Your Guide To Breast Reconstruction

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WHAT IS BREAST RECONSTRUCTION?

A breast reconstruction aims to rebuild your breast, either wholly or partially to match your normal breast in both shape and size. For many women breast reconstruction also helps restore confidence in body image and self-esteem and assists in the psychological and emotional recovery following breast cancer.
Current evidence suggests that having a breast reconstruction does not increase the risk of the cancer returning.
The Cancer Council of Australia recommends there should always be a discussion about breast reconstruction options between women and their doctors before a mastectomy.

Women should also be informed that in some cases breast reconstruction can occur at the same time as their mastectomy. While this is not an option for all women, the benefits of an immediate reconstruction include the need for fewer anaesthetics and fewer operations that require recovery time. It also allows the breast and plastic surgeon to work together to ensure the best possible outcome and the woman wakes from her surgery with reconstructed breasts rather than a scar across a flat chest which for some may be confronting. The benefit of having reconstruction at a later time (delayed reconstruction) include having to deal with less complex information all at the same time, when a cancer diagnosis has just been made and that it allows the woman opportunity to grieve the loss of her breast and get over her cancer treatment before embarking on reconstruction. For some women it is uncertain before they have their mastectomy whether they are going to require other therapies, such as radiotherapy and chemotherapy and this can affect reconstructions.

There are a range of surgical options available for breast reconstruction with varying degrees of complexity. Not all options are appropriate for all women so it's important that you are informed of the options that are most suitable for you and you are given a realistic expectation of the potential outcome.

MASTECTOMY

Mastectomy is the surgical removal of the entire breast.

About 40% of women diagnosed with breast cancer require or choose to undergo mastectomy. Some women carrying the BRCA1 or 2 gene also undergo mastectomy as a preventative measure.

The breast consists of glands, fat, milk ducts and some connective tissue sitting between the skin of the chest and the chest wall muscles. As the cancer can involve the ducts and the nipple is connected to the breast via ducts, the nipple must usually also be removed as part of the mastectomy.

While the presence of cancer in one breast usually only requires the removal of that breast, some women choose to have both breasts removed to reduce the risk of getting another breast cancer in the future. This is an issue that should be very carefully discussed with the treating breast cancer surgeon.

FACTORS AFFECTING BREAST RECONSTRUCTION

Always talk to your Specialist Plastic Surgeon before making a decision. Your Specialist Plastic Surgeon will assess your condition and general health, and advise the treatment that is best suited to you. This will depend on a range of factors including your age, general health and fitness, size and shape of the other breast, and available body tissue.

For some women there is only one type of breast reconstruction that is appropriate for them, but others will have the opportunity to make a choice between different options. Some of this will depend on how much breast skin and volume needs to be replaced after the cancer is removed and how much spare tissue is available in other parts of the body from which it can be taken. Your Specialist Plastic Surgeon will help to guide you through the pros and cons of different options.

Delayed reconstruction occurs at a later date when your cancer treatment has been completed.
The benefits of an immediate reconstruction are:

- The cosmetic results are usually better
- More of the skin of your breast may be preserved
- The scarring on the breast itself is usually less
- You will only need one major anaesthetic and recovery period
- It will involve only one stay in hospital
- You will not have to spend any time without a breast
- The benefits of delayed reconstruction are:
- Your cancer treatment can proceed without delay
- The surgery is carried out in two stages meaning an easier and shorter recovery following each procedure
- There is more time to consider your options and whether you want to have a reconstruction or not
- There is less to deal with all at once.

No Reconstruction

Many women choose not to have a breast reconstruction and this is a valid option. These women may not want to undergo further surgery or are happy to live with a flat area on the chest. These women can wear a prosthetic breast in their bra although some women say it restricts their choice of clothing and can sometimes cause irritation or sweating against the skin.

The important thing is that the decision is yours and you should not feel pressured into doing anything that is not right for you. Even if you decide against a reconstruction now you still have the option of a delayed reconstruction at a later date if you change your mind.

TYPES OF BREAST RECONSTRUCTION

There are two main types of reconstruction: an implant reconstruction which uses an implant to recreate the volume of the missing breast or a flap reconstruction where skin, fat and muscle are taken from elsewhere on your body to make the new breast.

IMPLANT RECONSTRUCTION

An implant reconstruction involves inserting a silicone or saline prosthesis under the skin and muscle of the chest. This is a relatively straight-forward operation that does not involve scars elsewhere on the body.

Sometimes an inflatable tissue expander is inserted in the space between the skin and the chest wall before the implant can be inserted. The expander is adjusted over a period of weeks by increasing the amount of saline or air inside to stretch the skin enough to accommodate the implant.

Implant based reconstruction is often recommended if you are not a suitable candidate for reconstruction using your own tissue. This may be because you are very slender and have no extra tissue to spare; you are not well enough for a larger operation; or you simply do not want a big operation involving cuts and scars elsewhere on your body.

Appearance and Feel

Sometimes it can be difficult to achieve a natural breast shape with an implant alone, particularly if the objective is to match the new breast to a remaining breast that has dropped a little over time. The best results tend to be achieved in women with a small remaining breast that sits high on the chest or in a situation where both breasts are being removed.

It's important to be aware that an implant-based breast reconstruction will feel different to a natural breast. Women often find that the implant feels cold to the touch and does not move in the same way as a natural breast. Often women choosing an implant-only reconstruction will require further procedures to have the other breast adjusted to improve the shape and size match. Usually a good match can be achieved when dressed but the breasts will often be different shapes when undressed.

Problems

Implants do not last forever and will need to be replaced in the future. Implants are susceptible to hardening, deflation, visible folds and creases and may not give desired results especially if you require radiotherapy either before of after the reconstruction.

Breast Implant Associated Anaplastic Large Cell Lymphoma

There is a small but real risk associated with breast implants of a rare condition known as Breast Implant Associated Large Cell Lymphoma (ALCL). This is not a breast cancer but is a cancer of lymphatic (white blood) cells. It occurs in association with breast implants and to date exclusively with exposure to textured implants. The commonest symptoms are fluid swelling around the breast implant and in the space between the implant and breast implant capsule. It is curative if diagnosed early. Therefore women should check for any changes in their breasts such as swelling or redness and see their doctor if this occurs.

AUSTRALIAN BREAST DEVICE REGISTRY

If you have a breast implant you should speak to your surgeon about being included on the Australian Breast Device Registry (ABDR). The ABDR is a Commonwealth Government health initiative that records information on surgeries involving breast devices such as breast implants and breast expanders. This allows the Registry to identify and report on possible trends and complications associated with these devices; to track the long term safety and performance of devices; and to identify best surgical practice and optimal patient health outcomes. Importantly the Registry aims to help safeguard the health of women undergoing breast surgery and provides peace of mind in the event of a product recall.

FLAP RECONSTRUCTIONS

Flap reconstruction involves taking a segment of skin and fat (and sometimes muscle) from different partss of the body to build a new breast. Which part of the body these are taken from often depend on the woman's body type.

Latissimus dorsi flap reconstruction (with or without implant)

This type of reconstruction involves using a muscle from the back (called the latissimus dorsi muscle) along with an overlying patch of skin and fat. The rich supply of blood from the vessels in this area make it ideal for breast reconstruction.

The flap is moved around the ribcage so that it lies at the front of the chest and replaces the skin that was originally removed with the mastectomy. The fat and muscle behind the skin replace the breast tissue that was taken with the mastectomy. Sometimes the tissue from the back is large enough that it is a good match for the breast that was removed and no implant is required (this is called an autologous lat dorsi or an extended lat dorsi flap) but sometimes an implant may also be required to further supplement breast volume.

When you are assessed ask your Specialist Plastic Surgeon whether they think you will need to combine an implant with the flap surgery or not. Latissimus dorsi reconstruction is very suitable if you do not need too much skin replacement and your tummy is not suitable for flap transfer.

This is an ideal reconstruction for relatively heavily built women with small to medium-sized breasts.
While it is a bigger operation than an implant alone it typically gives a more natural result.
Losing the muscle from the back does not usually seem to cause any restriction of shoulder movement or strength. However there will be a large scar on your back, but this can usually be positioned so that it is hidden by most clothing or underwear.

Flaps taken from the abdomen

Skin and fat from the lower abdomen can be ideal tissue for breast reconstruction creating a very natural look and feel. Abdominal flap reconstructions can give the best results giving a natural appearance that is stable and permanent.

Free flaps are entirely disconnected from their original blood supply and reconnected using microsurgery and very fine stitches to join the arteries and veins to vessels near the breast area.

Skin, fat and sometimes muscle from one part of the body is transferred to make a new breast. Blood vessels from the armpit or near the breastbone are used to create a new blood supply for the transferred tissue.

There are several types of lower abdominal free flaps:

Free TRAM flap – a small piece of muscle is taken along with the blood vessels, skin and fat.
Free DIEP flap – uses the same blood vessels as the TRAM flap, but they are carefully dissected out from the muscle when the flap is raised and DIEP flap contains no muscle.
Free SIEA flap – some of the more superficial blood vessels on the tummy are used and no muscle is dissected or transferred.

The DIEP and SIEA do not compromise the function of the tummy muscles, however, it's important to note that sometimes the exact flap used has to be decided during the operation so it's not possible for you to pick one over the other ahead of the procedure.

Recovery

Abdominal flap reconstruction is a major operation and you will spend about a week in hospital and several weeks recovering. You may have some difficulty sitting up from lying down if the tummy muscles are used. However in the long term this functionality does improve.There will be scars around the newly rebuilt breast and a large scar across the lower abdomen and around the navel.

Other types of flaps

If your tummy is not suitable as a source of tissue, a flap can sometimes be taken from the buttocks of upper inner thighs but these flaps are less commonly used.

FOLLOW UP SURGERY POST RECONSTRUCTION

If you have a breast reconstruction it is normal to need a further adjustment procedure at some point after the initial operation to further improve the size and shape match of the breasts.

However, these surgeries are usually less major than the first one.
These adjustments may include:

- Inserting or exchanging a breast implant to improve the shape or size match,
- Reducing or reshaping your opposite breast to match the reconstructed breast
- Reducing the size of, or reshaping a flap reconstruction
- Adding fat to your reconstructed breast using fat graft or lipomodelling.

Lipomodelling

Lipomodelling is where fat is removed by liposuction, refined and then transferred to another area to add volume to increase size and improve shape and profile. It is useful as an adjunct to breast reconstruction.
Fat can be taken from areas such as hips or tummy.

This is a relatively non-invasive procedure and can be done on its own or at the same time as other adjustments under either local or general anaesthetic depending on the size of the area to be treated.

Nipple Reconstruction

Nipple reconstruction is usually performed under local anaesthesia and is done at a later stage following the reconstruction of the breast to allow swelling in the reconstructed breast to settle down. This allows for more accurate placement of the nipple in comparison with the opposite natural breast.

If you are having any radiotherapy or chemotherapy then you will usually have to allow three months from the time of completion before a nipple reconstruction.

A nipple reconstruction will restore the look but not the feel or sensation of the nipple.

There are two main methods of nipple reconstruction:

- Flaps of tissue are raised up on the reconstructed breast and sewn together to make a nipple shape;
- Or a portion of the opposite nipple is transferred to the reconstructed breast (this type is much less commonly performed)

Later on in a separate procedure a tattoo is applied of appropriate colour to imitate the areola. Some women choose to have this done without the nipple reconstruction as a simple outpatient procedure.

For those who choose not to have a permanent reconstruction you can have a stick-on nipple prosthesis made from silicone rubber matched to the other side.

Reconstruction after a partial mastectomy

If only part of your breast needs to be removed ('lumpectomy' or 'wide local excision') there is usually no need for reconstruction. Wide excision of the tumour is usually followed by radiotherapy and once things have settled down often a reasonable degree of symmetry is achieved without any further surgery.

If the treated breast ends up smaller it is possible to add tissue to tissue using either a flap or lipofilling to match the natural breast.

For some women, particularly those with large breasts, it is possible to carry out a wide excision of the breast tumour and reshape the breast making it smaller than before. At the same time the opposite, unaffected breast is also reduced in size to match. This is ideal for women who have a partial mastectomy and are happy to have smaller breasts.

RECOVERY FROM BREAST RECONSTRUCTION

Deciding whether or not to have a breast reconstruction is a very personal decision that typically is made in association with the stress of a cancer diagnosis. There is a lot of complex information to digest at once and it is impossible to know exactly how a reconstructed breast will look in the future and how you will feel about it.

While most women report psychological and quality of life benefits following reconstruction including improved body image, confidence and self-esteem as well as a restored sense of wholeness and femininity, a breast reconstruction doesn't, however, completely mitigate the impact of breast cancer and mastectomy.

Feelings of anxiety or depression associated with breast cancer and treatment will typically subside during the first year after diagnosis regardless of whether you opt for a breast reconstruction or not.

Women who are most satisfied with their decision and the outcome tend to be those who have carefully considered all the options and made a considered decision and have realistic expectations of the likely outcomes.

What about pain?

In hospital you will be given appropriate pain medication. Keeping pain under control assists recovery.

Will there be scars?

All operations result in scarring of some sort. The technique used on your reconstruction will determine the amount and placement of scars. Generally implant techniques give shorter scars on the breast compared with flap techniques with longer scars on the breast and the area where the tissue has been taken from.

Initially the scars will be pink or red and raised but will lighten and flatter over time. How your scars heal will depend on your skin type and is not always possible to predict.

What are the possible complications?

General Complications

While modern surgery is generally safe, any operation does have the potential for risk and complications to occur. These may include:

- Delayed wound healing needing dressings for a long period
  This is commoner in women who smoke
  This problem is usually mostly an inconvenience rather than a major health problem.

- Infection requiring antibiotic treatment or rarely re-operation
  This is guarded against by the use of antiseptics, sterile techniques and antibiotics.
  It is uncommon but more common in women with diabetes or who are smokers
  It normally resolves with tablet antibiotics

- Post-operative bleeding which could require re-operation or transfusion
  this is uncommon, but you should inform your Specialist Plastic Surgeon if you normally take any blood thinners or if you are a Jehovah's Witness.

- Collection of fluid beneath the operation site, known as a "seroma."
  This is guarded against in some cases by having drainage tubes in place, when necessary
  the seroma can be treated easily in a clinic environment if it occurs

- Blood clots in legs or lungs requiring blood thinning medication.
  This is guarded against by having special stockings or calf pumps during your surgery and sometimes having blood thinning injection.You can reduce your risk in the period after surgery by moving your legs and ankles frequently and getting up and around as soon as your doctor advises.

- Pain, bruising and swelling around the operated sites

- Nausea following general anaesthesia and other anaesthesia-related risks
  You will be given medication to reduce this problem.

Implant reconstruction implications

- Problems with implant such as deflation, folds, infection or hardening
- Implant rupture or leakage
- Asymmetry of the breasts
- Movement of the implants from their original position

Flap reconstructions implications

- In some abdominal flap surgery there is a risk of abdominal muscle weakness

- Circulation issues with flap surgery
  This is uncommon but usually means that you have to go back to the operating theatre quite quickly. If this happens it is important not to panic, your Specialist Plastic Surgeon will often still be able to save your breast reconstruction.

The risk of complications varies between operations and will be outlined to you in advance by your surgeon. Although this list of complications seems daunting, it is important to remember that most women go through this surgery without any problems.

What about aftercare?

In hospital

A breast reconstruction typically involves a 2 to 5 day hospital stay depending on the type of operation you have.

After the surgery, your reconstructed breast may be covered with dressings. The nursing staff will change these regularly. Most modern dressings are showerproof, but your surgeon will give you guidance on this.

At home

When you return home from hospital you will feel very tired and will need someone around to help you.
The recovery period depends on the type of operation you have had but as a general rule:

- After the first week you should be starting to look after yourself and begin to resume normal activities (except for driving which may be a few weeks later).
- A few weeks after the operation you will be seen again to check your progress and ensure all wounds are healing properly
- A few months later there will be another consultation to assess the outcome and decide if any adjustments are required and when they should occur.

There may be some swelling to your reconstructed breast, that will reduce over the next few weeks. There may be a size difference between your reconstructed and natural breast that can be discussed with your surgeon once the swelling has settled down. There are some surgical options that can be considered to improve breast symmetry.

It is normal for your Specialist Plastic Surgeon to prescribe injections for pain relief. A wound drain may be inserted during surgery to remove excess fluid.

Your surgeon will advise whether or not you should wear a bra immediately after surgery.

It is normal to feel tired and sore for the first two weeks. Avoid heavy lifting, strenuous exercise, swimming and strenuous sports until advised by your surgeon. It is usually best to avoid doing activities with your hands above head height (such as hanging out washing or putting things in high cupboards).

If you experience any of the following symptoms, notify your surgeon immediately:

- A high temperature or chills
- Nausea, vomiting, shortness of breath or diarrhoea
- Heavy bleeding from the incisions
- Leakage of blood or fluid beyond the first day after surgery
- Worsening and/or spreading redness around the incision sites
- Increasing pain or tenderness in either breast

Make sure you follow specific instructions given to you by your surgeon on post-operative care and don't hesitate to ask about anything you are unsure about.

COST

Breast reconstruction is available for free in the public health system in Australia although waiting times may vary according to location.

In the private system prices may vary between Specialist Plastic Surgeons. Some factors that may influence the cost include the surgeon's experience, the type of procedure used and the geographic location of the office.

Costs associated with the procedure may include:

- Surgeon's fee
- Hospital costs
- Anaesthesia fees
- Prescriptions for medications
- Post surgery garments
- Medical tests

Breast reconstruction surgery is generally considered a reconstructive procedure and should be covered by private health insurance. However, insurance policies may vary greatly so it's important to review your policy carefully to determine what is covered.