

Breast reconstruction with deep inferior epigastric perforator- DIEP flap

This leaflet explains what's involved in breast reconstruction using a DIEP flap, including the benefits, risks, and alternatives. It also outlines what to expect before, during, and after your hospital stay. The Procedure is also referred to as "free tissue transfer".

If you have any further questions, please speak to your doctor or nurse.

What is a DIEP flap?

A DIEP flap is a common method of breast reconstruction using your own tissue. It is usually offered after a mastectomy (surgery to remove the breast due to cancer or risk of cancer).

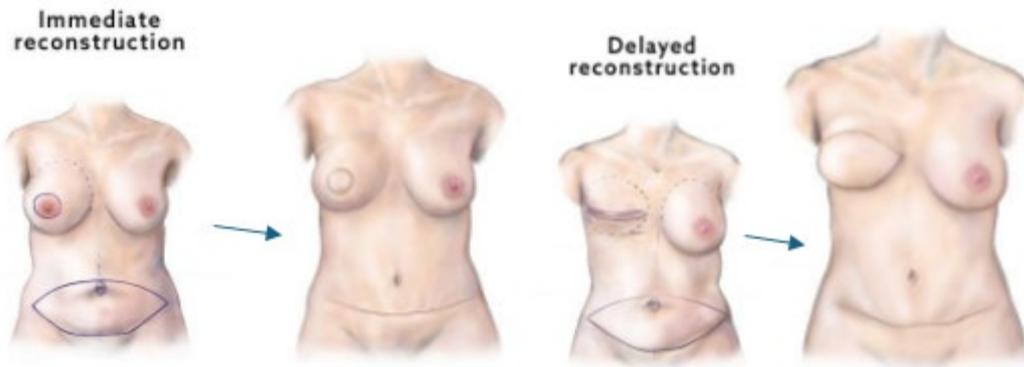
This operation uses skin and fat from your lower abdomen to rebuild the breast. The abdominal muscle is not usually removed. However, the surgeon will need to make a small cut in the muscle to access the blood vessels (an artery and vein) that supply the flap.

The tissue is moved to the breast area and connected to blood vessels on the chest or in your armpit. The surgery uses advanced microsurgical techniques to connect very small blood vessels. This requires a microscope and experienced surgeons.

Like other type of breast reconstruction, a DIEP flap can be performed:

- Immediately- at the same time as mastectomy.
- Delayed- sometime after you have healed from mastectomy.

The illustrations are provided as a general representation of what the breast reconstruction looks like. However, every reconstruction is individualised therefore scarring may differ depending on the individual. Your consultant will discuss this with you.



Images from <https://restore-bcr.co.uk>

Why should I have a DIEP flap?

Breast reconstruction is a personal choice, but many people choose it to restore the shape of the breast after mastectomy.

There are many good reasons to use your own tissue to reconstruct your breast as opposed to implant reconstruction. These are:

Feels more natural - your new breast is made from your own body, so it looks and feels more natural. It changes with you over time, just like the rest of your body. However, it will never feel the same as your original breast.

Long-lasting result - once it heals, it usually lasts for life without the need for replacements. Unlike reconstruction with implants, you do not need to worry about an implant bursting (rupture), needing replacement or becoming tight and uncomfortable overtime (capsular contraction).

Changes with your body – if you loss or gain weight in future, your breast will increase or decrease in size as well.

Comfortable and soft - your own tissue feels softer and more comfortable than an implant.

Peace of mind- many women feel re-assured knowing their breast is rebuilt with their own tissue, not with something artificial.

It is optional and will not affect the success of your cancer treatment. The priority is always to treat the cancer.

What are the risks?

This is a complex operation, usually lasting between 4- 6 hours for one breast and 6- 8 hours for both breasts. In some cases, it can take longer. Like any other surgeries, it carries some risks:

Risks that can occur after any operation:

- **Bleeding/haematoma** – Bleeding can occur. Nurses will monitor for signs. Occasionally, further operation may be needed to explore where the bleeding is.
- **Pain** – Some pain is expected. Please let the nurses know so they can give you the right pain relief.
- **Scarring** – Scars will be on the breast, across your lower tummy (hip to hip), and around the new belly button. They may appear red and raised at first and can take up to 12 months to settle.
- **Wound breakdown** – Small parts of the wound may open and leak fluid. Dressings can help support healing.
- **Infection** – Signs include redness, swelling, pus, or a high temperature. Antibiotics will be given if needed.

Risk of any major surgeries:

- **Blood clots** – A clot in the leg deep vein thrombosis (DVT) or lung pulmonary embolism (PE) is rare. You'll be given compression stockings, calf pumps, and injections to reduce this risk.
- **Reaction to anaesthesia**- rare, but the anaesthetist monitors you closely to keep you safe.
- **Longer recovery**- healing and getting back to normal can take from 6 - 12 weeks.

Risks specific to DIEP surgery:

- **Flap failure** – In rare cases (1–2%), the blood supply to the flap may not work properly. This usually happens in the first 24–48 hours. If this occurs, another operation is needed. The flap can often be saved when the problem is identified and treated quickly. If this is not possible then the flap will not survive and may have to be removed.
- **Partial flap failure**- It is more common that only part of the flap does not survive. Usually this can be managed with dressings but may involve another operation.
- **Asymmetry** – The reconstructed breast will not exactly match the other. If needed, further surgery can help improve symmetry, but complete symmetry is not achievable.
- **Hernia or abdominal weakness** – A bulge or weakness may develop in the tummy area, usually a year or more after surgery. Hernia after surgery means that a weak spot or gap has developed in the muscle or tissue wall where you had your operation.
- **Tight tummy**- your tummy will feel tight or stretched for several months after surgery. This usually improves with time and gentle exercises.

- **Changes in sensation-** numbness or changes in sensation in the breast or tummy area. This numbness usually fades in several weeks. Occasionally this may last longer or may be permanent.
- **Risk to the chest wall-** when preparing the blood vessels behind the ribs, there is a very small risk of damaging the lining of the lung. This is very rare but may require extra treatment.
- **Extra skin lumps (dog ear)** – small folds of the skin can appear at the end of the tummy scar. These are harmless and can often be corrected with a small procedure later if the surgeon feels an operation can improve this.
- **Some minor complications can occur including:**
 - a. **Seroma** – A collection of fluid can build up in the breast or tummy area. This may need to be drained with a needle or left to settle on its own. Compression garments can help reduce the formation of this.
 - b. **Fat necrosis** – Some fat may not survive, causing a firm or lumpy area under the skin, or fluid leaking through the wound. It usually goes away by itself.
 - c. **Delayed wound healing** - Some areas may take longer to heal but are expected to heal with dressings and time.
 - d. **Problems with the new belly button (umbilicus)** – because the belly button needs to be repositioned, occasionally a part of the skin at the belly button may die and there can be issues with wound healing. If this occurs, dressings will be used to assist to heal.

Are there any alternatives?

Yes. Other options include:

- Implant-based reconstruction (using implants or tissue expanders).
- No reconstruction – some people choose to wear a prosthesis instead.

Your surgeon will talk through the options suitable for you.

How can I prepare for a DIEP flap?

- Consultation – You will meet with the plastic surgical team, who are highly skilled in DIEP flap reconstruction. They will discuss the benefits, risks, and what to expect before, during, and after surgery. This is your chance to ask questions. If you have more questions later, contact the plastic surgery clinical nurse specialist on 0208 725 0473 (Mon–Fri, 9:00–16:00).
- If you smoke, you will need to stop smoking completely before surgery. Ideally it would be 6-8 weeks for patients having delayed reconstruction. Smoking increases the risk of complications such as tissue loss (flap failure) and wound breakdown particularly in the abdomen.
- Healthy eating – A balanced diet helps healing.
- Medications- tell your surgeon about all medications, vitamins, or supplements you take. Some medications/supplements may need to be stopped or adjusted before surgery, especially blood thinning drugs.
- What to bring to hospital:
 - A post-surgery bra (front-opening, one size larger, non-underwired).

- High-waisted compression pants.
- Slippers, dressing gown, toiletries, and loose, front button-up pyjamas.
- Arrange support – You may need help with cooking, shopping, cleaning, childcare, or caring for others for 2-4 weeks

Asking for your consent

It is important that you feel involved in decisions about your care. Before surgery, you will be asked to sign a consent form. This confirms that you understand the procedure and agree to go ahead. You can withdraw your consent at any time. If you want more information, please ask your team for a copy of the hospital's consent policy.

What happens on the day of surgery?

You will come to the surgical admissions lounge, where nurses will check your observations and complete the paperwork. You'll also meet the anaesthetist and the surgical team, who will go over the consent form and mark your skin.

You will have a general anaesthetic and will be asleep throughout the procedure.

Will I feel any pain?

Some pain is expected. You will receive regular pain relief. If needed, the hospital's pain team can help adjust your medications to keep you comfortable.

What happens after the operation?

After surgery, you will go to a high-dependency area or post anaesthesia care unit (PACU) for close monitoring.

You'll have:

- A drip- small tube attached to a needle inserted into a vein in your hand or arm so that medications and fluids can be given as necessary. A patient - controlled analgesia (PCA) pump is attached to the drip. This has a button you can press yourself to get extra pain relief when you need it.
- Drain- one or more small tubes that allow excess fluid and blood to drain away from the operation sites into a plastic bottle.
- A urinary catheter- a rubber tube going into your bladder automatically draining your urine. This allows careful monitoring of the level of fluid in your body.
- A heated blanket - to support flap blood supply.

Your vital signs and flap will be checked every 30 minutes to ensure good circulation.

You may feel tired and drowsy. You'll be lying with your knees slightly bent to reduce stretch on your tummy, as your tummy may feel tight at first. We aim that you will start to mobilise on the first day after your surgery, usually first thing in the morning.

This include sitting up in a chair and standing with help. Then you will move more each day and will be walking and using stairs before going home.

Going Home

Most people go home 4–7 days after surgery but this varies depending on the individual and progress made. It is normal to feel tired after the operation. We recommend having someone at home to help with basic tasks for at least a week.

Feeling emotional- seeing your new breast can bring a mix of emotions. Talk to family, friends, or a support group if you feel anxious or overwhelmed. Links to support groups are included at the end of this information sheet.

Rest – your body needs energy to heal, give yourself time to recover.

Do not:

- Lift heavy objects (e.g. children, heavier than a kettle, vacuum cleaners) for 4 weeks.
- Drive for 6 weeks but this can be longer if you are still having dressings. You are advised to notify your car insurer that you have had surgery to check you are still covered.
- Return to work until at least 6 weeks, depending on your job

Gentle movement is encouraged. Short walks can help circulation and reduce the risk of blood clots. Avoid sports and strenuous exercises for at least 3 months.

You can start gentle core- strengthening activities, such as Pilates classes after 3 months. This may strengthen your tummy muscles and improve posture. Always check with your plastic surgical team before starting new exercises.

When to seek help

If you notice signs of infection (redness, swelling, pus, fever), contact your GP or the plastic surgery dressing clinic (PDC) straight away. If your GP is unavailable, ring 111 or go to the urgent care centre at St George's Hospital. Early treatment is important.

Will I have a follow-up appointment?

You will be seen at the PDC at St George's Hospital within 7-10 days post discharge. If you haven't received an appointment within 7 days after discharge, contact the ward you were discharged from.

You will also have a follow-up appointment with your plastic surgeon approximately 6-8 weeks after operation.

Useful sources of information

<https://www.cancerresearchuk.org/about-cancer/breast-cancer/treatment/surgery/types-surgery>

<https://breastcancernow.org/information-support/support-you/someone-me>
<https://restore-bcr.co.uk> www.qvh.nhs.uk

Contact us

If you have any questions or concerns, please contact the Plastic dressing clinic nurse on 0208 725 0473 or email plasticdressing.clinic@stgeorges.nhs.uk

Plastic surgery clinical nurse specialist can be contacted on 02086721255 bleep7470 (Monday – Friday) 09:00- 16:00

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.

