

Lead extraction

Information for patients

Your doctor has recommended you undergo a lead extraction procedure. This leaflet has important information about the procedure, which will give you a better understanding of what's involved. A member of our team will meet you before your procedure to go through other specific details and will be happy to answer any questions you may have.

What is a lead extraction?

This is a complex surgical procedure done under general anaesthesia to remove your pacemaker/defibrillator (ICD) and the leads (wires) that are attached to your heart. A lead extraction is very different to the initial implant of your device or battery change procedures you may have had in the past and carries a significantly higher risk. On average, most patients can expect a 7-14 day stay in hospital following this procedure.

Why do I need a lead extraction?

After implantation, the body slowly starts to form scar tissue around the leads within the blood vessels making it impossible to simply pull out, thereby necessitating this extraction procedure. There may be a number of reasons for needing a lead extraction; the commonest is an infection involving any part of your pacemaker/ICD system. Other reasons include a damaged lead, blocked blood vessels or having too many leads.

What are the risks of having a lead extraction?

The risks of this procedure can be divided **into serious complications where you may be left with life-changing consequences or even death, and less serious complications which may prolong your stay in hospital or require additional procedures.**

Serious complications:

- Blood clot in your lungs
- Stroke or a heart attack
- Tear in a major blood vessel
- Puncture in the wall of your heart
- Emergency open heart surgery
- Death.

Less serious complications:

- Excessive bleeding needing transfusion
- Bleeding under the skin
- Damaged heart valve
- Minor leak around the heart/lungs
- Anaesthetic risks.

Data collected from around the world show that, on average, a serious complication may occur in 1 or 2 patients out of every 100 cases performed.

What could put me at higher risk?

Elderly, frail patients with multiple other medical conditions are at increased risk for complications. Also, the more leads and the longer they have been in the body, the higher the risk. The type of lead is another determinant, with ICD leads being more difficult to remove, thereby increasing the risk of the procedure.

How is the procedure performed?

The procedure is performed under general anaesthesia in an operating theatre. We will first make an incision (cut) over your pacemaker generator to remove it from under your skin. We then use specialist LASER or mechanical cutting tubes passed over your leads to gradually free it from the blood vessels and heart, allowing its safe removal. There are some rare instances when these standard techniques fail to remove the leads safely and we may have to resort to open chest surgery.

We may also insert a small tube in your groin as part of the procedure and in some patients a temporary pacemaker may be left in position (either from the groin or under the collarbone) which will be replaced with a permanent system once the infection has been treated.

Using these techniques, we have an overall 95% success rate, and most patients recover very well after their procedure.

What happens after the operation?

You will be woken up from general anaesthesia in the recovery bay of the operating theatres, and then be moved to the cardiology ward for observation. If the reason for your procedure was due to infection, you will need to continue to stay in hospital for antibiotic therapy until we are sure the infection is under control.

Some patients may require a new device (pacemaker or ICD) to be implanted but the timing and site of this is dependent on a number of factors and will be discussed with you individually.

If you have been transferred to our facility for your procedure, you will be transferred back to your own hospital for ongoing care once our team is happy it is safe to do so.

