

Lumbar fusion

Why this operation has been suggested

Dr Kieran Hirpara, a spine 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 a history, examine you, and arrange imaging where it is needed to work out what is causing your pain.

Lumbar fusion is an operation that joins two or more bones in your lower back so they heal as one solid piece. We usually suggest it for a spine that has slipped out of place (spondylolisthesis) or become unstable, where the pain is persistent and disabling and has not settled with non-surgical treatment such as physiotherapy, activity change or injections. For wear-and-tear low back pain without a clear structural cause, we do not recommend fusion, and surgery is generally avoided for pain coming from a worn disc. When there is nerve involvement with a slipped spine, surgery tends to help more than non-operative care. The aim is lasting relief of pain, better function and a stable spine. We will talk through the benefits and risks with you and decide together whether this operation suits you.

Before the operation

In the weeks before surgery we will confirm the plan using scans you have already had, such as X-rays or an MRI, and we may order fresh images if your spine has changed. Once a date is set, you will receive clear instructions from our team. You will need to stop eating and drinking seven hours before surgery. We ask for seven hours rather than a shorter fast so your operation can be brought forward if the theatre list runs early. Some medications need to be paused beforehand, and we will tell you exactly which ones and when. If you have other medical conditions, you may need blood tests or a review with the anaesthetist, the doctor who gives the anaesthetic. Most people do not need either. Arrange for someone to drive you home, and bring a list of your current medications. Wear loose, comfortable clothing on the day.

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, 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.

When the operation is finished, you wake up in the recovery area. Nurses monitor you there 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

Lumbar fusion joins two or more bones in your lower back so they heal as one solid piece. Your surgeon reaches the spine through a cut, most often over the back of your lower back. Some operations reach the spine from the side or from the front instead, through a cut in your flank or belly. The route your surgeon takes depends on which part of your spine needs treatment and on your own scans.

Once at the spine, your surgeon removes the tissue that is pressing on nerves, if that is part of your plan. This is called decompression. Your surgeon then prepares the space between the bones and places a spacer, sometimes called a cage, which holds the bones apart and gives the bone room to grow together. Bone graft material is packed around the spacer to help the two bones heal into one.

To hold everything still while the bone heals, your surgeon uses metal screws and rods. The screws go into the bones above and below the joint being fused, and the rods connect them. In some cases a brace is not needed afterwards, and you may be up and moving the day after surgery.

The cut is closed with stitches, then covered with a dressing. You will keep that dressing on for about 10 days, as described in the recovery section.

The exact steps vary with your condition, the number of levels involved and the approach your surgeon chooses. We will explain your own plan before you sign the consent form, and you can ask questions at any point.

After the operation

You will wake up in the recovery area, then move to the ward once you are stable. Nurses will check on you regularly and give you pain relief to keep you comfortable. Your team will tell you whether you go home the same day or stay one night in hospital. Someone should stay with you for the first 24 hours after you get home. You may be helped out of bed and moving around soon after surgery, and gentle walking helps your recovery. 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. Keep the cut clean and dry, and let our team know if you notice spreading redness, swelling, fluid leaking from the cut, or a fever.

Recovery

Everyone's recovery is different, and your timeline may differ from what others describe. Your surgeon and physiotherapist will guide you at each step.

In the first days and weeks, you can expect some pain and swelling around your lower back. This is a normal part of healing and should gradually ease. Pain relief keeps you comfortable, and gentle walking helps. You may be helped out of bed and moving around soon after surgery, and getting up early does not harm the healing bone.

As the days pass, you will do simple exercises with your physiotherapist to build strength and get moving again. Starting these exercises early is safe and can help you recover your movement sooner. You will notice your activity levels dip in the first month after surgery. They then build back gradually over the following months. Around the house, you can walk short distances often rather than long ones rarely. Avoid heavy lifting and bending until your team clears you. You will not need a brace for this operation.

Once your wound has healed and your surgeon is happy with how your back is settling, you can do more each day. When the pain and swelling settle, everyday tasks get easier. Driving can come back once you can sit comfortably, react quickly in an emergency stop, and are off strong pain medication. See our guide on driving after surgery for the full rules.

Take things at your own pace. If something hurts or worries you, tell your team.

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 bones do not knit into one solid piece. You might notice a return of the deep back pain that brought you to surgery, or pain that keeps coming back once the early healing period is over. If that happens, bring it up at your next review so we can check how the bone is healing.

The metal screws and rods can also cause trouble. A screw can loosen or move, or the spacer between the bones can settle into them. This often causes no symptoms at all, but it can bring back pain or new nerve-type pain down your leg. Tell us about any new or worsening pain so we can image the spine and see what is happening.

The nerves that run through your spine can be irritated during the operation. If that happens, you may notice burning or shooting pain down your leg, pins and needles, numbness, or weakness in your leg or foot. These changes can be temporary or lasting. There is no operation that reliably fixes nerve symptoms once they appear, so tell your team straight away if you notice any of them.

Infection can develop in the wound or deeper near the metalwork. Watch for a deep, throbbing pain that does not ease with simple painkillers, redness that spreads out from the cut, fluid leaking from the wound, or a fever. Some infections appear weeks or even months later, after the skin has healed. If you notice any of these signs, call the clinic or go to the emergency department.

You can lose more blood during this type of operation than is visible during surgery. If you feel dizzy, washed out or unusually short of breath after going home, let us know.

If you have osteoporosis, or brittle bones, or other health conditions such as liver disease, complications are more likely. We will talk through your own risk profile before surgery.

Fusing part of your lower back can also affect other joints. If you ever need hip surgery later on, a previous fusion raises the chance of the hip replacement dislocating and needing further surgery. It is worth mentioning your fusion to any future surgeon.

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

When to call us

Most problems announce themselves early, and we would rather hear about them straight away. Call us if you have a fever, if the skin around your cut becomes more red or starts leaking fluid, or if pain that was settling suddenly gets much worse. Call us if one calf becomes swollen or tender, or if you become short of breath. Go to emergency if you lose feeling in your legs, cannot move them, or lose control of your bladder or bowels.