PROCEDURE

Esophagectomy - minimally invasive

A minimally invasive esophagectomy removes part or all of the esophagus through small incisions and rebuilds the passage for swallowing.

PURPOSE
Remove diseased esophagus and restore swallowing

PROCEDURE TYPE
Therapeutic - surgical and minimally invasive

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General anaesthesia

HOW LONG IT TAKES
About 3-6 hours

PREPARATION
Fasting, medication changes, nutrition assessment

RECOVERY
About one week in hospital; no driving until cleared

MAIN RISKS
Leak, pneumonia, bleeding, blood clots

RESULTS
Surgical findings immediately; pathology within days to two weeks

Overview

A minimally invasive esophagectomy is major surgery to remove part or all of the esophagus, the tube carrying food from your mouth to your stomach. It is most often used to treat esophageal cancer.

The surgeon operates through small cuts in the abdomen and chest using a camera and long instruments. Robotic instruments may be used. "Minimally invasive" refers to the incisions; the operation and recovery are still significant.

The surgeon usually reshapes the stomach into a narrow tube and connects it to the remaining esophagus. Less often, part of the bowel is used. Nearby lymph nodes may also be removed and examined.

Why the procedure is performed

The main aim is to remove cancer that appears confined to the esophagus and nearby tissues. Surgery may follow chemotherapy, radiation therapy, or both.

Less commonly, esophagectomy may treat severe non-cancerous damage when the esophagus no longer works despite other treatments. Because surgery has substantial risks and permanently changes eating, it is usually considered only when less invasive options are unsuitable.

Who should and should not have it

You may be offered surgery if the affected area can be removed and you are fit enough for major chest and abdominal surgery. The team considers the cancer's location and stage, your nutrition, and your heart and lung health.

It is generally not used to cure cancer that has spread widely to distant organs. The operation may also be avoided or delayed if you have:

Age alone does not determine suitability. Overall health, independence, goals, and expected benefit are more important. Previous chest or abdominal surgery may make a minimally invasive approach impractical.

- A serious uncontrolled infection
- Severe malnutrition that should be treated first
- Heart, lung, liver, or kidney problems that make surgery unsafe
- A tumour that cannot be removed completely
- Recent treatment from which you have not recovered

How to prepare

Follow your treating facility's instructions because preparation varies by hospital and surgical approach.

You may have blood tests, scans, heart and lung testing, and an anaesthetic assessment. A dietitian may assess your weight and food intake. Nutritional drinks or temporary tube feeding may be recommended if swallowing problems have limited your nutrition.

Give the team a complete list of medicines, vitamins, and supplements. Medicines that affect

bleeding, including some blood thinners like warfarin or apixaban , may need adjustment. Do not stop prescribed medicine unless your team tells you to.

Follow instructions about when to stop eating and drinking. Tell the team if you develop a fever, chest infection, worsening cough, or another illness before surgery.

Stopping smoking can reduce lung and wound problems. Breathing exercises and physical activity may be included in a pre-surgery fitness program. Arrange help at home, as recovery involves reduced energy, smaller meals, and limits on lifting and driving.

What happens during the procedure

You receive general anaesthesia and a breathing tube. The surgeon makes small incisions in the abdomen and usually the chest. The exact approach depends on the disease's location and where the new connection will be made.

The affected esophagus and nearby lymph nodes are removed. The stomach is usually formed into a tube, moved into the chest or neck, and joined to the remaining esophagus. This join is called an anastomosis.

A feeding tube may be placed into the small bowel while the connection heals. Chest drains remove air and fluid. You may also have intravenous lines, a bladder catheter, and a tube through your nose.

If the operation cannot be completed safely through small incisions, the surgeon may change to an open operation.

Recovery and what to expect afterward

Pain around the incisions and drains is expected. Pain relief helps you breathe deeply, cough, and move, reducing the risk of lung complications.

Eating usually does not restart immediately. Nutrition may be provided through a feeding tube, and the new connection may be checked before liquids and then soft foods are introduced. After discharge, you will usually need small, frequent meals. Reflux, early fullness, weight loss, and loose stools may occur as your body adjusts.

Activity begins early with sitting and assisted walking to support lung recovery and prevent blood clots. Avoid heavy lifting until your team confirms healing is adequate.

Do not drive home or drive while taking sedating medicine. Wait until your surgeon clears you and you can turn comfortably, wear a seat belt, and make an emergency stop.

Returning to work often takes several weeks or longer, depending on recovery, nutrition, complications, job demands, and any further cancer treatment.

Risks and possible complications

Important risks include:

Complications may require antibiotics like amoxicillin or doxycycline , drainage, an endoscopic procedure, or another operation. There is also a risk of death from major complications. Your surgeon should explain your individual risks before consent.

- Leakage from the new connection
- Pneumonia, breathing difficulty, or fluid around the lungs
- Bleeding or infection
- Blood clots in the legs or lungs
- Irregular heartbeat
- Narrowing of the connection, causing difficulty swallowing
- Nerve injury causing hoarseness
- Leakage of lymph fluid into the chest
- Slow stomach emptying, reflux, or food moving too quickly into the bowel

Results and follow up

The surgeon can usually explain the main findings after surgery. For cancer, a pathologist examines the tumour, lymph nodes, and cut edges, called margins. The final report often takes several days to two weeks and helps determine whether further treatment may be useful.

Follow-up may involve surgical, oncology, and dietitian teams. Visits check swallowing, weight, hydration, wounds, breathing, and feeding-tube care. Report ongoing reflux, diarrhoea, vomiting, difficulty swallowing, or trouble maintaining your weight.

Alternatives

Alternatives depend on the disease's stage, location, and your goals.

For non-cancerous disease, alternatives may include medicines, endoscopic stretching, stents,

or reconstructive procedures that preserve the esophagus.

- Endoscopic removal or ablation: May treat selected very early cancers but is not adequate for deeper disease or involved lymph nodes.
- Chemotherapy and radiation without surgery: May be used when surgery is unsuitable or as definitive treatment for some cancers.
- Open esophagectomy: Removes the same structures through larger incisions and may be needed for complex disease.
- Systemic cancer treatment: Chemotherapy, immunotherapy, or targeted therapy treats disease throughout the body.
- Symptom-focused treatment: A stent, radiation, feeding tube, or other support may improve swallowing and nutrition when cure is not possible or surgery is not wanted.

When to call your healthcare team

Contact your team if swallowing becomes gradually harder, eating causes ongoing coughing, you continue losing weight, or diarrhoea, reflux, or poor appetite does not improve.

Seek urgent medical advice for fever, increasing wound redness or drainage, repeated vomiting, worsening chest or abdominal pain, new shortness of breath, or inability to keep fluids down.

Call emergency services for severe breathing difficulty, fainting, confusion, coughing or vomiting blood, sudden severe chest pain, or signs of a major allergic reaction. Do not drive yourself in an emergency.

Common questions

Will I be asleep?

Yes. You will have general anaesthesia and breathing support.

Can I drive home?

No. After discharge, do not drive until you are off sedating pain medicine and your surgeon has cleared you.

How painful is it?

Chest and abdominal discomfort are expected, especially during coughing and movement. Pain medicine is adjusted so you can breathe deeply and walk.

When will I be able to eat?

You may receive tube feeding first. Liquids and soft foods are introduced after the team is satisfied that the connection is healing.

When will I know the results?

The surgeon can discuss initial findings soon after surgery. Pathology usually takes several days to two weeks.

Will I eat normally again?

Most people eat by mouth again, but usually need smaller, more frequent meals. Dietitian support can help manage weight and symptoms.

Sources

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