The Leeds Teaching Hospitals NHS Trust

TUG (Transverse Upper Gracilis) Flap for breast reconstruction

Information for patients

Aim of this leaflet

This leaflet is for women who have a diagnosis of breast cancer, or have been identified as having a high genetic risk of developing breast cancer, and have been advised to undergo surgery to remove breast tissue (mastectomy or partial mastectomy). It aims to provide information about breast reconstruction using a technique called a TUG (Transverse Upper Gracilis) flap. The information has been issued by the Leeds Teaching Hospitals NHS Trust.

What is a TUG flap?

The TUG flap procedure is a free- flap procedure. It uses your own tissue from the upper inner thigh area to reconstruct your breast. The skin, fat, blood vessels and muscle (gracilis) are completely freed from their original location and attached to blood vessels in the chest area using microsurgery.

For your thigh tissue to survive on your chest it will require blood to flow in to it through blood vessels called arteries and out of it through veins. A microscope is used to stitch the thigh tissue onto blood vessels that run just under your ribs or in your armpit.

This procedure may involve a small piece rib or cartilage being removed to enable access to these blood vessels.

This procedure results in a tightening of the upper thigh area with a scar. This scar sits below your groin crease at the front and runs round to your buttock crease at the back. It may be seen when wearing knickers or swimwear but can be concealed under shorts.

Who is this useful for?

This option is used for ladies who want breast reconstruction using their own tissue.

It may be a better option than using tissue from the abdomen (DIEP or TRAM flap) in certain people.

The TUG flap is often a good option to consider if you have:

- A very slim abdomen
- Smaller (A-C cup) breasts
- Been told you are not suitable for a DIEP or TRAM flap
- Significant scars on your abdomen already
- Plans for pregnancy in the near future
- A desire to avoid a scar on your abdomen
- Thighs which touch when your legs are together

How long is the surgery?

This surgery is performed under general anaesthetic. On average, the operation to reconstruct one breast takes 5-6 hours.

How long will I stay in hospital?

Most patients remain in hospital for 3-4 nights after the surgery. Some go home after two nights, but some will need to stay longer.

Is the surgery always successful?

In carefully selected patients, this is considered a safe operation, which gives reliable results. However there are risks to consider:

Flap failure

- There is a small (<4%) chance that the flap, or part of the flap, may die. If the blood flow through a flap fails, the flap will fail. This is rare and when it does happen, it usually occurs within the first 48 hours.
- Usually a problem with the blood flow will be detected before flap failure occurs. A blood flow problem is seen in about 1 in 25 flaps. If detected early, your surgeon will usually recommend an emergency return trip to theatre to try to save the flap. More often than not, this is successful.
- If a flap fails, it must be removed in theatre, leaving you without a reconstruction but with new scars. This will usually feel upsetting. You will need time to recover physically and emotionally and then to discuss your options with your surgeon.

Are there risks with this surgery?

All surgeries have risks involved.

Common complications

(more than 1 in 10 women suffer these)**:**

- **Infection** About half of these can be treated with antibiotics alone. The remaining people need antibiotics and a procedure to washout the infection.
- **Haematoma** A collection of blood under the skin in the breast or thigh area. This usually required a return trip to the operating theatre.
- **Aysymmetry** Your reconstruction may not exactly match the size and shape of your other breast, whether that is an unoperated breast or a reconstruction. Your surgeon will discuss whether any further procedures may improve this.
- **Contour irregularity** Your reconstruction may have some irregularities in it's shape (lumps or flat areas). If a piece of rib was removed you may notice a small hollow area. Your surgeon can discuss how these may be improved or reduced.
- **Seroma** A collection of fluid around the reconstruction or in the thigh where tissue was removed. In most cases this is drained at the outpatients clinic.
- **Numbness** near the scar on the thigh is normal. The breast reconstruction will also usually feel numb. Sometimes a numb patch is noted on the back of the thigh, which extends towards the knee.
- **Discomfort** Some discomfort in the days and weeks after the surgery is normal. This can be managed with pain relief. For a small number of patients, some discomfort will continue for years.

Less common complications

(1 in 10 to 1 in 20 women suffer these):

- **Wound breakdown and/or slow to heal wounds** This is usually managed by having dressings applied to the wound, allowing it to slowly heal.
- **Scar pain**
- **Fat necrosis** This is rare but is where some fat cells die. In itself it is rarely serious but it can leave you with a lump in your reconstructed breast. It is important to discuss with your surgeon if you ever notice new lumps in the breast.
- **Lymphoedema** Swelling of the leg which can be permanent.
- **Complications linked to a long surgery** Difficulty breathing (atelectasis) or chest infection, joint pain.

Rare complications linked to a long surgery

(fewer than 1 in 100 women suffer these):

- **Deep Vein Thrombosis (DVT)** A blood clot, which forms inside a blood vessel, usually in your legs. Because it can move to your lungs it is serious.
- **Pulmonary Embolism (PE)** A blood clot, which forms inside a blood vessel and passes to your lungs. It is potentially life threatening.
- **Pressure sores/ Pressure related injuries** These occur when you remain still for a long period during the anaesthetic or can occur from equipment used during the procedure.

Your surgeon and nurses will be able to tell you the many things we do to reduce these risks.

Avoiding DVT/ PE

The risk of blood clots forming in your legs or lungs will persist for several weeks after surgery.

Please do not rest in bed all day. This will increase the risk of blood clots in your legs or lungs (DVT/PE). Please wear the compression stockings provided 23 hours a day for three weeks.

You will be given blood-thinning injections to use at home, please complete the full course as prescribed.

The Leeds Teaching Hospitals have produced a separate leaflet titled **'Preventing blood clots' (LN004075)**. Please ask a member of staff if you would like a copy or follow the link below:

Please scan or click the QR code or visit:

www.leedsth.nhs.uk/patients/resources/preventing-blood-clots-deep-vein-thrombosis-and-pulmonary-embolism/

Bras and shorts

Immediately after surgery you will need to wear a supportive bra. You will be advised to continue wearing this 23 hours a day for six weeks. We can provide one bra, but you may wish to purchase more.

Choose a bra without wires or padding with full coverage. Hooks and eyes allow more adjustment than zips. Front-opening surgical or nursing bras make checking your reconstruction easier in the early days.

You will likely feel most comfortable wearing supportive (shape-wear) shorts. If you choose to purchase these look for ones that extend from mid-thigh to your true waist, that are comfortable to spend 23 hours a day in and feel 'snug' on your upper thigh.

Please talk to your breast care nurse or surgeon about the underwear you require. NHS bras can be provided at the St. James's University Hospital breast clinic. Additional bras can be purchased from the breast clinic at St. James's University Hospital (or Ward J23), or purchased from most underwear shops. **Please bring your bra and shorts with you on the morning of surgery**.

After surgery

After your discharge from hospital (usually 3-5 days after surgery) you will be asked to take life very gently for a couple of weeks. For two weeks after surgery you will be asked to spend as little time sitting as possible. In this time you will be advised to either lie down or stand up and walk gently around. You should avoid housework.

Please do not stay in bed all day.

Clinic appointments

You will receive an appointment to see our Dressing Clinic nurses approximately 1-2 weeks after you leave hospital.

Your first post-surgery appointment with your surgeon is usually 3-8 weeks after surgery.

Return to exercise

You may start physiotherapy exercises immediately after surgery.

After six weeks it is generally safe to lift heavy objects or shopping bags.

You can start swimming after six weeks, providing all your wounds healed within the first month. Avoid breaststroke legs for eight weeks.

Avoid aerobic sports or heavy gardening for eight weeks.

After this type of reconstruction, we advise keeping your knees together for six weeks.

Return to work

This will depend on what work you do. Most women need 3-8 weeks off work.

Return to driving

We do not advise driving in the first 4-5 weeks after surgery. Most women can start driving by six weeks.

Return to sexual intercourse

The position of the scar means that we advise not having intercourse for at least six weeks. Take care to keep your knees together in all activities for the first six weeks.

Caring for your scars

Your wounds will usually be dressed with steristrips or paper-tape. Applying tape to the scars, for 8-12 weeks after surgery, may help the scars to mature sooner. Tapes can be replaced when loose or dirty, or weekly. You may find that tapes do not stick or irritate you. In this case try scar massage instead. Using an unscented moisturiser, massage your scars 3-4 times a day, for 5 to 10 minutes. You can start massaging the scars after the wounds are healed (usually two weeks). The pressure should be firm enough to blanch the scar. Ask your breast care nurse for advice if needed. Scars take 18-24 months to mature.

Will I need any further surgeries?

The TUG flap surgery creates the shape and volume of the new breast. Every effort is made to leave you with symmetry when wearing clothes. Many patients only ever undergo this one surgery to reconstruct their breast.

Some differences between two breasts is normal. If this is a concern for you, further surgeries may be offered to improve symmetry. In total, about three in every four patients choose to undergo at least one subsequent surgery to improve symmetry or appearance of their reconstruction.

When will my new nipple be made?

Not all women want to have a nipple reconstruction. For those that do, the nipple can sometimes be made during the first surgery. This is possible for about one in four women.

If this is not possible, you may choose to have a nipple reconstruction at a later date. We recommend waiting at least three months after the initial surgery, and often longer.

Shared experiences - What other patients say

How will it feel to have a breast reconstruction using thigh tissue?

In 2019 a research study asked 76 women who had undergone TUG flap breast reconstruction at least 18 months earlier about their experience.

A detailed survey was used to collect this information called the BREAST-Q.

Using the information from this study we can answer some frequently asked questions:

Are women who underwent TUG flap reconstruction usually satisfied with the outcome?

TUG flap breast reconstruction usually results in very high satisfaction scores. Patients who had undergone TUG flap reconstruction achieved 81% satisfaction with their breasts, this is similar to those undergoing reconstruction with abdominal tissue. In similar studies looking at implant based reconstruction, this score was 69%[1] and for those who did not have any reconstruction after their mastectomy, this score was 49%[2].

References:

1. Santosa et al. Long-term Patient-Reported Outcomes in Postmastectomy Breast Reconstruction. 2018.
2. Ng et al. Breast reconstruction post mastectomy. Ann Plas Surg. 2016.

How will my thigh look after the surgery?

Your thigh will have a long scar on the upper part of it and will be slimmer at the top.

Most peoples' scars can be hidden by shorts, even very short ones! Part of the scar will often be visible when wearing knickers.

96% of patients are satisfied with their appearance in clothes. A small number of women (7%) report limitations in their choice of underwear.

Will I notice any other changes to the function/ strength of my thigh?

The majority of women do not notice any limitation in function.

Difficulty moving around

The majority of women (77%) have no difficulty moving around. However, 1 in 50 women notice difficulty moving around even years after surgery.

Difficulty doing activities

The majority of women (74%) have no difficulty doing activities. Just over 1 in 10 women (11%) notice difficulty a little of the time. 1 in 50 women notice difficulty all the time.

Is it common to notice discomfort in the thigh after surgery?

Discomfort immediately after surgery is normal. This can be managed with pain relief, avoiding sitting in a chair and avoiding pressure on the wound.

Once some time has passed 94% of patients report no discomfort or only occasional discomfort.

Can I sit down after surgery?

For two weeks after surgery you will be asked to spend as little time sitting as possible. In this time you will be advised to either lie down or stand up.

After several months, the majority (88%) of women notice no problem sitting for a long period (i.e. working at a desk). However, 1 in 50 women notice that prolonged sitting is always difficult for them.

Will my thigh feel as it did before surgery when touched?

The most common undesirable change on the thigh after surgery is numbness near the scar. This is very common and occurs in almost all patients to some extent. For some patients this may be unpleasant and may involve the back of the thigh.

Changes to the genital area

This surgery leaves a scar on your inner upper thigh. Your surgeon will carefully position this so that it minimises tightness near your genitals, which can lead to discomfort.

1 in 50 patients reported undesirable changes to their genitals.

More information

If this information leaves you with unanswered questions please talk to your surgeon or breast care nurse. You can contact them by calling their secretary on the telephone numbers below.

Plastic Surgeons secretaries **0113 392 3102**

Breast/Oncoplastic Surgeons secretaries **0113 206 8725**
..... **0113 206 8772**

Leeds Breast Care Nurses **0113 206 8623**
(based at St. James's University Hospital)

Family History genetic practitioners **0113 206 8786**
(for patients with BRCA/Genetic risk)

Dressing Clinic, Leeds General Infirmary **0113 392 3628**
(for wound healing concerns) **0113 392 3572**

Email: leedsth.handsandplasticslth@nhs.net

Space to make notes to discuss with your surgeon:

What did you think of your care?

Visit: www.leedsth.nhs.uk/patients/support/feedback-complaints/friends-family-test/

Scan or click the QR code - Your views matter

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