PROCEDURE

Breast reconstruction - natural tissue

Natural tissue breast reconstruction rebuilds a breast using skin, fat, and sometimes muscle from another body area.

PURPOSE
Rebuild a breast using tissue from another body area

PROCEDURE TYPE
Therapeutic surgery using an autologous tissue flap

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
3 to 8 hours, sometimes longer for both breasts

PREPARATION
Fasting and medication adjustments following your facility's instructions

RECOVERY
Several hospital days; driving restricted during early recovery

MAIN RISKS
Flap failure, bleeding, infection, blood clots

RESULTS
New breast shape visible immediately; final contour settles over months

Overview

Natural tissue breast reconstruction uses your own skin and fat, and sometimes muscle, to create a breast shape. It is also called autologous or flap reconstruction.

Tissue may come from your abdomen, back, thighs, or buttocks. The best donor site depends on your body, previous operations, health, and goals.

A free flap , such as a DIEP flap, is separated from its original blood supply. A plastic surgeon reconnects its small blood vessels in the chest using microsurgery. A pedicled flap remains attached to some original blood vessels and is moved to the chest. An implant may be added if the flap does not provide enough volume.

Reconstruction may be done during breast cancer surgery or months to years later, on one

breast or both.

Why the procedure is performed

The procedure creates a breast shape after a mastectomy. It may also repair a breast affected by previous surgery, radiation treatment, injury, or a congenital difference.

People may choose it because living tissue can provide a soft, warm breast shape, may work well after radiation, and changes with some weight gain, weight loss, and ageing.

Reconstruction is optional. It does not treat breast cancer, prevent recurrence, or replace cancer follow-up.

Who should and should not have it

You may be offered this procedure if you want reconstruction, have enough healthy donor tissue, and are well enough for a long operation and recovery involving two surgical sites.

Surgery may be delayed or avoided because of:

Some issues are temporary or manageable. Previous abdominal surgery, higher body weight, or radiation does not automatically rule out reconstruction but may change the safest option.

- Active infection
- Uncontrolled diabetes or serious heart or lung disease
- Current nicotine use, which reduces blood flow and healing
- A medicine or condition that creates a high bleeding risk
- A blood clot risk that cannot be safely managed
- Too little suitable donor tissue
- Previous damage to important donor-site blood vessels
- A cancer treatment plan that makes different timing safer

How to prepare

Follow your treating facility's instructions because fasting, medicines, and admission plans vary.

Tell your team about all medicines, vitamins, supplements, allergies, and previous reactions to

anaesthesia. Do not stop a blood thinner or other prescribed medicine unless the clinician responsible for your care tells you how to do so safely.

You may have blood tests, photographs, and imaging of donor-site blood vessels. Ask whether nipple reconstruction, tattooing, or revision surgery would require separate procedures.

Nicotine interferes with flap blood flow. Your team may require you to stop smoking, vaping, or using other nicotine products before and after surgery.

Follow fasting instructions exactly. Arrange transport home and help with meals, washing, household tasks, children, or pets. Loose, front-opening clothes may be easier during early recovery.

What happens during the procedure

You receive a general anaesthetic and are unconscious during surgery.

For immediate reconstruction, the breast surgeon performs the mastectomy first. For delayed reconstruction, the plastic surgeon reopens or revises the chest scar.

The surgeon removes a planned section of skin and fat from the donor area. Some flaps preserve the underlying muscle; others include part of it. For a free flap, the artery and vein are reconnected to chest vessels using a microscope. A pedicled flap is moved while its blood supply remains attached. The tissue is then shaped into a breast mound.

The wounds are closed, and temporary drains may remove blood and fluid. A monitor on or near the flap may help staff check blood flow.

Recovery and what to expect afterward

Pain: Soreness, tightness, swelling, and bruising are expected at the chest and donor site. Abdominal flaps may make standing upright uncomfortable at first. Pain relief is provided.

Eating: You usually start with fluids and resume food as nausea settles and bowel function returns. Anaesthesia, reduced movement, and opioid medicines can cause constipation.

Activity: Staff help you walk soon after surgery. Early movement supports circulation, but lifting, strenuous exercise, and stretching the wounds are restricted. Follow instructions for sleeping position, drains, dressings, showering, bras, and support garments.

Driving: Do not drive while taking sedating pain medicine or if pain or restricted movement prevents safe steering or an emergency stop. Follow your team's specific restrictions.

Work: Returning often takes several weeks. Physical work, reconstruction of both breasts, and

abdominal flaps may require longer.

Hospital monitoring commonly lasts several days. Swelling improves over weeks, while scars and breast shape change for months.

Risks and possible complications

Possible complications include:

Further surgery may be needed to treat complications or improve shape. The reconstructed breast usually has reduced sensation, although some feeling may return.

- Bleeding, infection, wound opening, or delayed healing
- Reduced blood flow to part or all of the flap
- Emergency surgery to restore blood flow
- Partial or complete flap loss
- Blood or fluid collecting beneath the skin
- Firm areas of damaged fat, called fat necrosis
- Blood clots in a leg or lung
- Scarring, numbness, chronic discomfort, or asymmetry
- Weakness, bulging, or hernia at an abdominal donor site
- Shoulder or back weakness after some muscle-containing flaps
- Anaesthetic complications

Results and follow up

The new breast shape is visible immediately, but swelling and tightness affect its early appearance. The flap and scars settle over several months.

Follow-up appointments check healing, drains, blood flow, movement, and the donor site. Drains are removed when their output is low enough under your team's protocol.

Later procedures may adjust shape or symmetry, reconstruct a nipple, add medical tattooing, or use fat grafting to fill contour differences.

Continue the follow-up plan from your cancer team. Imaging depends on remaining breast tissue, cancer history, symptoms, and examination findings.

Alternatives

Alternatives include:

Consider appearance, recovery, donor-site effects, implant concerns, cancer treatment, and how you feel about further surgery.

- No reconstruction: Avoids reconstructive surgery and gives the shortest recovery but leaves a flat or uneven chest
- External breast prosthesis: Avoids more surgery but must be worn inside clothing or a special bra
- Implant reconstruction: Usually has a shorter operation and no distant donor scar, but the implant can harden, rupture, become infected, or require replacement
- Oncoplastic breast surgery: Reshapes remaining tissue but is only possible when mastectomy is not required
- Fat grafting: Uses liposuction and small injections, but often requires several sessions and may not rebuild a whole breast
- Delayed reconstruction: Allows treatment to finish or more decision time but requires a separate operation

When to call your healthcare team

Contact your surgical team if pain is not improving, a drain stops working, swelling gradually increases, or you have questions about dressings, activity, or medicines.

Seek urgent advice for:

Call emergency services for trouble breathing, chest pain, fainting, confusion, or severe uncontrolled bleeding. Do not wait for a routine appointment.

- Increasing redness, warmth, wound drainage, or fever
- A sudden increase in pain or swelling
- New wound opening
- A flap that becomes pale, blue, dark, cold, or unusually firm
- One-sided calf pain or leg swelling

Common questions

Will I be asleep?

Yes. The procedure is performed under general anaesthesia.

Can I drive home?

No. You will initially stay in hospital and need someone to take you home. Do not drive until you can safely control the vehicle and no longer take sedating pain medicine.

How painful is it?

Pain and tightness are expected at both surgical sites. Medicine, positioning, and gradual movement usually help. Tell your team if pain suddenly worsens or is not controlled.

When will I know what it looks like?

You will see the basic shape soon after surgery, but swelling, scars, and tissue position change for months.

Will the reconstructed breast feel normal?

It usually feels soft and warm, but sensation is often reduced. Some feeling may return, although full sensation is not guaranteed.

Will I need another operation?

Possibly. Later procedures may include nipple reconstruction, tattooing, fat grafting, scar revision, or surgery for symmetry or complications.

Sources

- National Cancer Institute. Breast Reconstruction After Mastectomy
- American Cancer Society. Breast Reconstruction Using Your Own Tissue: Flap Procedures
- American Society of Plastic Surgeons. Breast Reconstruction with Flap Surgery
- NHS. Breast reconstruction
- Cancer Research UK. Breast reconstruction using body tissue