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# **Breast Reconstruction Choices in Breast Reconstuction**

#### Choosing breast reconstruction

Living with the diagnosis of breast cancer is a difficult one, but as many women have proven, the disease is surmountable. Considering what you are going through, your decision to undergo breast reconstruction may be complex and only you may make that decision



Depending on the person, opting for breast reconstruction may help restore body image and help make a positive start to a new

There are various ways to reconstruct the breast. Once again, the choice you make depends on a variety of personal details such as your age, your state of health, the shape and size of your breasts, your remaining skin and other body tissues, your wishes and your lifestyle.

#### Effects of breast reconstruction

Breast reconstruction has no known effect on altering the natural history of breast cancer or interfering with other forms of breast cancer treatment such as chemotherapy or radiation.

# Timing of breast reconstruction

The timing of breast reconstruction will depend on a lot of things. Doctors differ in their views on when breast reconstruction should be performed.

Some doctors will advise reconstruction at the same time as breast cancer surgery (such as mastectomy).

When a reconstruction is performed at the same time as the mastectomy it is called an immediate reconstruction. Some women find that immediate reconstruction helps them to cope with the emotions associated with the loss of a breast, and to resume normal life again.

If you are interested in having an immediate reconstruction you should discuss it with your surgeon who will tell you if it can be done. Your surgeon may still recommend a delayed reconstruction, particularly if you are expected to have radiotherapy or chemotherapy immediately after your initial surgery. In other cases, women who smoke, or who have other health conditions, such as obesity or high blood pressure, may be advised to postpone surgery.



Other doctors believe it is important to wait, possibly a year or more after having a breast removed, before undergoing reconstructive surgery. If a breast reconstruction is performed weeks, months or even years after a mastectomy it is called a delayed reconstruction.

If you have had radiotherapy after breast cancer surgery you will have to wait some months before having a delayed reconstruction to allow the skin in the treated area to completely recover.

A small number of women may find that the loss of a breast is less upsetting than they had expected. If you have made arrangements to have a reconstruction at a later date but then feel you do not want to have any further surgery, you can change your mind. It is important that you feel completely happy with any decision that you make.

If you think you might want breast reconstruction it is a good idea to discuss the issue with your surgeon before your mastectomy. You do not have to make a definite decision at this early stage and ultimately the choice of timing for your breast reconstruction depends on what you want.

#### Types of breast reconstruction

There are many techniques currently available for breast reconstruction. As with any breast surgery a successful reconstruction depends on not only creating a new breast but also preserving or re-establishing breast symmetry.

In addition to achieving symmetry, reconstruction should be as simple as possible and safe as possible.

The various breast reconstruction techniques should be discussed with your reconstructive surgeon so that you both can decide on the reconstruction technique most suitable for you.

It is important to know that, whichever method of reconstruction you choose, it may involve various stages before the end result is

A breast can be reconstructed with implants or tissue expanders, your own body (autologous) (tissue flaps) or a combination of both.



#### Reconstructing the nipple

The reconstructed breast will not have a nipple if the nipple has been removed during mastectomy or lumpectomy. It is possible to have a nipple reconstructed following breast reconstruction. This is usually done some time after the breast reconstruction has healed and settled into its final shape and position.

By waiting, the surgeon is better able to position the nipple accurately, in line with the one on the other breast.

The time interval between breast and nipple reconstruction may vary, but is usually about three to four months.

Surgeons use various techniques for nipple reconstruction. A nipple may be reconstructed from grafted skin taken from the opposite nipple or from the crease in the groin, where the skin is darker in colour. A nipple may be reconstructed by tattooing a round area on the reconstructed breast. A tattoo is flat on the skin and will not produce the shape of a nipple beneath clothes.

A reconstructed nipple will not function or have the same sensation as a natural nipple.

Alternatively a silicone stick-on nipple can be attached to the reconstructed breast. It may be possible to retain your original nipple but it will depend on whether the surgeon thinks it may contain cancer cells. Another method of preserving your nipple is to graft the nipple onto the reconstructed breast.

#### Surgery to the other breast

Surgeons carrying out breast reconstruction aim to match the size and shape of the reconstructed breast to your remaining breast.

Symmetry may not always be possible, so it may be suggested that an operation be performed on the opposite breast to achieve a better match. This may involve reducing the size of the other breast or lifting it to reduce its natural droop.

Surgery will cause some scarring to the other breast.

At the time of surgery any tissue removed may be sent to pathology for testing. Costs incurred for this service will be the responsibility of the patient.

# Breast reconstruction using an implant

Implant reconstruction is possible after a mastectomy where breast tissue is removed but the skin and nipple can be preserved (skin sparing mastectomy). The implant is placed beneath the skin and the muscle of the chest wall to replace the lost breast tissue.

Implant reconstruction alone may not be possible after a radical mastectomy (where a larger amount of skin and chest wall muscle have been removed), after radiotherapy (because the skin is unlikely to expand to accommodate an implant) or if the other breast is very large (because symmetry will be difficult to achieve).

Breast implants are basically textured silicone shells filled with silicone gel.

The advantages of implant reconstruction is that it usually looks good and is simple to carry out. However, complications may occur later on with this method of reconstruction and there is a possibility that after undergoing breast reconstruction with implants future revisional surgery will be required.

#### Breast reconstruction using tissue expansion

Breast reconstruction involving tissue expansion can provide very good results and avoids the need for extensive surgery involved in using tissue flaps. However, it may take a much longer time to complete than other methods, and some women find this frustrating.

Tissue expansion may be the reconstruction of choice in some cases where there is a skin shortage and tissue flaps are not going to be used. Tissue expansion may not be possible after radiotherapy because the skin has lost its elasticity and ability to stretch. Tissue expansion takes advantage of the ability of normal skin to stretch. Tissue expansion involves two operations. A tissue expander can be inserted at the time of mastectomy (immediate breast reconstruction) or at a later time (delayed breast reconstruction).

In the first stage of tissue expansion, an expandable implant with a valve for filling (like an empty balloon) is inserted under the skin and chest wall muscle.

The tissue expander is filled over time to increase the size of the breast mound. The expander is expanded over a few months by injecting a sterile saltwater (saline) solution in the surgeon's office either weekly or fortnightly.

Some discomfort may be experienced when the expander is being inflated, causing the breast to feel tight and hard.

This usually lasts only a day or so after each time the expander is inflated.

If the inflation is too uncomfortable it is possible to inflate the expander at a slower rate.

The process will continue until the size is slightly larger than the opposite breast. The over-expansion will allow the skin to drape without tension over the permanent implant so the reconstructed breast will assume a more natural form.

When skin expansion is complete, usually after several months, a second operation is performed to remove the inflatable tissue expander and replace it with a permanent silicone implant.

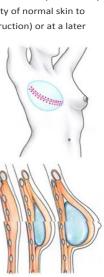
A capsulectomy is performed at the same time to remove scar tissue around the expander in order to make space for the permanent implant.

The implant size will aim to match the size of the opposite breast.

It is possible to perform nipple reconstruction during this procedure or at a later time.

Tissue expander breast reconstruction cannot produce an exact replica of the removed breast.







#### **Alternative Treatments**

Implant and tissue expander breast reconstruction is an elective surgical operation.

Alternative treatment would consist of the use of external breast prostheses or padding, breast reconstruction by another method such as transfer of other body tissues for breast reconstruction or breast reconstruction without implants or tissue expanders.

Alternative treatments involving breast reconstruction have risks and complications.



# Risks of Surgery

# All surgery is associated with some risk

It is important that you understand that there are risks involved with any surgery. Whilst the majority of majority of individuals undergoing surgery do not experience any complications, a minority do and there cannot be any guarantees in surgery. With every type of surgery the best possible outcome is sought. The importance of having a highly qualified surgeon and professional surgical team and facility cannot be overestimated.

# Risk to benefit

The choice to undergo a surgical procedure should be based on the comparison of the risk to the potential benefit to you. Make sure that you take time to read and understand how each potential complication can impact on your life and try to try to make the risk to benefit comparison specifically for yourself.



#### Informed consent process

Before any surgery, your surgeon should explain to you the risks of the procedure and the possible complications that could happen. The informed surgical consent web site will help you to understand the risks that your surgeon has already discussed. It may also bring up other issues that will require a second surgical consultation to clarify. You should not feel that you are being an inconvenience by seeking another consultation and clarification of any questions that you may have. You should take the opportunity to read this informed surgical consent website carefully and at your own pace. The questionnaire at the end will help to clarify your understanding. There is also opportunity to make note of specific concerns and issues that may be relevant to you so that you can discuss these concerns with your surgeon.

#### Impact of complications

The risks of surgery involve possible inconvenience if a complication occurs. It may result in an extension of your recovery period and in some cases may need further surgery. Infrequently, complications may have a permanent effect on your final result.

#### Financial risks

Financial risks are involved with any surgery. Private health insurance is strongly recommended. If you do not have private health insurance then a complication or further surgery will add to the overall cost of your surgery.

# Risks related to general health

Your general health will impact on the possible risks of surgery. Many of the risks associated with surgery can be predicted. However, your general health plays a vital role to the outcome of your surgery. Age carries a greater risk with any surgery. Being overweight carries a greater surgical risk. Other medical conditions such as high blood pressure, high cholesterol, diabetes, heart and lung disease may also increase your surgical risk. Smoking greatly increases all risks and complications of surgery.

# What else?

Finally other factors, that may not be obvious, can influence the outcome of your surgery and the risks are beyond anyone's control.

# Specific Risks of Breast Reconstruction using Implants or Expanders

Complications following breast reconstruction using implants and expanders may occur. Multiple procedures may be required to obtain acceptable results. The commonest complications related to the use of implants and expanders include capsule contracture (hardening of the breast), implant exposure, implant malposition and infection.

#### **Bleeding**

Bleeding may occur after reconstructive surgery. It is possible that a collection of blood (haematoma) can occur in the breast. Additional treatment including surgery will be required to treat bleeding. A haematoma will increase the risk of infection and capsule contracture.

#### Seroma

Tissue fluid may accumulate around the implant or the tissue expander after surgery, trauma or vigorous activity. Fluid around a breast implant or expander will cause swelling and pain and may increase the risk of infection. A firm bra and rest will help to resolve a seroma. Drains in the breast are often used to decrease the risk of seroma and haematoma occurring. Additional treatment or surgery may be necessary to remove the fluid.

#### Infection

Infection is always a possibility after any surgery despite careful aseptic techniques. Should an infection occur, treatment including antibiotics, possible removal of the implant or expander, or additional surgery may be necessary.

Infections with the presence of a breast implant or expander are harder to treat than infections in normal body tissues. If an infection does not respond to antibiotics, the breast implant or expander may have to be removed. If it is deemed necessary to remove a breast implant or expander an external prosthesis may be temporarily desirable. After the infection is treated, a new breast implant or tissue expander can usually be re-inserted after 6 months. Low grade or chronic

infections may be difficult to diagnose and may present as capsular contracture, implant displacement or increased wrinkling.

It is rare for an infection to occur around an implant or expander from a bacterial infection elsewhere in the body (like a boil or urine tract infection). Prophylactic antibiotics may be considered for subsequent dental or other surgical procedures to cover against breast implant or expander infection. Should an infection occur, treatment including antibiotics or additional surgery may be necessary.

#### **Firmness**

Excessive firmness of the breasts can occur after surgery due to internal scarring. The firmness may make the reconstructed breast look and feel different to the opposite normal one. The occurrence of this is unpredictable.

#### Capsular contracture

When any type of breast implant or tissue expander is inserted, the body reacts by forming a lining of scar tissue around it. This is referred to as the "capsule" or "tissue capsule". Capsule formation is normal and happens to everyone regardless of whether the implant or expander is smooth or textured, saline or silicone.

Capsule formation is the most common local change after implantation. The body's response to any foreign object varies greatly from person to person. How much the capsule will contract, if at all, is hard to predict. A capsule is usually thin but may tighten or contract and may cause hardening of the breast, breast discomfort and pain, sensitivity to touch, wrinkling or distortion of the breast and displacement of the implant.

The cause of capsular contracture is unknown and the incidence is unpredictable. It is believed that many factors can contribute to capsule contracture, including infection, fluid collection around the implant and the body's scar reaction to the implant or expander. Radiation therapy may increase the risk of capsular contracture.

If capsule contracture causes problems, further treatment involving ultrasound and surgery will be required. Improvements in implant design and surgical techniques have contributed to the declining rates of capsular contracture. The current risk of significant capsular contracture is approximately 5%. Lower rates may be associated with a sub-muscular placement of implants.

#### Recurrent capsular contracture

Scar tissue may form again around the new breast implant and can tighten making the breast firm and possibly painful. The recurrence of symptomatic capsule contracture following capsulectomy and replacement of implants is not predictable. Capsular contracture may recur on one side, both sides or not at all.

Treatment for recurrent capsular contracture may require additional surgery, or implant removal.

#### Implant exposure and extrusion

Lack of adequate tissue coverage or infection may result in exposure and extrusion of an implant or tissue expander. Implant or expander exposure usually occurs at the mastectomy scar. This occurs more frequently with larger sized implants and expanders. Skin breakdown has been reported after radiation therapy to breast tissue. If tissue breakdown occurs and the implant or tissue expander becomes exposed, further surgery or implant or expander removal may be necessary. Smoking may interfere with the healing process.

# Delayed healing

Some areas of the breast may not heal normally and may take a long time to heal. Smokers have a greater risk of delayed wound healing and wound healing complications. Wound breakdown may occur due to the thinness of the skin over the implant or expander. Sometimes this may require removal of the implant or expander and further surgery to repair the non-healed areas on the breast.

### Skin necrosis

Necrosis is the formation of dead tissue (skin and fat) around the implant or tissue expander. This may prevent wound healing. Factors associated with increased necrosis include infection, smoking, chemotherapy/radiation and excessive heat or cold therapy. Implant or expander removal and surgical correction including skin grafting may be necessary. Unsatisfactory scarring may occur following necrosis.

#### Implant displacement

Displacement or migration of a breast implant may occur from its initial placement. An implant may migrate upwards or downwards causing asymmetry. Upward migration of an implant is frequently related to capsule contracture. There may be associated distortion in breast shape and discomfort. Further surgery will be required. Anatomical or shaped implants may rotate onto their side resulted in an abnormal breast shape. Implants or expanders may migrate sideways to the armpit. Further surgery will be required. Occasionally muscle contraction above an implant placed in a submuscular position can cause the implants to move in an abnormal manner. Additional surgery may be required to correct this problem.

# Skin rippling and wrinkling

Visible and palpable wrinkling of implants and tissue expanders can occur. Some wrinkling is unavoidable and related to the nature of implants. There is marginally less wrinkling and rippling when silicone cohesive gel implants are used. Occasionally implants will wrinkle more if there is a tight capsule around them or if they are too large. Visible wrinkles may be cosmetically undesirable but in most cases wrinkling is inherent to the nature of implants and expanders and is unavoidable. A fold in the implant may be confused with a breast lump and if there is any doubt further investigation will be required.

#### Skin scarring

Additional scars other than the mastectomy scar are rarely needed when reconstruction of the breast is achieved by using an implant or expander.

#### Skin changes

The skin overlying an implant or tissue expander may thin out with time. Small skin vessels (telangiectasis) and translucency of the skin develop in about 50% of breasts that have had implant reconstruction.

#### Chest wall deformity

Chest wall deformity is often present from the pressure of the breast implant or tissue expander. The chest wall deformity is unlikely to be visible under the skin unless there is very little breast tissue and the implants are not replaced. The consequence of chest wall deformity is of unknown significance.

#### Change in breast size and shape

Following beast reconstruction the breast size and shape will be different. In most cases the breasts are smaller. Occasionally a reconstructed breast is larger than the original breast. The shape of the breast after implant reconstruction is rounder and more spherical than a normal breast. Anatomical or teardrop shaped implants may give the breast a more natural shape. If capsule contracture occurs the reconstructed breast will appear rounder even if shaped implants are used.

#### Breast asymmetry

Breast symmetry may not be perfect following breast reconstruction. Factors such as skin tone, fatty deposits, chest wall shape and muscle tone may contribute to normal asymmetry in the breast. The size and shape of the opposite breast is occasionally altered at the time of breast reconstruction to help achieve symmetry of the breasts

#### Breast disease

There is no medical evidence to date to show that women with breast implants beneath a tissue flap have a higher chance of developing breast disease, breast cancer, or recurrence of breast cancer. Breast disease can occur independently of breast implants and any form of muscle and skin reconstruction. It is recommended that all women perform periodic self-examination of their breasts, have regular mammograms and seek professional care should they notice a breast lump.

#### Future removal and replacement of a tissue expander

A tissue expander is usually a temporary device used to expand or stretch the skin of the chest wall to provide enough skin to comfortably cover a breast implant. The skin of the chest wall is slowly expanded over several months by progressively injecting saline (salt water) into the tissue expander. When expansion is complete the expander is removed and replaced with an implant.

#### Future removal and replacement of a breast implant

Future (years later) removal or replacement of breast implants and the surrounding scar tissue envelope may be required as the implants age and the risk of recurrent capsular contracture increases.

#### Implants and expanders

Breast implants, similar to other medical devices, can fail. Breast implants and expanders cannot be expected to last forever. Implants and expanders can break or leak. When a silicone gel implant fails, the escaped gel can cause capsule contracture (felt as increased hardening of the breast), breast distortion and displacement, silicone granuloma (felt as a breast lump). Rupture of a breast implant can occur from no apparent cause, as a result of an injury, or during mammography. It is possible to damage an implant at the time of surgery. Damaged or broken implants or expanders cannot be repaired. Ruptured or deflated implants and expanders require removal and replacement. An implant or expander ruptures, is usually visible because the volume decreased. Rupture occurring in a gel filled implant may be diagnosed by mammogram, an ultrasound or MRI. MRI is the most accurate test.

# Life expectancy of breast implants

Breast implants are artificial devices that gradually age and wear out, and may eventually need to be removed or replaced. As the time after surgery increases so does the risk of implant rupture and gel diffusion. How long the breast implant remains without complications, depends on the type of implant inserted, the type of surgery you have had and how much physical activity you do. Injury to the breast and excessive repetitive compression of the implant against the chest-wall may reduce the life of the implant. Depending on your age when you have breast implants, the implant may need to be replaced at some time in your life. There are cases were some patients have experienced no problems after 25 years, while in rare cases some have experienced problems immediately after the procedure.

Recent studies indicate that the risk of experiencing problems with the breast implant increases significantly 8 to 10 years after the surgery. For these reasons you should be aware that you may need to undergo surgery on your breasts again for some reason related to your implants.

# Deflation

Breast implants, tissue expanders and similar to other medical devices, can fail. Implants and expanders can break or leak. Rupture can occur as a result of an injury, from no apparent cause, or during mammography. It is possible to damage an implant or expander at the time of surgery. Damaged or broken implants and

expanders cannot be repaired. Ruptured or deflated implants and expanders require replacement or removal. If a silicone gel implant ruptures the gel is usually contained within the capsule around the implant. Sometimes the gel does not remain within the capsule and may be found in nearby breast and other body tissue. Some of the silicone gel may travel to other parts of the body, including the lymph nodes. However, with improved modern implants this migration of silicone is diminished. Current research does not indicate any adverse effects from the silicone gel, except the presence of some local enlarged lymph nodes. While it is stressed that an implant can rupture at any time after insertion, the risk of rupture increases with the age of the implant. New style implants have a thicker envelope and are filled with a high viscosity silicone (cohesive gel) to reduce the possibility of rupture and spread of the silicone gel. Improvements in implant design and manufacture contributed to lower rates of rupture, and complications related to silicone gel.

# Long-term results

Subsequent alterations in the shape of the reconstructed breast or the opposite breast may occur as the result of aging, weight loss or gain, complications of implants or circumstances not related to breast reconstruction. Additional surgery may be required.

# Granulomas

When silicone gel leaks into the breast and other nearby body tissues including the lymph nodes, small reactive lumps may sometimes form. If there is a large amount of leaked silicone than larger lumps may form. These lumps are described as granulomas and are usually associated with implant rupture. Granulomas are not cancerous but it may be difficult to distinguish them from breast cancer. If a granuloma develops additional investigations will be required including removal of some breast tissue (breast biopsy) to determine if it is a cancer.

#### **Breast cancer**

There is no medical evidence to date to show that women with breast implants have a higher chance of getting cancer, including breast cancer. No studies have

established a link between silicone gel filled breast implants and cancer. Breast implants don't hinder breast self- examination.

#### Mammography

Mammograms are generally safe for women with implants, but breast implants make mammography more difficult and may obscure a small portion of the breast and reduce the early detection of breast cancer. It is important that you inform the mammography technician that you have breast implants so that arrangement for special views can be made. Silicone implants cause some shadowing of breast tissue on a mammogram. Mammogram screening is easier if the implant is in a sub-muscular position. If a breast lump needs evaluation, other methods such as ultrasound, MRI and specialised mammogram views can be performed. There is a small chance that the pressure placed on the implants during a mammogram could cause breast implants to rupture or break. The risk of damage to a breast implant rises with the age of the implant. If an implant is damaged during mammography, surgery may be required to remove or replace the implant.

Mammograms are more painful if a capsule contracture is present. The difficulty of breast imaging with mammography increases with the degree of capsule contracture. It is possible that the pressure of the mammogram can cause the scar tissue (or capsule) to crack. If this occurs, the breasts may have a different shape and softer texture afterwards. Likewise, there is an extremely small chance that the pressure placed on breast implants by the machine during the mammogram could cause the implants to rupture or break. If breast implants have a suspected gel leak, it is possible that having a mammogram could increase the amount of silicone spreading into the breast tissue. If an implant has a suspected rupture other investigations like ultrasound, CT scan or MRI may be necessary.

It is important to continue to have regular mammograms on the normal breast as well as the reconstructed one and to perform regular breast self-examination. Any lumps that are found should be brought to the attention of your doctor.

#### Calcification

Calcium deposits can form in the scar tissue surrounding the implant and may cause firmness and pain. The calcium deposits can be visible on a mammogram.

These deposits must be identified as different from calcium deposits that are a sign of breast cancer. If there is some confusion between calcium within a capsule and breast cancer additional surgery will be necessary to remove the calcifications for identification. The surgery may require replacement with a new implant.

#### Undesirable result

You may be disappointed with the results of breast reconstruction. The reconstructed breasts may not be the desired size, there may be asymmetry in size and shape of the breasts and the breasts may not feel natural. It may be necessary to discuss your concerns with your surgeon and occasionally, additional surgery may be necessary to improve your results.

#### Pain

Chronic pain may occur very infrequently from nerves becoming trapped in scar tissue after breast reconstruction.

# Unusual activities and occupations

Activities and occupations that have the potential for trauma to the breast could potentially break or damage breast implants, or cause bleeding.

#### Thrombosed veins

Thrombosed veins, which resemble cords occasionally develop in the area of the breast and on the abdomen or arms, and resolve without medical or surgical treatment.

#### Immune system diseases and unknown risks

To date, there is no scientific evidence that women with silicone gel-filled breast implants have an increased risk of immune system diseases such as systemic lupus erythematosis, rheumatoid arthritis, scleroderma, and other arthritis-like conditions. Additional complaints involve the musculo-skeletal, skin, nervous, and immune systems. The relationship of breast implants to these conditions has not been scientifically proven Currently, there is insufficient evidence to state that there is a health benefit from removing either breast implant(s) or scar-tissue capsule(s) or that removal will alter autoimmune disease or prevent its potential occurrence.

#### Change in skin sensation

Diminished or loss of skin sensation in the breast area may not totally resolve after breast reconstruction.

#### Skin contour irregularities

Contour irregularities and depressions may occur after breast reconstruction. Visible and palpable wrinkling of skin can occur. The new breast may not have the same shape and texture as your other breast. The breasts may become firm or hard after radiotherapy. The firmness of the breasts may result in implant displacement, distortion of breast shape or pain. Additional surgery will be required.

#### Poor scars

Stretched scars may occur. In rare cases, hypertrophic or keloid scars may result. Scars may be unattractive and of different colour than surrounding skin. Additional treatments including surgery may be necessary to treat abnormal scarring.

#### Pain

Pain of varying intensity and duration may occur and persist following breast implant surgery. In addition, improper size, placement, surgical technique, or capsular contracture may result in pain associated with nerve entrapment or interference with muscle motion. You should tell your doctor if you experience severe pain.

# Additional surgery

Additional surgery may be required at some point after initial placement. Problems such as deflation/rupture, capsular contracture, infection or migration can require removal of an implant or expander. Abnormal scarring may require additional surgery.

# Dissatisfaction with cosmetic results

Dissatisfaction results such as wrinkling, asymmetry, implant displacement (shifting), incorrect size, unanticipated shape, implant palpability, scar deformity, hypertrophic (irregular, raised) scarring, and/or sloshing (with implants containing saline) may occur. Careful surgical planning and technique can minimise but not

always prevent such results.

#### Costs of breast implants and expanders

Medicare benefits are payable in relation to the following medical services:

- 1. The insertion of breast implants or expanders where surgery is required for medical reasons such as following mastectomy.
- 2. The removal and/or replacement of implants or expanders where clinically indicated. In general, the costs of any surgery will vary depend on whether the surgery is performed in a public or private hospital. Your surgeon and anaesthetist may charge a gap above the schedule fee. Additional tests such as pathology and radiology will add to the costs of surgery. The cost of implants and expanders is separate and may be covered by some insurance policies.

Private patients in either public or private hospitals are required to meet accommodation and all other charges by the hospital, either personally or through private health insurance.

# Risks Common to All Operations

#### Discomfort and pain

The severity and duration of post-operative pain varies with each individual. Mild to moderate discomfort or pain is normal after any surgery and can be expected after breast reconstruction. Pain will be worse when chest wall muscles are used with arm movement, coughing or sneezing. If the pain becomes severe and is not relieved by pain medication you may have a complication. In this case you should contact your surgeon.



#### Nausea and vomiting

Nausea and vomiting typically relate to the anaesthetic and usually settles quickly. In some cases persisting nausea and vomiting may relate to pain relieving medication or other medications like antibiotics. Infection may also cause nausea and vomiting. If nausea and vomiting persist you may develop dehydration. You should contact your surgeon if nausea and vomiting persist.

#### Swelling and bruising

Moderate swelling and bruising are normal after any surgery and can be expected after breast reconstruction surgery.

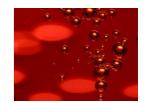
Swelling and bruising may take 4 to 6 weeks to settle. Swelling and bruising are expected to settle faster by wearing a tight bra or garment and with application of arnica ointment to the skin of the chest wall and breast for the first 4 weeks following the operation.

Severe swelling and bruising may indicate bleeding or possible infection. Discolouration from bruising may take several weeks to resolve.

Intermittent swelling of the breast after breast reconstruction may persist for several months after surgery.

# Bleeding and haematoma

Bleeding is always possible after any operation. Some bleeding will result in bruising. Continued bleeding may result in continuous ooze from the suture line or from the drain holes sites or may result in a collection of blood in the breast. Accumulated blood in the breast will cause pain and swelling in the breast.



You should notify your surgeon if bleeding after surgery persists.

Small collections of blood under the skin usually absorb spontaneously. A large collection of blood (haematoma) may produce pressure and complications to healing of the skin.

Most haematomas occur in the first 24 hours and may require aspiration or surgical drainage in an operating room and a general anaesthetic to drain the accumulated blood.

The presence of a haematoma, even if evacuated, may predispose to infection and antibiotics are often recommended. Infrequently haemorrhage can happen 7 to 10 days following breast reconstruction. Possible factors for late bleeding include infection, extreme physical exertion, aspirin ingestion or an unrecognised bleeding disorder.

Aspirin, anti-inflammatory tablets and mega doses of certain vitamins (vitamin E) can influence blood clotting and cause excessive bleeding. It is recommended that you do not take any aspirin, similar drugs like cartia, astrix or non-steroidal anti-inflammatory medications for ten days before surgery, as this contributes to a greater risk of bleeding, bruising, swelling and infection. A single tablet is enough to increase the risk of bleeding.

If you take an anticoagulant like heparin or warfarin, you will need to discuss these medications with your surgeon prior to your breast reconstruction surgery.

Hypertension (high blood pressure) that is not under good medical control may also cause bleeding during or after surgery.

# Seroma

Yellow fluid (seroma) may accumulate in the reconstructed breast following surgery, trauma or vigorous exercise, especially in the first month following surgery.

The accumulated fluid will cause swelling and pain in the breast.

While the body absorbs small seromas with rest, larger ones need needle drainage or additional surgery to drain the fluid from around the breast implant or expander.

A seroma may contribute to infection and/or to the formation of a pseudo-bursa.

#### Inflammation and infection

Infection may occur after any surgery.



Most infections occur within 3 to 5 days after surgery and may cause swelling, redness and tenderness in the skin around the suture lines. A surface infection may only require antibiotic ointment.

Occasionally an offensive discharge may occur from the suture line. Deeper infections will require treatment with antibiotics. Some deep infections and development of an abscess (collection of pus) will require additional surgery under an anaesthetic to drain the abscess and remove dead tissue in an operating room. Implant or expander removal may also be required.

Infection may cause wound breakdown or skin slough (loss). Both wound breakdown and skin slough will result in delays to healing and possible implant or expander exposure and an increase in scarring.

Additional surgery to deal with wound breakdown and skin slough will be required. Additional surgery may involve removal of the breast implant or expander and possible flap reconstruction. More scarring, and further surgery can be expected in the long term.

Some surgeons will prescribe prophylactic (preventative) antibiotics to be used around the time of breast reconstruction surgery.

#### Crusting along incision lines

Crusting along suture lines should be prevented with frequent and regular washing of your suture lines with antibacterial soap (sapoderm, gamophen) and application of antibiotic ointment or soft white paraffin if required. Careful drying of the suture lines with a clean towel will be required to prevent moisture.

#### **Numbness**

Small sensory nerves to the skin surface are occasionally disturbed when the incision for breast reconstruction is made, or interrupted by undermining of the skin during surgery. Numbness of the skin of the reconstructed breast gradually returns - usually within 3 months as the nerve endings heal spontaneously. Return of sensation may sometimes take up to 2 years and numbness may be permanent.

#### Itching

Itching and occasional small shooting electrical sensations within the skin of the breast frequently occur as the nerve endings heal. Ice, skin moisturisers and massages are frequently helpful. These symptoms are common during the recovery period and may persist for several weeks after surgery.

#### **Necrosis**

Necrosis is the formation of dead tissue around the wound. This may prevent wound healing and require surgical correction and/or implant removal.

Unsatisfactory scarring may occur following necrosis.

Factors associated with increased necrosis include infection, use of steroids in the surgical pocket, smoking, chemotherapy/radiation and excessive heat or cold therapy.

#### Wound separation or delayed healing

Any surgical wound, during the healing phase may separate or heal unusually slowly for a number of reasons or due to complications. This can occur as a result of inflammation, infection, wound tension, excess external pressure and decreased circulation. Some people may experience slow healing due to unrelated medical problems. Smokers have a greater risk of skin loss and wound healing complications.

Wound separation may also occur after suture removal.

Wound separation will require frequent wound dressings and healing will be delayed. If delayed healing occurs, recovery time will be prolonged, (weeks to months), and the final outcome of surgery may be affected. More scarring can be expected.

Further surgery may be required to remove any non-healed tissue and to obtain wound closure. Skin grafting may also be required to achieve wound closure.

Poor scars will result following wound healing problems and additional surgery may be desired 6 to 12 months after the initial surgery to improve scarring.

#### Increased risk for smokers

Smokers have a greater chance of infection, skin slough (loss), underlying fat loss (necrosis), and poor wound healing, because of decreased skin circulation. Bleeding and haematoma formation are more common in smokers than non-smokers.

Smoking also predisposes to life threatening complications like deep vein thrombosis (DVT), pulmonary embolism, pneumonia or massive infection.



It is strongly recommended that you cease smoking 4 weeks prior to and 4 weeks after your surgery.

#### Sensitivity or allergy to dressings and tape

Skin or localised allergies may occur to topical antiseptic solutions, suture materials, soaps, ointments, tapes or dressings used during or after surgery. Such problems are unusual and are usually mild and easily treated. Please advise your surgeon of any skin irritation, itch, blisters or redness that may develop beneath your dressings. Allergic reactions resolve after removal of the causative agent and may require additional treatment.

#### Suture complications

Suture reaction or local infection may occur when subcutaneous sutures (sutures under the skin) are used. Exposed sutures will require suture removal for local healing to progress. Skin sutures may become buried under the skin during healing and subcutaneous sutures may not dissolve (stitch granuloma). Additional surgery may be necessary to remove buried sutures or granulomas. Suture marks in the skin can occur if skin sutures or staples are used to close your surgical incision.

#### Skin scarring

All surgical incisions produce scarring and although scars are inevitable, some are worse than others, and the quality of the final scars is unpredictable and not

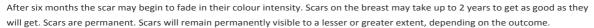
entirely under the control of the surgeon. Some areas on the body scar more than other areas, and some people scar more than others.

Scars may be worse if there is a tendency to keloid scarring, in the younger person or if there has been a delay in healing due to infection or wound breakdown.

Your own history of scarring should give you some indication of what you can expect. Please ask your surgeon about scar management.

#### Red and discoloured scars

The appearance of your surgical scar will change during the various stages of wound healing. Some scars become more red and somewhat raised and excessive between six weeks and three months.





A brown discolouration in a scar usually settles with time. White scars are permanent and there is no known satisfactory treatment. Please ask your surgeon about scar management.

#### Abnormal scars

Abnormal scars may occur even though careful surgical techniques are used and uncomplicated wound healing occurs after surgery. Scars may be unattractive because they are raised, thick (hypertrophic or keloid), stretched (wide), depressed, or of a different colour to the surrounding skin. An abnormal scar may have visible suture marks. Abnormal scars may occur both within the skin and the deeper tissues.

Abnormal scars occur more commonly in some skin types, in the younger patient or if there has been a delay in healing due to infection or wound breakdown. Most scars improve with time but some may require additional treatment.

Thick scars may respond to taping, placement of silicone sheeting onto the scars, serial injection of steroid into the scars or surgical scar revision. Wide scars may require scar revision surgery to improve their appearance. Surgical scar revision may be disappointing especially in the younger patient.

Please ask your surgeon about scar management.

#### Asymmetry

The human body is normally asymmetrical. Despite surgical allowance for correction, the normal variation from one side of the body to the other will be reflected in the results obtained from your breast reconstruction. Perfect symmetry may not be attainable after breast reconstruction.

#### Injury to deeper structures

Blood vessels, nerves and muscles may be injured during breast reconstruction. The incidence of such injuries is rare.

# Post-operative fatigue and depression

It is normal for people to occasionally experience feelings of depression for a few days after surgery, especially when the early postoperative suture line, swelling and bruising is seen. The post-operative emotional low improves with time. Physical recovery from any operation and anaesthetic is gradual.



# The undesirable result

The undesirable result occurs because of limitations of the human tissues and skin. On the other hand you may be disappointed with the results of surgery if they have not met your expectations. Your expectations may leave you dissatisfied with the results of your breast reconstruction, despite having an adequate surgical result. Additional surgery may or may not improve the results of surgery.

#### The unfavourable result

The unfavourable result may relate to the appearance of the reconstructed breast, asymmetry, or scar related problems. Additional surgery may be required to improve your results.

#### Need for revisional surgery

Every surgery has associated risks and complications that you need to be aware of. Should a complication occur, additional surgery or other treatment might become necessary. Revisional procedures are less predictable and involve more risks. You must consider any revisional surgery carefully after discussion with your surgeon.



The practice of medicine and surgery is not an exact science. Although good results are expected, there is no guarantee or warranty expressed or implied, on the results that may be obtained.

If revisional surgery is required, you may incur further surgical, anaesthetic, pathology and hospital fees. These fees may be covered if you have private health insurance, depending on your level of cover. These fees will be your responsibility; so careful financial planning is required before you embark on any form of surgery.

Private Health Insurance is strongly advised for any surgery. Please speak to your surgeon regarding the costs of treating complications.

#### Chronic pain

Following surgery, abnormal scarring in the skin and deeper tissues may trap nerves and produce pain. Uncommonly, persistent or chronic pain that is of an unknown or ambiguous cause may develop.



This type of chronic pain may be difficult or impossible to correct.

# Long-term effects

There are many variable conditions that may influence the long-term result of your breast reconstruction surgery. Subsequent alterations to your body contour may occur as the result of aging, sun exposure, weight gains or weight loss, pregnancy, illness or other circumstances not related to your surgery.

Additional surgery or other treatments in some cases may be required to maintain or improve the results of your operation.

#### **Deep Vein Thrombosis**

A deep vein thrombosis is a blood clot occurring in the deep veins of the legs/calves. It causes pain and swelling in the affected leg and is potentially life threatening.

Treatment for deep vein thrombosis is essential and involves blood-thinning agents. Complications of a deep venous thrombosis include clots spreading from the legs to the lungs or heart and may cause shortness of breath, chest pain or death. If you are undergoing surgery, the risk of deep vein thrombosis relates to the type of surgery and the duration of the procedure.



Some people are more prone to developing deep venous thrombosis than others. These people may be of advanced age or people who have had a deep vein thrombosis in the past. Varicose veins are a risk factor as are certain medications like hormone replacement therapy and the oral contraceptive pill.

Smoking increases the risk of forming a deep vein thrombosis as well. Preventive treatment for deep vein thrombosis may be recommended and may consist of compression stockings, early ambulation or blood thinning agents. Your risk of DVT will be automatically calculated by this web site, and shall be presented to you later

#### Anaesthetic related risks

Anaesthetic complications, although uncommon, do occur and should be discussed thoroughly with your anaesthetist prior to your surgery.

Allergic reactions to drugs used in anaesthesia are rare (1 in 10,000).

Systemic reactions may also occur to drugs used during surgery and prescription medicines. Allergic reactions may require additional treatment.

It is possible to get a sore throat from the tube that is used to administer anaesthesia. You may develop a painful or infected intravenous site.

Other anaesthetic complications should be discussed with the anaesthetist.

# Life threatening complications

Life threatening (or fatal, in some circumstances) complications like pulmonary embolism, cardiac arrhythmia, heart attack, stroke or massive infection are rare. These complications will require additional treatment.

# Pulmonary (lung) complications

Pulmonary complications are uncommon and may occur secondary to either a blood clot starting in the legs (pulmonary embolism), aspiration of stomach secretions or partial collapse of the lungs after general anaesthesia.

# **Before Your Operation**

# Organise yourself for after your surgery

- Organise how you will get to and from hospital.
- Arrange to have someone at home with you for at least 2 or 3 days after you leave hospital.
- Organise help with your shopping, laundry, housework, pets, lawns, etc.
- Get all your pre-operative tests.
- Arrange leave from work and any financial chores as required.

#### Your Health

Surgery and anaesthesia impose stress on your body.

The state of your health will be determined how well your body will cope with this stress.

It is important that you maximise your general health by exercising, not smoking and having regular checks with your GP, so that conditions such as hypertension, diabetes etc can be controlled.

### **Smoking**

Smoking increases the risk of post-operative complications after surgery. It is recommended that you stop smoking for 4 weeks prior to your surgery and for 4 weeks after.

If you need help to give up smoking, speak to your G.P. who can prescribe medication to help you, speak your chemist who can advise you about nicotine replacement therapies or call the national QUIT LINE on 13 18 48.

# Hospital

Depending on your pain tolerance and your home situation, it may be in your best interest to stay overnight in hospital. When in hospital you may have a urinary catheter, drains, a drip for fluid and pain relief and in some cases PCA machine for pain relief. Drain tubes and dressings are likely to be removed before you are discharged from hospital.

# Fasting, fluids, food

Fasting for surgery means that you cannot eat any food, or drink any fluid, after midnight the night before your surgery. A stomach full of fluid or food will mean that your anaesthetic may be dangerous and your procedure may be delayed or cancelled.

Adults who are fasting should have nothing solid to eat, and drink no milk-containing fluids for 6 hours prior to an operation. You may







have up to 1 glass of water per hour up to 3 hours prior to surgery.

If you are in hospital a sign over your bed will read "fasting", "nil by mouth" or "NBM".

If you take medications in the morning, these should be taken as normal on the morning of your operation with a sip of water at 6 am.

NB. Diabetic tablets and insulin should be withheld while you are fasting. When you brush your teeth in the morning, spit out any water rather than swallowing it.

#### Medications

You will be required to list all your medications by writing down the name, the dose and the day each medication is taken. If this is too difficult for you, ask your regular doctor to make a list of your current medications for you. It is important that you also bring all your medications to hospital with you.

Continue to take all your routine medications up to the time of admission to hospital EXCEPT blood thinning tablets like warfarin/coumadin. These medications must be stopped 5 days before surgery. You should discuss these medications with your surgeon.

Tablets like aspirin, astrix, plavix, iscover, cardiprin, and tablets for arthritis, rheumatism and gout, like brufen, Clinoril, feldene, indocid, orudis and voltaren must be stopped 10 days before surgery.

If you are not sure about your medications and the effect that they may have on your surgery please seek advice from your surgeon in advance of your surgery.

#### Other medications

Antibiotics and small doses of blood thinning agents may be prescribed prior to your surgery.

#### Diabetes mellitus

If you have diabetes you must tell your surgeon prior to your admission date. You must also tell the staff at the time of your admission. Special arrangement will be made for you as necessary.

Your blood sugar levels will be monitored from the time you start fasting until normal eating resumes. Do not take any diabetic tablets on the morning of your surgery.

#### Skin preparation

You may be required to shower at home with an anti-bacterial soap such as sapoderm or gamophen prior to your surgery. The same soap can be used after your surgery as well.

You may be required to have a shower in hospital with an antiseptic solution before your surgery.

# A responsible person

A responsible person may be required to accompany you home after surgery. A responsible person is an adult who understands the postoperative instructions given to them and is physically and mentally able to make decisions for your welfare when appropriate.



You will need to arrange for a responsible adult to drive you after your surgery. A suitable vehicle is a car or similar. A taxi is only acceptable if someone OTHER than the taxi driver accompanies you. Public transport such as a bus is NOT acceptable.

# General exercise

It is important that you maintain your fitness and you should continue your normal activities prior to your surgery. If time permits you may try to increase your fitness level gradually. Your fitness will be of benefit to your overall recovery after surgery. Walking is an excellent way of improving fitness and is recommended.

#### **Bowels**

If you normally take medication for bowel problems you will need to bring these medications to hospital with you. It is common to develop constipation after surgery that may require treatment.

#### Pain relief in hospital

It is expected that you will have pain and discomfort after your surgery. The amount and severity of pain will vary from person to person.

Narcotics (morphine, pethidine, fentanyl) are used to relieve pain. Narcotics are not addictive in the amounts required to relieve

You may be given a PCA (Patient controlled analgesia). A PCA allows you to regulate the amount of medication that you need to control your discomfort. This is achieved by pushing a button to administer a pre-prescribed dose of narcotic through your intravenous drip.

It is important to limit the amount of discomfort that you have, so that you are able to do your breathing and general exercises as directed by your physiotherapist.

Any initial severe pain and discomfort will be managed with intravenous medication such as morphine, pethidine or fentanyl. Removal of tubes and drains usually results in a significant reduction of pain. The PCA machine is usually replaced with pain relieving tablets before discharge from hospital.



Pain, aches and discomfort may still be present when you leave hospital and may continue for several weeks. It is important when







you are at home to maintain control over your pain, aches and discomforts.

Drugs for pain relief vary in strength and can "generally" be related to pain severity, BUT remember also that individuals have differing responses to pain and pain relieving medications.

As a guide and for your knowledge, the range of medication by drug strength from weakest to strongest is as follows:

Mild pain relief will be required for mild pain. Such pain relieving medication includes panadol, paracetamol, panamax and panadeine.

Moderate pain relief may require medications such as digesic, panadeine forte, tramyl, endone or oxycodone. You need to be aware that some pain relieving medications may contribute to persisting nausea and vomiting and will contribute to constipation in the post-operative period.

Anti-inflammatory drugs such as vioxx, celebrex, brufen, naprosyn and indocid will contribute to effective pain relief when taken with mild pain relieving tablets.

If you have persistent unrelieved pain you may need to be seen by a doctor to exclude another cause for the pain.

#### Constipation

If you normally take medication for bowel problems you will need to bring these medications to hospital with you. It is common to develop constipation after surgery that may require treatment.

Prevention of constipation begins on the day of surgery and continues until the bowel returns to "normal" function, which is usually once the need for pain medication ceases.

Medications for constipation such as coloxyl and senna or lactulose can be purchased from the local chemist without a prescription. Eat fresh fruit and vegetables, take extra fibre and increase your exercise. Drink plenty of water, providing you are not on restricted fluids for any reason.

#### Other

It is important that you try to retain your identity as a normal person whilst you are in hospital. Make sure that you ask plenty of questions about what is happening to you. Feel free to share your concerns with the nurses, doctors, physiotherapists and other professionals that are involved in your care.

# **After Your Operation**

# On waking

You will have dressings over your breasts. Small drain tubes will come out at the side of the chest. You will be propped up with pillows behind your head. Your chest will be sore.

#### Discomfort

You can expect to have some discomfort when you wake up after a breast reconstruction. Your head will be elevated to reduce pain and swelling in the breasts. Increasing pain in the reconstructed breast may be due to a complication.

You will need to remember to move your legs to keep the circulation flowing and to take deep breaths to expand the lungs.

Care should be taken when moving around in bed. Rolling from side to side is preferable to lifting your body. Lifting your body may place stress on the chest wall muscles and the suture line.



# T.E.D. stockings

You will be fitted with TED stockings before your breast reconstruction surgery and you will wake from surgery with the stockings on. TED stockings help to prevent blood clots from forming in the legs. TED stockings should be worn whilst you are immobile and you may be required to wear the stockings for up to 2 weeks following surgery.

#### Garment

When dressings are removed your surgeon may fit you with a bra or other support garment. The bra or garment provides support for the breast and helps to reduce swelling and pain post surgery.

The bra or garment should be worn day and night for about 2 weeks after surgery. It may be removed to allow you to have a shower. Depending on the advice of your surgeon, the bra or garment may have to be worn during the day for 4 to 6 weeks following your operation.

For continuing support after this time a comfortable bra or support underwear may need to still be worn for up to 3 months following surgery.

#### Catheter

A bladder catheter may be used to allow you to rest in bed without the need to get up to go to the toilet. It is usually removed after 1 to 2 days.

# Walking

Initially walking will be more comfortable if it is slow and you are hunched over. With time you can straighten out to walk.

#### Pain relief

You will need to take painkillers as provided. It is recommended that you avoid aspirin or aspirin based products, as they will promote bruising and bleeding. The usual medications given in the postoperative period consist of panadol, panadeine, panadeine forte, panamax, digesic, and endone. These medications may be combined with anti-inflammatory medications such as vioxx, celebrex, or brufen. Make sure that you have a postoperative pain regime at the time of discharge



and that you understand the medications that you are taking and what they are designed to do for you.

#### Sleeping tablets

One or two sleeping tablets (normison, temazepam, ativan) may be taken at night, if necessary, to help with sleeping in the first few days after surgery.

#### Other medications

Your surgeon may prescribe a course of prophylactic (preventative) antibiotics.

#### Nausea and vomiting

Nausea and vomiting may be due to the anaesthetic or post-operative medication (like pain killers or antibiotics). Apart from being unpleasant, vomiting will cause pain around the chest wall. Medication to prevent nausea and vomiting may be required.

If prolonged, nausea and vomiting may be related to a complication like infection and may cause dehydration. You need to inform your surgeon of prolonged nausea and vomiting.

#### **Bruising**

Bruising of the body (breast, upper abdomen) after breast reconstruction surgery is usually maximal at approximately 48 hours after surgery. Most bruises will resolve by 2 weeks. Gentle massage with a moisturising lotion (sorbolene), or arnica cream may help to dissipate bruising.

#### Bleeding or ooze

There may be ooze of blood from any of the suture lines or from the drain tube holes. Any ooze should resolve within 24 to 48 hours. Persistent or offensive ooze should be reported to your surgeon.

# **Swelling**

Swelling in the breast can occur for 4 to 6 weeks after breast reconstruction and sometimes, intermittent swelling may take up to 12 months to settle. Please ask your surgeon how long swelling should take to resolve. Swelling lasting longer than this time may be due to a complication, and should be reported to your surgeon.

### Ice packs

At home a mouldable cold pack or a small bag of frozen peas wrapped in a tea towel may help to reduce swelling, bruising, and pain. Cold packs can be applied to the breast (for 20 minutes every 1 to 2 hours) in the first 48 hours after surgery to help minimise swelling and bruising. The cold packs should not hurt.

If cold packs are uncomfortable, don't use them as often. After a few days gentle daily massage with a bland moisturising cream after your shower will help to resolve bruising and any lumpiness.

#### Dressings and Drains

Dressings and drains following breast reconstruction may be removed as early as 24 to 48 hours after your surgery. If there is a lot of drainage, then the drains will remain for longer. Please ask your surgeon how long the dressings need to stay on. Steri-strips or tapes may be present on the suture line and will need to be changed regularly. Check with your surgeon if you are able to shower.



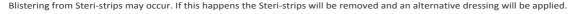
#### **Sutures**

Sutures may be beneath the skin and will absorb with time. The aim of absorbable sutures beneath the skin is to provide wound support for a longer time than skin sutures, so that scar stretch can be minimised.

Occasionally the body will want to extrude these sutures. A sore or a pimple on the suture line may indicate an underlying suture trying to break through the skin. This suture can be removed as soon as it breaks through the skin. Antibiotic ointment or betadeine may be required along with a small dressing until the area heals. Infrequently a lump forms related to a suture that has not dissolved (a stitch granuloma). This stitch granuloma may need to be excised as a local anaesthetic procedure.

Sutures or staples may be present in the skin. These sutures or staples will require removal at some stage after your surgery. The normal time frame is anywhere between 7 days to 14 days depending on the surgery. Suture removal is usually arranged with the surgeon.

Some surgeons place Steri-strips over the suture line. Steri-strips are meant to stay intact and are usually removed one week after surgery. You may be able to shower.



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# Cleaning

Having a shower and getting your sutures wet may be permitted by your surgeon after the dressings (and drains) have been removed. An antibacterial soap (sapoderm, gamophen) may be recommended.

You will need to pay attention to washing the suture line. Suture lines should be carefully dried with a clean towel. If your suture line has steri-strips or tape, wash over the tape and dry it.

Occasionally the suture line may become red and ooze. If this occurs tapes are usually removed and antibiotic ointment or betadeine may be required. Your surgeon may prescribe antibiotics as well.

Some surgeons will prefer you to keep your sutures dry. Please check with your surgeon and ensure you follow your surgeon's instructions about wound care.



#### Travel

A breast reconstruction is performed under general anaesthesia and a hospital stay will be necessary. When you are going home after surgery a family member or friend must drive you and someone should stay overnight or until you are well settled at home. You may need help from a relative or friend at home during the first few days after your breast reconstruction.



If you have any questions about these matters, please speak to your surgeon.

#### Anaesthetic effects

The effects of an anaesthetic may still be present 24 hours after your procedure, even if you do not feel them. Your reflexes will be slower and you are at risk of injury. It is illegal to drive while under the influence of a drug (even a prescribed one) and you could be charged. Do not make important decisions or sign legal documents for 24 hours after an anaesthetic. Take care with alcohol intake after surgery because medications and alcohol may interact with the residual anaesthetic. Discuss your normal medications with the anaesthetist.

#### Readmission to hospital

Rarely you may need to be re-admitted unexpectedly to hospital. The most common cause is persistent nausea and vomiting, anxiety, the need for unexpected additional pain relief or for treatment of unexpected complications of surgery such as bleeding, wound problems or infection.

#### Activity

Too much activity too soon will risk delays in healing or increase the risk of complications. Try to walk in a stooped manner. Sleeping head up and with lots of pillows behind your head should continue for two weeks after surgery. Try to avoid any straining or rushing around.

You may go to the bathroom, walk around the house sit and watch TV, etc., but no matter how good you feel do not clean the house, engage in heavy manual work, go to the gym etc. for 4 weeks following your surgery. This also applies to sexual activity.

#### Sport

Slow walking on the flat for exercise is often therapeutic in the early post-operative period. Your body will dictate whether you are able to safely recommence your exercise program. More strenuous exercise like fast walking, running or swimming may commence after 4 to 6 weeks.

More strenuous exercise like tennis or contact sports can commence after 6 to 8 weeks. As a general rule: if it hurts, don't do it. Please ask your surgeon when you can start exercising.

Localised sore areas within the reconstructed breast are not uncommon.

#### Sun exposure

If fresh scars are exposed to the sun, they will tend to become darker and take longer to fade. Sunscreen on sun-exposed scars can help to fade scars. Take extra care and precautions if you are planning to tan, as some areas of your body may be temporarily numb after surgery and you will not "feel" a sunburn developing.

#### Diet

Your post-operative diet should consist of fluids initially then soft food that is easy to prepare. If you have any postoperative nausea, carbonated sodas and dry crackers may settle the stomach. Small frequent meals after surgery will be more suitable and comfortable.

# Vitamins

Although not proven, there is some suggestion that multivitamins prior to and after surgery may aid in wound healing. Avoid mega dosing on vitamins prior to surgery.

#### **Smoking**

Smoking reduces capillary blood flow to the skin and may result in delays to wound healing or complications of your breast reconstruction. Any coughing may disrupt the muscle repair. Smoking not only affects wound healing; it also increases the risk of bleeding, wound infections, post-operative chest infections.

Smoking also increases the risk of developing a blood clot in the legs that can travel to the lungs. It is recommended that you cease smoking at least 4 weeks prior to your surgery and for 4 weeks after.

#### Alcohol

Medications and alcohol may interact with the residual anaesthetic and prescription pain medicine.

Alcohol also dilates blood vessels and may increase the risk of postoperative bleeding.

It is recommended that you avoid alcohol for the first three days after surgery and restrict your alcohol intake for the first month.

#### Driving

It is recommended that you do not drive for a certain period of time after a breast reconstruction. To be able to drive safely you must have full use of your reflexes to drive, and any post-operative discomfort will inhibit your reflexes.

If pain will inhibit them, don't drive. In the interest of safety whilst driving, and legally, you must wear a seat belt across the chest.

You may resume driving when you feel you are able, but it is advisable to discuss this with your surgeon or check with the road traffic authority first.



#### Recovery time

You must allow yourself adequate recovery time. You will have restriction to mobility for up to 4 weeks. Too much activity too soon will increase the risk of complications such as seroma (fluid around the breast implant or expander), bleeding, infection and delayed healing. It would be wise to ensure you have adequate time off work.

You must also allow sufficient time for your body to recover from the effects of anaesthesia and surgery. Discuss the expected time for recovery with your surgeon prior to your surgery and allow plenty of time for adequate recovery.

#### Healing

Everyone heals at a different rate. The ability to heal is variable and depends upon a number of factors such as your genetic background, your weight, your overall state of health and lifestyle (exercise, diet, smoking, drinking, etc.). Your attention to preparing yourself for surgery will be manifest in your post-operative recovery. Many people believe the surgeon "heals" the patient. Not one person can make another heal. Your cooperation and close attention to pre and postoperative instructions is extremely important and is in your best interest.

#### Following instructions

A major factor in the course of healing is whether you follow the instructions given by your surgeon and the nurses in the surgery.

Such guidelines are designed to promote the healing process and to prevent the occurrence of anything that may interfere with your recovery.



It is imperative that you recognise that you are a partner in this process and have a responsibility to follow instructions carefully. The instructions, based on broad experience, are designed to give you the best opportunity for healing without delay or surprise.

#### Depression

Depression is a normal reaction to surgery. The third day following your surgery may be the worst. You may be teary. It is not uncommon to experience a brief period of "let-down" or depression after any surgery.

You may subconsciously have expected to look and feel better "instantly," even though you rationally understood that this would not be the case.

Day 3 post surgery may be the worst. As healing occurs, these thoughts usually disappear quickly.

If you feel depressed, understanding that this is a "natural" phase of the healing process may help you to cope with this emotional state.

### Support from family and friends

Support from family and friends can be very helpful, but because they may not understand what constitutes a normal postoperative course, their comments may unintentionally create emotional turmoil for you.

The staff at the surgery and your surgeon will tell you honestly how you are doing and what to expect.

Please trust in your surgeon's knowledge and experience when your progress is discussed with you.

# Complications

Complications are infrequent. When complications occur, it is seldom a consequence of poor surgery or poor postoperative care. Complications are more likely to be a result of the variable healing capacity or a failure to follow post-operative instructions. You will be assisted in every way possible if a complication occurs.

Should the unexpected occur, please understand that it is important to follow the advice of your surgeon and nursing staff in order to treat it as effectively as possible. Your surgeon and the nursing staff will ensure that you have support and assistance during this difficult time.

#### **Appointments**

It is very important that you follow the schedule of appointments established for you after surgery. Appointments to see the nurse or the surgeon should be made before or immediately after discharge from hospital.

The review appointment may be the next day or up to one week following surgery.

If no appointment has been made, you must ensure that you contact your surgeon and make a follow up appointment. If you have any concerns don't feel that you are bothering the surgeon or the staff.

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If need be, you can be seen prior to any arranged review appointment to sort out any concerns.

#### Revisional surgery

Occasionally the result of your surgery may not be totally perfect. If you feel that you can focus on the overall degree of improvement instead of any small lack of perfection, then you will reap the benefits of the results of your operation. If small imperfections will prevent you focusing on the degree of improvement after your surgery you probably should not have had an operation.

Your surgeon will use their expertise and experience in their surgical techniques to achieve the best results and ensure their patients receive the most advanced surgical techniques available. They keep updated by attending, national and international aesthetic conferences and seminars regularly.

The surgery performed may not necessarily relate to the methods that are sometimes promoted, or advertised in popular magazines, newspaper articles or on television.

The rate of revisional surgery, even in the most skilled surgical hands, can never be zero because patient and surgeon can control only some aspects of the outcome.



Minor adjustments or additional revisions following cosmetic surgery may be necessary in up to 5% of patients. Revisional surgery is performed after the first postoperative year (12 months after surgery) because resolution of swelling and stabilisation of the final appearance takes at least that long.

During the first year after surgery irregularities, asymmetries or poor contours may sufficiently improve without surgery, so very small imperfections following surgery should not be revised.

Revisional procedures are less predictable and involve more risks. You must consider any revisional surgery carefully after discussion with your surgeon.

If revisional surgery is required you may incur further surgical, anaesthetic, pathology and hospital fees. These fees may be covered if you have private health insurance, depending on your level of cover.

These fees will be your responsibility and you will need careful financial planning you before you embark on any form of cosmetic surgery. Private Health Insurance is strongly advised for any cosmetic surgery.