Patient Information

Breast Reconstruction

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As the Breast Reconstruction Team at the Auckland Regional Centre for Plastic Surgery we have the expertise to offer patients all of the breast reconstruction options and can tailor the advice/surgery to the specific needs of the patient and the individual clinical situation. We work closely with oncologists and oncologic surgeons across Auckland to provide a comprehensive breast reconstruction service for the region.

Breast Reconstruction

Breast reconstruction may be performed at the same time as a partial or complete mastectomy (immediate reconstruction) or at a later date (delayed reconstruction). The timing of reconstruction, or indeed whether or not it is performed at all, is decided by the patient and the surgeon together, taking into account the patient's individual preferences and the need to optimally treat the disease. Sometimes it is clinically more appropriate to delay the decision on whether or not to have reconstruction until after treatment is complete.

Many patients never want a breast reconstruction and this is an entirely valid decision. Studies have shown that whatever the decision a woman makes, they are usually happy with this in the long term, provided that they have been fully informed of their options from the outset.

While in certain circumstances the outcome of reconstruction is better if done immediately, there are equally circumstances where the outcome is better with delayed reconstruction. This is why it is important to discuss your individual circumstances and proposed treatment with a plastic surgeon who has expertise in all aspects and techniques of reconstruction. Each treatment plan needs to be tailored to the individual clinical situation, and to the individual patient's needs.

While broadly there are two types of reconstruction (implant based and tissue based), there are many possible variations and even combinations of these two types. Sometimes all options are suitable for any given patient but there are times when the appropriate options are more limited. Every reconstruction has its positive and negative aspects which need to be considered by the surgeon and the patient before deciding on a plan of reconstruction.

Frequently the best symmetry cannot be obtained without some adjustment of the opposite breast. This is usually done as a separate (later) procedure once the breast reconstruction has settled down into its long term shape (which can take many months) and any additional adjustments have been made (which are not uncommon). Nipple reconstruction (if desired) can be done at that time in many (though not all) cases.

As you can see breast reconstruction is seldom a one off procedure, and further operations may be needed to optimise the final result. These are optional from the patient's point of view and many choose not to do so, being very happy with the original outcome.

Types of Reconstruction

Prosthetic (implant) reconstruction:
This involves replacing the breast tissue that has been removed with an artificial implant underneath the skin and muscle of the chest wall. This may be done in one or two operations (one or two stage procedure) depending on the clinical situation. If done in two stages the first involves the placement of an inflatable implant called a tissue expander. This is inflated with saline (salt water) over a period of weeks to the desired volume. This is frequently more than the ultimate desired breast size to allow for the skin to be slightly overstretched. This improves the final shape. The tissue expanded is then left in place for several months to allow the skin to adjust to its new stretched volume before a second operation to remove it and replace it with the permanent implant.

Prosthetic Reconstruction Advantages	**Prosthetic Disadvantages**
▪ Scars confined to the breast ▪ Relatively simple procedure (short operative time) ▪ Faster recovery	▪ If tissue expansion used, approx 6 months to complete → Two stage procedure ▪ Potential for implant complications - Infection - Implant rupture (implant will not last a lifetime) - Capsular contracture (scar tightening around implant) ▪ Poor tolerance of postoperative radiotherapy → Increased risk of capsular contracture → Thinning of tissue over implant → Ability to feel implant → Skin breakdown ▪ Leading to implant exposure/removal ▪ Not advisable when the tissues have already been treated with radiotherapy, or radiotherapy is likely postoperatively ▪ Difficult to match opposite breast, especially when large and/or droopy ▪ Shape of breast limited by shape of implant

Autogenous (Patient's own) Tissue reconstruction
Also known as flap reconstruction. This involves moving tissue usually skin, fat, and sometimes muscle from one part of the body to another (in this case the breast). If the tissue remains attached to its original site by the blood vessels that keep the tissue alive it is known as a pedicled flap.

Currently the main two pedicled flaps used are the Latissimus Dorsi flap (from the back), and the **TRAM** flap from the abdomen (tummy). Latissimus Dorsi is the anatomical name of the muscle that is part of this flap. TRAM is the initials of the full name of the flap, which is **T**ranverse **R**ectus **A**bdominis **M**yocutanoeous, which is also named for the muscle that is part of the flap. The rectus abdominis muscle is the vertical muscle in the centre of the abdomen (one on each side) that form the "six pack" in fit young people.

If the tissue is separated completely from the body and reattached by microsurgery to small vessels in the chest or armpit it is known as a Free Flap or Microvascular Flap. The usual tissue moved by this method is from the lower abdomen. It is known a Free TRAM flap (see above) if muscle forms part of the flap, or a free **DIEP** flap if no muscle is used. Tissue can be move d from other parts of the body such as from the buttocks or inner thigh in unusual clinical situations.

Autogenous Flap Advantages	**Autogenous Flap Disadvantages**
▪ No implant complications ▪ Better feel ▪ Generally better potential to shape and match opposite breast ▪ Permanent ▪ Completed in one procedure (aside from revision/surgery on the other breast)	▪ More complex procedure ▪ Longer recovery ▪ Flap failure (partial or complete loss of transferred tissue) ▪ Scars on other parts of body ▪ Risk of muscle weakness/hernia ▪ There may be insufficient excess tissue to allow reconstruction to the same size as the other breast

All operations carry risks some specific to the operation others more general

General complications/risks include:

- Anaesthetic risks
  - Drug reactions
  - Chest infections
  - DVT/PE (blood clots in legs/lungs)

- Operative complications
  - Infection
  - Bleeding (haematoma)
  - Seroma (fluid collection)

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