PROCEDURE

Cleft lip and palate repair

Cleft lip and palate repair uses surgery to close openings in the upper lip or roof of the mouth.

PURPOSE
Close the cleft and improve feeding, speech, appearance, and function

PROCEDURE TYPE
Therapeutic surgery

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
About one to three hours for each operation

PREPARATION
Fasting and medication instructions from the treating facility

RECOVERY
Usually overnight; no driving after general anaesthesia

MAIN RISKS
Bleeding, infection, breathing problems, wound separation

RESULTS
Closure is immediate; function is assessed during long-term follow-up

Overview

Cleft lip and palate repair is surgery to close a gap in the upper lip, roof of the mouth, or both. A cleft forms before birth when developing tissues do not fully join.

Repair may involve several operations. Lip and palate repairs are usually performed in infancy or early childhood, with timing based on the child's health, growth, anatomy, and the cleft team's approach.

Surgery is one part of long-term care. A specialist team may also provide feeding support, hearing care, dental and orthodontic treatment, speech therapy, and emotional support.

Why the procedure is performed

Cleft lip repair joins the lip and its muscles. It aims to improve lip function and the shape of the lip and nose.

Cleft palate repair joins the tissues and muscles in the roof of the mouth. It separates the mouth from the nose and helps the palate move during speech and swallowing.

Repair may:

Further surgery may be needed later for speech, the lip or nose, the jaw, or an opening that remains in the palate.

- Make feeding and drinking easier
- Support clearer speech
- Reduce food or liquid passing into the nose
- Improve facial balance
- Support dental and jaw development
- Improve confidence and wellbeing

Who should and should not have it

Most children born with a cleft lip or palate are considered for repair. A multidisciplinary team assesses the likely benefits, limits, timing, and number of operations.

Surgery may be delayed if anaesthesia or surgery would be less safe, including because of:

Do not stop a prescribed blood thinner or other medicine unless the surgical team tells you to.

For complex health needs, the team may recommend modified surgery, later timing, or supportive care based on expected benefit, anaesthetic risk, and family goals.

- A chest infection, fever, or other significant illness
- Breathing or airway concerns
- Poor growth, dehydration, or feeding problems
- An uncontrolled bleeding disorder or significant anaemia
- A heart, lung, or other condition needing stabilisation
- Medicines that increase bleeding risk

How to prepare

Follow the treating facility's fasting, arrival, bathing, and medication instructions exactly. Surgery may be postponed if fasting instructions are not followed.

Tell the team about all medicines, vitamins, supplements, allergies, previous anaesthetic problems, bleeding conditions, loose teeth, and implanted devices.

Contact the team before surgery if the patient develops a cough, cold, fever, vomiting, diarrhoea, breathing difficulty, or a new rash. The anaesthetist will decide whether surgery can proceed.

The team may arrange tests or assessments. For an infant, confirm which milk or clear fluids are allowed and when they must stop. Bring requested feeding equipment and comfort items.

Arrange adult transport and care after discharge. An adult patient must not drive after general anaesthesia and should follow instructions about supervision at home.

What happens during the procedure

General anaesthesia keeps the patient unconscious and pain-free. The anaesthesia team monitors breathing, heart rate, blood pressure, and oxygen throughout.

For lip repair, the surgeon makes planned cuts along the cleft, joins the lip muscles, and shapes and closes the skin with stitches. The nostril and nose may also be adjusted.

For palate repair, the surgeon works through the mouth. Tissues are moved toward the centre, the soft-palate muscles are repositioned and joined, and the lining is closed in layers. An outside facial cut is not usually needed.

Some stitches dissolve; others require removal. Ear ventilation tubes may be inserted during the same anaesthetic if separately discussed and consented to.

Recovery and what to expect afterward

Soreness, especially during swallowing, is expected. Use pain medicines only as directed. Early swelling, bruising, mild blood-stained saliva, and nasal stuffiness may occur.

Eating restarts according to the surgical team's plan. After palate repair, feeding equipment may be restricted or adapted. Avoid hard, sharp, sticky, or crunchy foods for the period specified.

Keep activity quiet and prevent hands, toys, straws, cutlery, or other hard objects from touching the repair. Use protective arm sleeves only if instructed. Follow advice about school,

childcare, sport, and rough play.

The adult taking a child home must be able to drive safely. An adult patient must not drive until the facility's restriction has passed and pain medicine no longer causes impairment.

Return to work, school, or childcare depends on comfort, eating, sleep, the repair, and the surgeon's advice.

Risks and possible complications

Possible risks include:

A fistula that affects speech, eating, or dental care may require another repair.

- Bleeding, infection, or a reaction to anaesthesia
- Swelling that affects breathing
- Wound separation or delayed healing
- A visible or raised lip scar
- Uneven lip or nose shape
- A remaining or new opening in the palate, called a fistula
- Food or fluid leaking through the nose
- Ongoing speech problems
- Effects on upper-jaw growth
- Need for further surgery

Results and follow up

The cleft closes during surgery, but swelling settles over weeks and scars soften over months.

Long-term follow-up is routine. The team checks healing, eating, speech, hearing, teeth, jaw and facial growth, and emotional wellbeing. Speech results are assessed as speech develops. Some children need speech therapy or another operation to improve palate closure during speech.

Later treatment may include dental care, braces, bone grafting in the gum cleft, lip or nasal revision, or jaw surgery.

Alternatives

Choosing no surgery avoids anaesthesia, scars, and surgical complications, but leaves the cleft open. Feeding, speech, dental development, appearance, and wellbeing may remain affected.

A feeding plate or palatal obturator may help feeding or temporarily separate the mouth and nose. It does not join the muscles or permanently close the cleft. Special bottles and feeding support can improve milk flow and growth but do not close the cleft.

Speech therapy helps with speech sounds but cannot correct a palate that cannot physically close against the throat. Surgery or a speech appliance may then be considered.

Presurgical moulding can shape the gums, lip, or nose before repair. It does not replace surgery and requires frequent appointments.

When to call your healthcare team

Contact the surgical team promptly for worsening pain, poor fluid intake, repeated vomiting, fever, increasing redness, unpleasant-smelling drainage, new nasal leakage, or concern that the wound or stitches have opened.

Seek urgent medical care for persistent bleeding, difficulty keeping fluids down, or dehydration signs such as very little urine or unusual sleepiness.

Call emergency services for trouble breathing, blue or grey lips, severe swelling around the mouth or throat, heavy bleeding that does not stop, collapse, or difficulty waking the patient.

Routine questions about feeding, scar care, speech, activity, and appointments can usually wait for normal working hours.

Common questions

Will I or my child be asleep?

Yes. Repair is performed under general anaesthesia with continuous monitoring.

Can we drive home afterward?

The patient must not drive after general anaesthesia. A responsible adult should provide transport. An unsedated caregiver may drive a child home after discharge is approved.

How painful is cleft repair?

Soreness is expected, especially when swallowing. Contact the team if pain worsens or prevents drinking.

When will we know if it worked?

Closure is immediate, but swelling affects the early appearance. Healing is assessed over weeks; speech, hearing, dental, and facial-growth results are assessed over years.

Will there be a scar?

Lip repair leaves a scar between the lip and nose that usually softens and fades. Palate scars are inside the mouth.

Will another operation be needed?

Possibly. Further treatment may address a fistula, speech, the lip or nose, the gum cleft, or jaw growth.

Sources

- American Cleft Palate Craniofacial Association. Parameters of Care for Evaluation and Treatment of Individuals with Cleft Lip/Palate or Other Craniofacial Conditions . 2024
- National Health Service. Cleft lip and palate: treatment
- American Academy of Pediatrics. Lewis CW, Jacob LS, Lehmann CU. The Primary Care Pediatrician and the Care of Children With Cleft Lip and/or Cleft Palate . Pediatrics. 2017;139(5):e20170628
- Centers for Disease Control and Prevention. Cleft Lip/Cleft Palate
- Royal Children's Hospital Melbourne. Cleft lip and palate: discharge care after surgery