and the cartilage cap on top can loosen or break away, a bit like paint peeling off a wall.

CQ HAND + UPPER LIMB
Dr Kieran Hirpara — Specialist Orthopaedic Surgeon
Suite 2, Level 1, Mater Private Hospital Rockhampton, 31 Ward Street, The Range, QLD 4700
Phone 07 4863 6556 · office@cqupperlimb.com.au · cqupperlimb.com.au

The main problem is in the bone just beneath the joint surface, and the cartilage is affected second. Early on, the surface may simply soften. Later, the patch can separate from the bone around it, forming a flap or a loose fragment that floats inside the joint. That loose piece is what causes catching, locking and giving way.

There are two forms, and the difference matters. In young people whose growth plates are still open, the condition is called juvenile osteochondritis dissecans. Growth plates are the areas of growing tissue near the ends of children's bones. This form can often heal on its own if repetitive impact loading stops, and about half of these cases heal with rest and activity change alone. Once the growth plate has closed, the same condition is called adult osteochondritis dissecans. This form rarely heals without surgery.

No one knows exactly why the blood supply fails. Repetitive stress on the bone plays a part, and so do factors like body chemistry and family history. The patch most often sits on the inner rounded end of the thigh bone, in the part of the knee that takes your weight when you stand and move.

The symptoms you read about above follow directly from this. The softening and swelling cause the deep ache. A fragment that shifts or breaks free causes locking and giving way. If the patch does not heal, the joint surface can wear out early, which is why this condition is worth treating properly rather than pushing through.

What we can do about it

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 first visit we take a history, examine your knee, and arrange imaging where it's needed. X-rays are usually the first test, and an MRI scan often follows, because it shows whether the patch of bone is stable or starting to come loose.

For young people whose growth plates are still open, we usually begin without surgery. Stopping or cutting back on sport is often enough to let the patch heal. Some knees are treated with a cast or with protected weight bearing, where you limit how much weight goes through the leg. We generally give this a six-month trial, and check along the way whether the bone is healing. If the patch is small, conservative treatment can be continued for up to 12 months. Physiotherapy aims to keep the knee moving and strong while the bone settles, and to settle the pain that twisting movements bring on.

For adults whose growth plates have closed, rest alone rarely works, and surgery is usually needed to assess the patch and treat it. The right operation depends on the size of the patch, whether it is stable, and whether it sits in a weight-bearing part of the knee. These things can only be confirmed during the operation itself, which is done through a keyhole look inside the joint. If the patch is still attached, drilling can encourage healing by prompting new blood supply. If it has come loose, it can be pinned back in place, sometimes with a bone graft to help it knit. If the surface is damaged beyond repair, options include transferring plugs of healthy bone and cartilage from elsewhere in your knee, using donor tissue, or growing your own cartilage cells in a lab and implanting them. Each of these has its own page, and we will talk through which suits your knee.

Surgery is worth considering when pain continues for six months without signs of healing, when symptoms persist after the growth plate has closed, when the patch has hardened and become unstable, or when a loose

CQ HAND + UPPER LIMB
Dr Kieran Hirpara — Specialist Orthopaedic Surgeon
Suite 2, Level 1, Mater Private Hospital Rockhampton, 31 Ward Street, The Range, QLD 4700
Phone 07 4863 6556 · office@cqupperlimb.com.au · cqupperlimb.com.au

fragment is causing trouble. We will go through the options with you and decide together on the plan that fits your knee, your age, and what you want to get back to.

What to expect

The outlook depends a lot on your age and on whether the patch of bone is still stable. In young people whose growth plates are still open, this condition can often settle with rest and a break from sport, as described earlier on this page. In adults, the patch rarely heals on its own, and symptoms tend to persist or come and go rather than disappear.

If the patch does not heal, the trouble usually builds slowly. The knee can stay achy and swollen, and a loose fragment can cause catching, locking or giving way. Over the long run, a joint surface that never heals can wear out early. About one in five people with a patch like this ends up needing a knee replacement within 20 years.

Treatment aims to stop that chain of events. When the patch is managed well, most people get back to daily activity with less pain and better movement. Surgery works best when the smooth joint surface is restored properly, so your surgeon will match the operation to the size and position of the patch. Simply removing a loose fragment without repairing the surface tends to give poorer results, which is why that is rarely the whole answer.

Recovery is gradual rather than instant. Pain and function usually improve over months rather than weeks, and it can take a year or more to feel the full benefit. Some people return to sport sooner than others, and knees with the patch on the inner side often settle faster than those on the outer side. Results also depend on things like your age, how long you have had symptoms, and whether more than one patch is involved.

Be aware that no operation is a sure thing. Some cartilage procedures need redoing, and roughly one in four people who have a revision cartilage procedure go on to need another one. Your surgeon will talk through what is realistic for your knee rather than promise a particular outcome.

When to see someone

See your GP if a sore, swollen or locking knee has not settled after a few weeks of rest from sport, or if it keeps grumbling after activity. Ask for a specialist review if the knee regularly locks, catches or gives way, if it will not bend as far as it used to, or if the ache is stopping you from sleeping, working or taking part in sport. These are signs the patch of bone may be loosening, and they are worth checking sooner rather than later. The earlier this condition is picked up, the more options you have, because early patches can often heal without surgery while ones that have come loose usually cannot. If the knee suddenly locks and will not straighten, or gives way repeatedly, ask for that review promptly rather than waiting out another season.

CQ HAND + UPPER LIMB
Dr Kieran Hirpara — Specialist Orthopaedic Surgeon
Suite 2, Level 1, Mater Private Hospital Rockhampton, 31 Ward Street, The Range, QLD 4700
Phone 07 4863 6556 · office@cqupperlimb.com.au · cqupperlimb.com.au