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Lymph Node Transfers combined with DIEP flap

What is a Lymph Node Transfer?

Lymph node transfer is a relatively new procedure which is proving to be very successful in the management of lymphoedema as a result of surgical removal of lymph nodes or trauma. It was originally described by French surgeon Dr Becker and has shown to be of great benefit to patients plagued by lymphoedema. To my knowledge, I am one of the few surgeons in Europe offering this technique and have had very promising results with several years follow up.

The procedure involves harvesting several superficial lymph nodes from the groin area. In patients requiring breast reconstruction, the lymph nodes are taken attached to the DIEP flap (see DIEP breast reconstruction). In those patients not requiring breast reconstruction or who have lower limb lymphoedema, it can be performed as an isolated procedure in its own right. The superficial lymph nodes are not responsible for draining the leg and therefore their removal does not risk lymphoedema of the leg in anyway. To date I have performed DIEP breast reconstruction and lymph node transfer in 30 patients and they have all had improvement of the lymohoedema with minimal donor site morbidity. The lymphoedema begins to improve rapidly and most patients will notice a reduction in the size of their affected limb before discharge from the hospital. The lymph nodes have been shown to release cytokines (cell signalling chemicals) that encourage old lymphatic pathways to open up and new networks to develop. Most patients notice reduced discomfort and heaviness in their affected limb which starts to improve immediately. Those suffering from recurrent cellulituis also notice a dramatic reduction in the number of episodes

How do I prepare for surgery?

If you are planning weight loss, you are best waiting until you have reached your target weight before you book surgery. This will reduce the possibility of complications. Smokers should ideally give up six weeks before your operation. The longer you give up beforehand, the better. Smoking reduces the amount of oxygen in the blood and can significantly increase the risk of healing problems after your operation.

Following your consultation, if you decide to proceed with an operation, a range of dates will be offered to you. You may be invited to attend the hospital for a pre-operative assessment with a nurse and to have a scan of the lymph nodes and supplying vessels in your groin (CT angiogram). This provides a road map to follow so that the flap can be accurately planned before surgery.

Depending on your age and general health, routine blood tests and a heart tracing (ECG) may be taken. You will be given the opportunity to ask any questions you may have or raise any concerns.

You will be admitted to the hospital on the day of your operation. If you are having a general anaesthetic, you will be asked not to eat anything six hours before surgery**.** Black tea/coffee or non-fizzy drinks (nothing containing milk) can be taken up to two hours before surgery. Chewing gum should also be avoided six hours before your operation.

It is important to inform your surgeon, anaesthetist and nurse of any medicines (self or GP prescribed) or recreational drugs you take. Medicines containing aspirin should be avoided for two weeks before the operation since they increase the risk of bleeding during surgery. If there are any other medications that may affect surgery then this will be discussed with you at your first appointment.

What happens after the operation?

Once you have recovered from the anaesthetic, you will be encouraged to sit up in bed. Pillows may be placed under your knees to support you in a more comfortable position

You may have an oxygen mask on your face until the anaesthetic wears off but some patients will have oxygen for up to 24 hours. You may feel drowsy following surgery. Expect to wake up and doze off for the remainder of the day. Staff will regularly check the blood supply of your flap.

A firm, supportive dressing or a corset will be in place around your tummy. This should stay in place for the first four to six weeks, but can be removed for bathing. It should help to reduce any swelling and generally make you feel more comfortable.
Two tubes (called drains) will be placed either side of your wound to drain off any excess blood or body fluid. There will also be one tube under your reconstruction and possibly one in your armpit. These are usually removed before you go home.

You might also have a catheter in place after surgery to drain urine from your bladder. This means that you will not have to get up to go to the toilet. This would be removed the next day.

Special stockings and boots will be applied to your legs to help prevent any blood clots forming. The boots will be removed once you are up and walking about. However, you are advised to wear the stockings for up to six weeks.

Your tummy will feel tight and fairly sore for the first few days. Naturally, you will be given pain relieving medicines to make you feel more comfortable.

Before you leave the hospital, you will be given a follow up appointment. You may have dissolvable stitches. Any permanent stitches will be removed 7 to 10 days after surgery at the same time as your dressings are removed.

What are the risks and side effects of surgery?

Complications are infrequent and usually minor. However, no surgery is without risk and it is important that you are aware of possible complications.

Rarely a **haematoma** (collection of blood in the wound) can occur. This is most likely to occur within 24 hours of surgery. Large haematomas may need to be drained in the operating theatre, under a general anaesthetic.

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Everybody heals differently, and this is not always predictable. **Poor or delayed healing** occasionally occurs. These healing difficulties can range from minor problems, such as small areas of wound separation, to major issues, such as skin loss. Although very rare, this situation may require a skin graft to close the wound, meaning more surgery. People who have diabetes, smoke, are obese or elderly are at an increased risk of delayed healing
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There is **always permanent scarring** where the incisions are made. Although these usually fade and soften up to a year after surgery, scars can occasionally thicken and stretch. Darker skinned people have more of a chance of forming thick scars (hypertrophic or keloid scars). The scars are designed so they lie under the average bra or bikini top

Breast asymmetry/shape irregularities can occur following this operation. In some cases, further surgery is needed to correct this.

It is not always possible to match the flap exactly to the other breast, particularly if the normal breast is droopy or excessively large. In these cases it would be best to have a breast uplift (**mastopexy**) or reduction in addition to the reconstruction.

Sometimes, areas of fat within the reconstruction form hard lumps called **fat necrosis**. Usually, no specific treatment is required and the problem settles down over about 12 months.

Straw coloured fluid can collect in the abdomen donor site (**seroma**). This is normal and will gradually reabsorb unnoticed. However in some patients in can make the back feel tight and will need simple aspiration with a needle.

Infection may occur but again this is rare. Infections can usually be treated successfully with antibiotics.

The DIEP flap is very reliable but when tissue is moved from one area to another, there is always a chance that its blood supply is inadequate and the flap could **fail**, necessitating its removal.

There are general risks associated with all operations. Very occasionally a blood clot can form in the leg (**deep vein thrombosis or DVT)** which would require medical treatment. Part of these clots can also break off and move up to the lungs, causing acute shortness of breath and pain in the chest. This is known as a **pulmonary embolus (P.E).** Developing a **chest infection** is uncommon but more likely to happen to people who smoke.

All the risks will be discussed in detail at your consultation. However, if you have further questions or concerns, do not hesitate to discuss these with your surgeon. Decisions about cosmetic surgery should never be rushed.

What is the estimated time for recovery, absence from work and return to usual activities?

Recovery times vary from one person to another so use the times given below as a guide only. If you have any concerns during this period, do contact the hospital team for advice.
Two to three days after your operation, it is important for you to get out of bed and walk every two hours during the day and early evening. Staying in bed too long increases your chances of developing clots in the legs. Gradually increase your activity over the next few days. It will be about 3 months before you feel back to normal again. You should plan on at least 4-6 weeks off work, although this may take longer .
Avoid sunbathing topless for up to a year after the operation and certainly for the first few months. The scars are more sensitive to sunlight and burn more easily**.**

DIEP Breast reconstruction and Lymph Node transfer post surgery timeline

Day 1 to 7	Week 2	4 to 6 weeks	6 to 9 months
You may have some discomfort for at least the first two weeks. Painkillers will help with this but avoid taking aspirin Keep walking around to avoid post operative	Might pull and hurt a little when you move around. Any non dissolvable stitches would be removed Gradually begin to increase your	Avoid lifting or pushing anything heavy for at least four weeks No need to wear a bra during the night but keep one on during the day	Scars will begin to soften and fade. Can start to judge the result.

complications Sports bra worn day and night for about 3 weeks	activity Depending on your job, should be able to return to work from 4 weeks Drive only when you feel safe		