PROCEDURE

# Eardrum repair

Eardrum repair is surgery to close a hole in the eardrum.

**PURPOSE**
Close an eardrum hole and protect or improve hearing

**PROCEDURE TYPE**
Therapeutic surgery through the ear canal or small incision

**WHERE IT IS DONE**
Operating theatre

**ANAESTHESIA**
General, or local with sedation for selected adults

**HOW LONG IT TAKES**
About 1 to 3 hours

**PREPARATION**
Fasting and medication review; follow your facility's instructions

**RECOVERY**
Same day or overnight; no driving after anaesthesia

**MAIN RISKS**
Graft failure, infection, dizziness, worse hearing

**RESULTS**
Graft checked within weeks; hearing tested after healing

## Overview

Eardrum repair is surgery to close a hole, called a perforation, in the thin tissue separating the ear canal from the middle ear.

A repair limited to the eardrum is often called a myringoplasty . A tympanoplasty may also repair middle-ear structures, including the tiny hearing bones.

The surgeon covers the hole with a graft made from tissue near the ear, cartilage, or another suitable material. The graft supports new tissue as the eardrum heals.

Repair can help keep water and germs out of the middle ear and may improve hearing, although improvement cannot be guaranteed.

## Why the procedure is performed

Eardrum repair may be offered when a perforation has not closed naturally. The hole may have resulted from an infection, injury, previous surgery, or an ear tube.

Reasons for repair include:

Hearing may not return to normal if the hearing bones, inner ear, or hearing nerve are also damaged. Your surgeon should explain what improvement is realistic.

- Repeated infections or drainage
- Difficulty keeping the ear dry
- Hearing loss linked to the perforation
- Creating a safer, more stable middle ear
- Repair as part of wider middle-ear surgery

## Who should and should not have it

Repair may be suitable when a hole is unlikely to heal naturally or is causing hearing or infection problems. The decision depends on its size and location, the condition of the other ear, and middle-ear ventilation.

Observation may be appropriate for a small or recent perforation, or when the ear is dry, hearing is acceptable, and water precautions are manageable.

Surgery may be delayed if an acute illness makes anaesthesia less safe. An active ear infection may need treatment first, although some persistently draining ears are repaired as part of treatment.

Smoking, poorly controlled medical conditions, or problems with middle-ear ventilation can reduce the chance of successful healing. Extra planning is needed if this is your only hearing ear or previous surgery has changed its anatomy.

## How to prepare

Your treating facility's instructions take priority over this general information.

Follow the instructions about when to stop eating and drinking exactly. Otherwise, the operation may need to be postponed.

Give the team a complete list of your medicines, supplements, allergies, and medical conditions. Ask what to do with medicines that affect bleeding, including anticoagulants and

antiplatelet medicines. Do not stop prescribed medication unless your care team tells you to.

Tell the team if you develop a cold, fever, chest infection, or worsening ear discharge before surgery.

Arrange for a responsible adult to take you home after general anaesthesia or sedation. You may also need someone to stay with you for the first night.

Do not put drops or objects into the ear unless instructed.

## What happens during the procedure

Eardrum repair is usually performed under general anaesthesia. Selected adults may have local anaesthesia with sedation.

Using a microscope or endoscope, the surgeon reaches the eardrum through the ear canal or through a small cut inside, in front of, or behind the ear.

The edges of the hole are prepared, and a graft is placed under or over the remaining eardrum. Dissolvable packing may support it.

The surgeon may inspect and repair damaged hearing bones during the same operation. More extensive disease may require additional surgery. Any incision is closed with stitches, and packing or a dressing may be placed in the ear canal.

## Recovery and what to expect afterward

Mild to moderate pain, pressure, or a blocked feeling is common. Packing can make hearing seem worse until it dissolves or is removed.

You can usually eat and drink once awake and not feeling sick. Rest for the first few days.

Keep the operated ear dry and follow instructions about washing your hair. Do not swim or put anything into the ear until your team says it is safe. Avoid forceful nose blowing, and keep your mouth open when sneezing.

Follow your team's restrictions on exercise, heavy lifting, flying, and contact sports while the graft heals.

Do not drive home after general anaesthesia or sedation. Drive again only when permitted, fully alert, able to turn your head comfortably, and unaffected by dizziness or medicines.

Many people return to desk work within several days to two weeks. Physical work, dizziness, or a larger operation may require more time.

## Risks and possible complications

The graft may not heal completely, or the eardrum may open again. Further treatment or another operation may be needed.

Other complications include:

Serious inner-ear hearing loss and facial nerve injury are uncommon. Facial nerve injury can cause weakness on one side of the face. Anaesthesia also has risks based on your health and the type used.

- Bleeding, infection, or slow wound healing
- Temporary dizziness, nausea, ringing, or altered hearing
- Changed taste or tongue sensation from irritation of a nearby nerve
- Scarring or narrowing of the ear canal
- Persistent drainage
- Hearing that does not improve or becomes worse

## Results and follow up

Follow-up is arranged to inspect the incision, packing, and graft. Packing may dissolve or be removed by the surgical team.

Early healing can often be assessed within a few weeks, but complete healing takes longer. A hearing test is usually done several weeks to a few months after surgery.

Attend appointments even if the ear feels well. If you cannot attend, contact the clinic rather than removing packing or stitches yourself.

## Alternatives

Observation may be suitable because a recent or small perforation can close naturally. The ear may still need to be kept dry, and hearing or infection problems may continue.

Some small holes can be treated with an office-based patch or plug procedure, although this may be less reliable for larger or long-standing perforations.

A hearing aid may improve hearing but does not close the hole or prevent water entering the middle ear. Conventional aids can also be difficult to use in a wet or infected ear.

Water precautions and infection treatment may control symptoms without surgery. More extensive tympanoplasty may be recommended when middle-ear disease or damaged hearing bones also need treatment.

## When to call your healthcare team

For routine questions about packing, activity, hearing, or returning to work, contact the surgical clinic during normal hours.

Contact your healthcare team promptly if you have:

Seek urgent medical assessment for sudden major hearing loss, severe persistent spinning, or new weakness on one side of your face.

Call emergency services for trouble breathing, collapse, chest pain, or another severe reaction after anaesthesia.

- Pain that is worsening rather than improving
- Fever, increasing redness or swelling, or foul-smelling drainage
- Bleeding that soaks through the dressing
- Repeated vomiting or dizziness that prevents normal movement
- An incision that opens
- Packing that falls out, unless told this may happen

## Common questions

Will I be asleep?

Most repairs use general anaesthesia. Some adults can have local anaesthesia with sedation.

Can I drive home?

No. Someone else must take you home after general anaesthesia or sedation. Do not drive again until you meet your facility's restrictions and can drive safely.

How painful is eardrum repair?

Pain is usually manageable and improves over the first few days. Pressure, fullness, popping, and muffled hearing are common while the ear heals.

When will I know whether it worked?

The graft is checked at follow-up visits. Hearing results become clearer after swelling and

packing settle, usually within several weeks to a few months.

Will my hearing improve straight away?

Usually not. Packing and swelling may initially make hearing worse. Improvement is assessed after healing, and normal hearing cannot be guaranteed.

Can I fly after surgery?

Not unless your surgeon approves it. Cabin-pressure changes can affect the healing ear, so ask before booking travel.

## Sources

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