

LINX Procedure Patient Information and Pathway

What is the LINX procedure ?

The LINX is a device placed around the junction of the stomach and the oesophagus (gullet) to control acid reflux symptoms. LINX is made of magnetic beads joined up to form a chain like a bracelet. This is placed laparoscopically (Key hole surgery) under general anaesthesia. Approximately 5 small incisions are made in the upper abdomen to carry out the procedure, which will take about an hour. Following surgery, you will be taken to the recovery area where you will be monitored for a period of time before being transferred to the ward.

How it works

The magnetic beads separate when you swallow (allowing food to pass into the stomach) and close when you are not eating or drinking. The device in the closed position helps to prevent stomach contents refluxing back into the oesophagus.

Am I suitable for LINX the Procedure?

The LINX procedure is suitable for patients with long standing gastro-oesophageal reflux symptoms who are not responding to medical therapy and life-style changes. Your surgeon will assess your symptoms and carry out a few tests to ensure your suitability to undergo the procedure. It is important to note that not everyone with acid reflux symptoms is suitable for surgery. A number of criteria have to be met in order to be suitable for a LINX device. Your surgeon will discuss these with you.

What tests do I need to assess my suitability?

Your surgeon will discuss these with you at the initial consultation. The number of tests may depend on your symptoms. You may require the following tests:

1. Gastroscopy
2. Barium swallow

3. Oesophageal manometry/Ph monitoring test
4. BRAVO test

Do I need pre-operative tests?

You will be asked to attend a pre-operative assessment clinic approximately two weeks before surgery. You will be assessed for fitness for general anaesthesia. Your blood pressure, heart rate and oxygen saturation levels will be recorded and the nurses will go through a standard questionnaire. We will be taking blood and urine samples and also skin swabs to ensure you do not have any evidence of an MRSA infection.

What are the alternate treatment options:

1. Life style changes:
 - a. Eat little and often, avoid heavy meals in the night
 - b. Lose weight if you are overweight
 - c. Stop smoking and reduce alcohol consumption
 - d. Avoid foods which aggravate symptoms (fatty and fried food, caffeine)
 - e. Limit stress (a well-known trigger for acid reflux)
2. Medical therapy
 - a. Your GP, Specialist or pharmacy might recommend antacids which should help to control symptoms (e.g. Omeprazole, Lansoprazole etc)
3. Other forms of surgery
 - a. Anti-reflux surgery (fundoplication)
 - b. Endoscopic treatment (STRETTA)

What are the side-effects and complications?

1. Difficulty swallowing: You will likely experience this in the short term. Usually, the swallowing improves after six weeks but can persist for longer. Rarely, you may continue to experience symptoms which require an endoscopic balloon stretch procedure. Very rarely, removal of the LINX device is required (<5%).

2. The LINX device should not affect going through airport security systems.
3. You are able to have an MRI scan provided it is less than 1.5 Tesla. You will be given a card which could be presented if an MRI is required.
4. Very few patients (<0.5%) develop an erosion of the LINX device which requires surgical removal.

Shared decision-making:

We would like you to be involved in the decision-making process. Your surgeon will explain the various options for treatment and you will be provided with written information. Following investigations and assessment of suitability, we will take you through the consent process. Please make sure you understand the procedure, side-effects and potential complications before you consent to the procedure.

How much pain will I experience?

Usually, the pain experienced following surgery is controlled with simple pain-killers. It is common to feel shoulder discomfort after any keyhole surgery. This is due to irritation of the diaphragm muscle from the gas used to inflate the abdomen. It usually improves within 24 hours. You will be discharged home with analgesics and anti-sickness tablets.

Post-operative diet

You will be able to start drinking fluids very soon after the procedure. We would like you to start eating soft food on the same day as the surgery. It is important to eat small and frequent (every 2-4 hours) meals. We recommend you commence a normal diet as soon as possible. You may have some trouble with your swallowing as you progress, which indicates that you need to chew your food longer. It is not unusual for swallowing issues to become more noticeable in the second week due to the swelling around the operation site. Persevering with a "little and often" diet is important if this happens. Swallowing issues can sometimes peak at 6 weeks following surgery, usually settling down by 12 weeks.

Recovery following surgery

You will be discharged on the day of surgery, with appropriate medications, unless any clinical reasons prevent you from doing so.

You will be able to walk around and carry out most activities soon after surgery.

You can undertake any non-strenuous activity within two days of surgery. Avoid driving until you are able to perform an emergency stop without undue pain. Usually, a good sign of this is coming off the stronger pain-killers, often 7-10 days following surgery. Avoid heavy lifting or strenuous activities for 6 weeks.

You may experience constipation after surgery, often related to the pain killers. Simple laxatives such as lactulose or senna usually help to relieve symptoms.

Follow up

First follow up will be approximately 4 weeks after surgery. If you have any concerns prior to this, please contact the Consultant's office in daytime hours or the hospital ward after hours.

You will receive six monthly follow up appointments for two years after surgery to guide you through your recovery.