CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Neck of femur fracture

What you're feeling

A broken neck of femur means the bone in your hip just below the ball of the joint has cracked. The pain is usually felt in the groin, the outer hip, or down the front of the thigh. It is often severe enough that you cannot put weight on that leg.

The leg may look shorter than the other one, and the foot may turn outward. Both of these signs happen because the broken pieces of bone have shifted out of place.

Sometimes the break is not shifted at all. These cracks can be hard to pick up, and the pain may be milder. You might still be able to walk, or hobble a short distance. The groin or hip pain often flares when you move the leg, get out of a chair, or climb stairs. Standing on that leg alone is usually painful too.

Some breaks happen after a fall or a hard knock. Others are stress fractures, small cracks that build up over time rather than coming from one injury. With a stress fracture, the pain tends to come on during activity and ease with rest, and it may ache at night or when you first get moving after sitting or lying down.

Daily tasks that need a strong hip become hard. Getting on and off the toilet, stepping into the shower, walking to the letterbox, or carrying a basket of shopping can all be too much. You may find you cannot lift your leg to put on socks and shoes.

If you have had a fall and your hip pain does not settle, or you cannot bear weight, seek medical care straight away. Some of these fractures do not show on the first X-ray. If the pain continues, further scans may be needed to find the break before it shifts.

What's actually happening

Your hip is a ball-and-socket joint. The ball sits at the top of your thigh bone, and the short piece of bone connecting that ball to the rest of the thigh is called the femoral neck. A neck of femur fracture is a crack through that short connecting piece.

The neck carries all the load between your body and your leg, a bit like the pillar holding up a balcony. It is also wrapped in a tight sleeve of tissue, and inside that sleeve runs the blood supply to the ball of the joint. That is

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what makes these breaks different from most broken bones. When the neck cracks, the vessels feeding the ball can be stretched, squeezed or torn. Without blood, bone cannot stay healthy or heal well.

This is why the two types of break behave so differently. If the pieces have not shifted, the blood supply is usually still working and the bone can knit. If the pieces have shifted, the vessels are more likely damaged, and the ball of the joint is at risk. Roughly three in four of these breaks involve some loss of blood flow to the ball, though in most of those the flow returns within about six weeks.

Healing is also slower here than in other bones. The neck sits inside that tight sleeve, so the broken ends cannot form the thick, glue-like callus you see when other fractures mend. The bone has to heal from within, which means the pieces must be held very still and lined up well for the repair to succeed.

There is another reason these breaks matter. They often happen where the bone has become thinner and weaker, so the fracture is a sign of fragile bone as well as a single injury. And when the broken pieces shift, the leg can end up shorter with the foot turned out, which is exactly what you may have noticed in the section above.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. 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 the clinic visit we take a history, examine your hip, and arrange imaging where it is needed. X-rays come first. If the X-ray looks normal but your pain continues, we may order a CT scan or an MRI scan, because some of these breaks do not show on the first films.

A broken hip is a structural injury, so for most people surgery is recommended straight away rather than a trial of rest and physiotherapy first. The aim of treatment is to hold the broken pieces still and lined up well so the bone can heal from within, and to protect the blood supply to the ball of the joint. For some people with a small crack that has not shifted at all, we may discuss leaving the bone to heal without an operation. That path means staying off the leg for 4 to 6 weeks, and there is a real chance the break shifts later and surgery is needed anyway. We weigh this up together.

When surgery is the plan, the choice depends on your age, the type of break, and whether the pieces have shifted. For younger people and those still active at work or sport, we aim to save the ball of your own joint. The bone is lined up and held with metal, often screws or a plate-and-screw device built for this part of the thigh. For some breaks, especially where the pieces have shifted or the bone is fragile, we may recommend replacing part or all of the hip joint instead. If a first operation has not worked, replacing the hip is still a well tolerated and effective option. We will talk through which option suits your injury, and you decide together with us.

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What to expect

A neck of femur fracture changes how you move from one day to the next, not how you feel in a single moment. The outlook depends on your age, the type of break, and whether the pieces have shifted. Most people are treated successfully, and many return to the activities they were doing before the injury. Recovery is gradual. Over weeks and months you can expect the pain to ease, your strength to build, and your walking to improve step by step.

There are honest limits to set. Some people keep less hip function than they had before, and a few need more surgery down the track. If the ball of the joint loses its blood supply, or the bone settles into a collapsed position, the outcome is worse. Collapse of more than 15 mm is linked with healing problems and greater loss of function. Roughly 1 in 6 people live at least 10 years after a hip fracture, which reflects the age and general health of many people who break a hip rather than the break itself.

Leaving a broken hip alone is rarely a safe option. If the pieces have shifted, waiting allows the damage to the blood supply to progress, so these breaks are treated on an urgent basis to protect the joint and improve function. Even a crack that has not shifted needs a clear plan, because it can shift later. These fractures also tend to happen in bone that is already thin, so the break is a sign of fragile bone as well as a single injury. Strengthening the bone is part of protecting your other hip and your long-term health.

Your surgeon will talk you through what the evidence supports for your specific injury, and what a realistic recovery looks like for you.

When to see someone

Go to an emergency department straight away if you have had a fall or a hard knock and you cannot put weight on that leg, or the leg looks shorter with the foot turned outward. These breaks are time-critical: the longer the pieces stay shifted, the more the blood supply to the ball of the joint is at risk. Ask for an urgent review if you have hip or groin pain after a fall that has not settled, even if you can still walk, because some of these breaks do not show on the first X-ray. If you are being treated for a thigh bone fracture and you have ongoing hip pain on the same side, ask for that hip to be checked as well. New or worsening pain after a hip injury has started to settle also deserves prompt review.

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