COMPLEX REVISION SURGERY

When stenosis has resulted in forward slippage of a vertebra or curvature of the spine, patients may require spinal fusion surgery. Two or more vertebrae are fused permanently in this procedure, using a bone graft from bone removed during decompression surgery.

What is Complex Revision Spine Surgery?

Revision spinal surgery is a procedure that takes place if you have already undergone some form of spine surgery and have not seen full benefits. Revision spinal surgery is always more difficult as the complexity of surgery is much more with scar tissue around delicate structures like spinal nerves.

A revision discectomy is one of the most common spinal operations done for persistent sciatica (pain down leg) or a neurological deficit developing after previous surgery for a disc prolapse (hyperlink). If we remove too little of the disc, recurrence rates may be high (often said to be around 15% of cases). If we remove too much of the disc- you may be left with persistent back pain. It is therefore really important even after successful surgery for a disc prolapse, to improve your core strength and maintain a healthy body weight to prevent a recurrence of your disc problem.

Similarly, in surgery for spinal stenosis (hyperlink), symptoms are relieved only when sufficient bone is removed. If too much bone is removed, it could result in 'instability', requiring further surgery such as a spinal fusion or stabilisation. If we remove too little, you may suffer a recurrence of their symptoms as you age, requiring surgery again at a later age.

Revision surgery involves working through scar tissue and bone that often gets stuck to the nerves and the fragile membrane called the dura. Great care and skill is required to avoid injury to the nerve and dura. This type of surgery can be painstaking and lengthy, sometimes lasting a few hours. The risks of damage to these critical structures are much higher than in primary surgery. I will help you understand what is involved in the surgical process and thoroughly evaluate the risks and benefits of such an operation with you, advising you with your best interests at heart.

Informed consent

I will discuss all benefits and risks of the procedure with you at your consultation. If you have any concerns about the procedure please ask me during your consultation.

I work with a team of three consultant surgeons, consultant radiologist and a very experienced physiotherapy team and discuss all complex cases in our fortnightly multidisciplinary team meeting to be able to provide a first class service.

Getting ready for revision surgery

There are risks of an anaesthetic and surgery, such as developing pneumonia etc. Elderly people have higher rates of complications from surgery. So do people with excess weight or medical illnesses such as Type 2 diabetes, heart disease, if you smoke or if you have multiple medical problems.
You must inform my anaesthetist, the nurse looking after you, preassessment team and me of all the medications you are taking, any allergies that you may have including drug reactions as these can seriously impact your surgery and recovery. Drugs such as aspirin, clopidogrel, and other blood thinners may need to be reviewed or stopped under guidance before surgery. If you are diabetic, especially on insulin, this needs to be highlighted early.

Do try if time permits to stop smoking, lose weight and make some lifestyle changes as these will make your recovery smoother.

What are the risks of revision spinal surgery?

I will be discussing all potential complications and will inform you of my own success rates.

Potential complications include:

- **Bleeding**
- **Infection**
- **Blood clots**
- **Spinal nerve root injury**
- **Spinal fluid leak** as the surgery is close to the thin membranous lining of the nerves (dura)
- **Infection:** The risk of infection is less than 1%. All my patients receive a dose of intravenous antibiotics when they are going off to sleep. If you develop an infection, it is most likely to be a superficial wound infection that will resolve with a short course of oral antibiotics and not a cause for serious concern
- **Bleeding:** Blood loss is usually minimal with a laminectomy
- **DVT:** Developing blood clots in the legs (deep vein thrombosis – DVT) is a risk of any surgery. The risk is minimised by using thrombo-embolic deterrent stockings (TEDS) and mechanical pumps. These pumps squeeze your lower legs, helping the blood to circulate. They are put on when you go to sleep and stay on until you start to mobilise. I encourage early mobilisation as this also helps to prevent DVT.
- **Nerve Injury:** Nerves are compressed by ligament and bone and are often adherent to the nerves which can be physically damaged at the time of surgery when separating and removing the ligaments and bone from the nerves. This can lead to a loss of nerve function with persisting pain, weakness and numbness in the territory of that nerve. I keep this risk to a minimum by using magnification and careful dissection around the nerves.
- **Dural Tear:** Rarely there can be an injury to the thin membrane that surrounds the nerves (Dural tear) which can result in a CSF leak. This can usually be repaired at the time but sometimes needs another operation to address it.

What are the long term risks?

About 20 % of patients may not benefit from surgery, especially in cases of long-term nerve compression. Patients having very severely compressed nerves are at a higher risk of nerve damages or, more commonly, a CSF leak where the fluid surrounding the nerves and enclosed in a thin membrane leaks out. This can be repaired at the time, though you may require further surgery to prevent re-leaking. More neurologically severe complications, like complete paralysis, are rare. Rarely, misplacement of the screw may cause nerve damage needing revision surgery. This type of surgery is not suitable for all patients and I will guide you with all available options and give you my own higher success rates.

How long should I expect to stay in hospital?

The procedure involves a hospital stay of one to four days following a spinal revision surgery.

What can I expect after my surgery?

• Pain medication is administered initially through an intravenous (IV) line, followed by oral pain-relieving medications to keep you comfortable
.
• You are encouraged to move, usually the following day. You should get out of bed with assistance and sit on a chair. This helps to retain muscle tone and prevent immobilisation. Walking is encouraged as it strengthens the lower back and leg muscles and helps in surgical recovery. Next, walking on stairs is introduced and you will be assisted by a physiotherapist.

• The incision area may have a bulky dressing that is changed to a waterproof dressing the day after surgery.

• I recommend that you avoid driving, excessive sitting, lifting, or bending down for about a month after surgery. Be guided regarding how much you move or bend in the first few weeks after surgery based on your pain. If it is painful, be careful of overdoing it. Your physiotherapist will demonstrate exercises to strengthen the back and to prevent scar formation around the nerve.

• Following a hospital stay, you are given a physiotherapy program before discharge to help recover.

What should I expect at home?

• The treating physiotherapist usually provides exercises that you can follow easily at home. The ward team will prescribe pain-relief medicines. Non-steroidal anti-inflammatory drugs (NSAIDs) are not always prescribed as they can cause oozing from the wound.

• Stool-softeners. These are sometimes required initially to in to avoid constipation which would prevent excessive straining during bowel movement.

• Look after your wound by avoiding activities like bathing, swimming, and hot-tubs until the incision has completely healed to prevent rupturing of sutures and infection from setting in. The absorbable sutures used for surgery usually dissolve in a few days after surgery. A water proof dressing is used to cover the wound to allow showering. Do ring the ward if you have any

concerns.
• You should continue with the physiotherapy program and follow the prescribed exercises. You should avoid activities like running or lifting heavy weights (typically over 5 pounds).

• You are advised to use compression stockings to prevent blood clot formation, until you are completely mobile.

• I would like you to download and use the link to the app for MyRecovery to collect information which helps me improve my service

What is the expected recovery time from this operation?

You will generally return to normal activities in 2 to 3 months.

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