Understanding Breast Reconstruction Options: Preparing for Your Operation and Managing Your Post-Surgical Recovery

Although you may be going through a difficult time right now, with a new diagnosis of breast cancer, or a strong family history of breast cancer, many decisions have to be made regarding your treatment plan and surgical options. Successful surgery requires a partnership between the patient and the surgeon. Your surgeon will discuss with you and your family, if you so desire, the options available to you for breast reconstruction. The goal of this book is to help you make decisions about what type of surgery you and your doctor choose, anticipate what will occur with each surgery and help manage the post-operative care required.

There are multiple options regarding breast reconstruction and with each of these come unique issues and questions. This book will help answer those questions and act as a reference manual for you. What questions aren’t answered here can be answered by our professional team of nurses, doctors, and staff. This book will be continually updated to encompass all frequently asked questions and concerns. We will also use web based materials to continually enhance the education and resources available to our patients.

This guide will be useful to you throughout your reconstruction process. The Plastic Surgery Team at Moffitt Cancer Center is dedicated to restoring a healthy body image through the most advanced techniques in breast reconstruction.
# Table Of Contents

Breast Reconstruction Decision Making Tool ................................................. 4

## SECTION 1

Choosing Your Breast Reconstruction ......................................................... 6

1.1 What Is Breast Reconstruction? .......................................................... 6

1.2 Types of Reconstruction ................................................................. 9

* Tissue Expander Reconstruction Surgery .......................................... 9

* Latissimus Dorsi Flap Surgery with or without Tissue Expander .......... 18

* Abdominal Tissue Flap TRAM (Pedicle) Flap ....................................... 21

* Abdominal Tissue Flap DIEP Flap or Muscle Sparing Free TRAM .......... 23

* Thigh Flap Reconstruction Surgery TUG or PAP Flap ......................... 26

1.3 Nipple Sparing Mastectomy and Reconstruction ............................. 29

1.4 Nipple Reconstruction ................................................................. 32

## SECTION 2

Preparing for Surgery and What to Expect ............................................... 33

2.1 Tips For Your Operation ................................................................ 33

2.2 Smoking Precautions ..................................................................... 39

2.3 Advice from Other Patients Who Have Gone Through This Journey ... 40

## SECTION 3

Managing Care at Home and Possible Surgical Complications ................. 41

3.1 What to Expect After Surgery ......................................................... 41

3.2 Instructions When You Go Home ................................................... 42

3.3 Managing Your Scar .................................................................... 44

## SECTION 4

Diet and Healing ...................................................................................... 47

## SECTION 5

Sexuality and Breast Reconstructive Surgery .......................................... 49

## SECTION 6

Insurance Coverage for Reconstructive Surgery .................................... 50

## SECTION 7

Caregiver Tips ......................................................................................... 51

Glossary .................................................................................................... 56

Surgical Drain Care ................................................................................ 57

JP Drain Record Sheet ........................................................................... 59

Recommended Resources ...................................................................... 62
## THINGS TO THINK ABOUT

<table>
<thead>
<tr>
<th></th>
<th>Tissue Expanders (Implants)</th>
<th>Latissimus Flap with Tissue Expander (Lat Flap)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of surgery</strong> <em>(Not including mastectomy)</em></td>
<td>1-2 hours</td>
<td>3-4 hours</td>
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<tr>
<td><strong>Length in hospital</strong></td>
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<tr>
<td><strong>Recovery time</strong> <em>(Average return to work time)</em></td>
<td>2-6 weeks</td>
<td>2-6 weeks</td>
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<td>6-9 months</td>
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<td><strong>Possible number of surgeries</strong></td>
<td>3</td>
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</tr>
<tr>
<td><strong>Use of implant</strong></td>
<td>yes</td>
<td>usually</td>
</tr>
</tbody>
</table>

### Goal of Appearance

- **Tissue Expanders (Implants):**
  - Requires use of implant
  - Maintains shape over time
  - Greater possibility of symmetry (looking similar or even) with a bilateral procedure (removal of both breasts)

- **Latissimus Flap with Tissue Expander (Lat Flap):**
  - May require use of implant
  - More natural looking than implant alone

### Recommended if you:

- **Tissue Expanders (Implants):**
  - Want a shorter surgery and recovery time
  - Want both sides reconstructed
  - Do not have enough abdominal tissue or fat elsewhere

- **Latissimus Flap with Tissue Expander (Lat Flap):**
  - Have had radiation in the past
  - Want only one side reconstructed
  - Have a larger body structure/type

### Not recommended if you:

- **Tissue Expanders (Implants):**
  - Are a smoker
  - Want the most natural looking breast
  - Are unable to come to 6-8 weekly visits for expansions

- **Latissimus Flap with Tissue Expander (Lat Flap):**
  - Are a smoker
  - Want the most natural looking breast
  - Are unable to come to 6-8 weekly visits for expansions
<table>
<thead>
<tr>
<th>Abdominal Tissue Flap</th>
<th>DIEP Flap (or Muscle Sparing Free TRAM)</th>
<th>Thigh Tissue Flap</th>
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<tbody>
<tr>
<td><strong>TRAM Pedicle Flap</strong></td>
<td><strong>TUG</strong></td>
<td><strong>PAP</strong></td>
</tr>
<tr>
<td>3-6 hours</td>
<td>6-8 hours (one side)</td>
<td>6-8 hours (one side)</td>
</tr>
<tr>
<td></td>
<td>8-12 hours (both sides)</td>
<td>8-12 hours (both sides)</td>
</tr>
<tr>
<td>3 days</td>
<td>5 days</td>
<td>4-5 days</td>
</tr>
<tr>
<td>6 weeks</td>
<td>4-6 weeks</td>
<td>3-4 weeks</td>
</tr>
<tr>
<td>3 months</td>
<td>3 months</td>
<td>3 months</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

- Natural looking
- Soft to touch
- Flatter stomach
  ~ Often requires another surgery for breast symmetry
- Want natural looking breast(s)
- Have enough recovery time and are healthy enough for a long surgery
- Have had radiation in the past
- Have enough abdominal tissue
- Prefer larger sized breasts
- Are a smoker
- Are on narcotics for chronic pain
- Do not have time off work for a longer recovery time
- Have had abdominal surgery (not including C-sections)
- Have other chronic health problems
- Do not have time off work for a longer recovery time
- Are a smoker
- Are on narcotics for chronic pain
- Have other chronic health problems
- Prefer larger sized breasts
- Do not have time off work for a longer recovery time
- Are a smoker
- Are on narcotics for chronic pain
- Have other chronic health problems
- Prefer larger sized breasts
- Do not have time off work for a longer recovery time

- Natural looking
- Does not use abdominal muscle
- Soft to touch
- Flatter stomach
  ~ Often requires another surgery for breast symmetry
- Want natural looking breast(s)
- Have enough recovery time and are healthy enough for a long surgery
- Have had radiation in the past
- Have enough abdominal tissue
- Want as much abdominal muscle preserved as possible
- Prefer larger sized breasts
- Are a smoker
- Are on narcotics for chronic pain
- Do not have time off work for a longer recovery time
- Have had abdominal surgery (not including C-sections)
- Have other chronic health problems
- Prefer larger sized breasts
- Do not have time off work for a longer recovery time

- Natural looking
- Provides appearance of having an inner thigh lift
- Want natural looking breast(s)
- Do not have enough abdominal tissue or don't want to use your abdomen
- Have had a previous tummy tuck or TRAM
- Have had radiation in the past
- Prefer larger sized breasts
- Are a smoker
- Are on narcotics for chronic pain
- Do not have time off work for a longer recovery time
- Have had abdominal surgery (not including C-sections)
- Have other chronic health problems
- Prefer larger sized breasts
- Do not have time off work for a longer recovery time

- Natural looking
- Good donor site scar
- Provides appearance of having an inner thigh lift
- Want natural looking breast(s)
- Do not have enough abdominal tissue or don't want to use your abdomen
- Have had a previous tummy tuck or TRAM
- Have had radiation in the past
- Prefer larger sized breasts
- Are a smoker
- Are on narcotics for chronic pain
- Do not have time off work for a longer recovery time
- Have had abdominal surgery (not including C-sections)
- Have other chronic health problems
- Prefer larger sized breasts
- Do not have time off work for a longer recovery time
The goal of this book is to help guide you through your breast reconstruction journey. This book discusses the different reconstruction options and helps you and your plastic surgeon decide what type of reconstruction is best for you. It is important to know that not all options are possible for you. You and your plastic surgery team will discuss the options best for you. Just like breast cancer, no two patients are exactly alike and sometimes one size does not fit all.

There are basically two main categories of breast reconstruction; reconstruction with implants and reconstruction using your own body tissue. Sometimes there is a need to combine these two types of reconstruction.

The most common form of breast reconstruction utilizes a breast implant to build a breast mound. Implant reconstruction generally requires less extensive surgery, but more procedures (at least two) are required to complete the process. Additionally, reconstruction with implants often requires the use of tissue expanders. There are a few circumstances when implant reconstruction with either silicone gel or saline implants can be performed without the use of a tissue expander. We will discuss this further along in the book.
What is the difference between immediate reconstruction and delayed reconstruction?

Immediate reconstruction is any type of reconstruction that is done at the time of your mastectomy. Delayed reconstruction is any type of reconstruction that is done after healing from the initial cancer surgery and/or other treatments (chemotherapy and/or radiation) or at a date of your choosing.

What if I need radiation?

If you and your surgeon decide you are a good candidate for breast reconstruction, your need for radiation therapy after mastectomy will impact reconstruction options available to you. If there is question about whether radiation is needed, you will be referred to the Radiation Oncologist prior to your surgery.

If radiation therapy is not expected after mastectomy, the reconstruction process can begin at time of surgery.

If radiation therapy is required, your surgeon may recommend that reconstruction be done at a later date.

Sometimes the final pathology shows unexpected findings after your surgery. In these cases, radiation therapy may be recommended after mastectomy.

If you do require radiation, the following can occur:

- If you choose a tissue expander/implant, it may be left in place or removed. Your radiation doctor may request that the expander be deflated prior to radiation if there is a possibility it may interfere with treatment.

- If you choose reconstruction using your own tissue for coverage, this type of surgery may be done 9-12 months after radiation therapy is complete.

There are possible risks and side effects of breast reconstruction with radiation therapy. These risks apply when you already have a breast implant in place before your breast cancer treatment begins.

Risks with existing implants and a mastectomy

If you have an implant from a previous breast augmentation (cosmetic enhancement), the implant may be located in front of the muscle. If this is the case, it will need to be removed and a new one will be placed behind the muscle. If your implant is located behind the muscle it may be left in place and injury to the implant is less likely to occur. Radiation therapy may increase the chance of capsular contracture happening. You can read more about capsular contracture in Section 1.2, page 14.
What are my options if I do not want reconstruction?

It is important to remember that breast reconstruction is not for everyone. Every woman is different and when presented with the choice, some women elect not to have reconstruction. After your mastectomy, you may choose not to undergo reconstruction. There are options available that may help you feel more comfortable in your clothing and simulate the look of a natural breast under clothing. This may include the use of breast prostheses or form and bras that can be fitted especially for you.

Breast prostheses and forms come in a variety of shapes, sizes, and materials. Many are made of new materials that may be lighter, softer and cooler than the traditional prostheses. Often times you can make an appointment at specialty stores with someone with training in fitting bras and forms. There are even options for bathing suits.

Most of these products are covered by your insurance or Medicare. Ask your doctor to write a prescription for your breast prostheses and mastectomy bras. It would be important to check to see what is covered for you and where you may purchase these products. A handout can be provided to you from the nurses if you are interested in obtaining more information on where to purchase these items and be fitted by a professional.

Breast prosthesis

Some resources with information about breast prosthesis:

- www.tlcdirect.org American Cancer Society’s “TLC Catalog”
- www.ameona.com Ameona Breast Forms
- www.breastprosthesesis.net a listing of several prosthesis manufacturer’s and retailers.
1.2 Types of Reconstruction

>> Tissue Expander Reconstruction Surgery

Breast reconstruction with a tissue expander is a two-step process. The first part of the process is the mastectomy, or removal of the breast, (this may or may not include the removal of your nipple(s)). This part of the surgery is done by your breast surgeon. If your nipple(s) are removed this is discussed in Section 1.4.

Tissue Expander (Remote Port vs. Integrated Port)

Once your breast is removed, your plastic surgeon will place a tissue expander (like a deflated balloon) under your skin and chest wall muscles. This balloon-like device allows the skin and muscle to stretch by filling the expander once a week with saline.

Your plastic surgeon may place some fluid at the time of your surgery so when you wake up your chest will have some contour. The expansion or “fill process” can take 2 to 6 months to “fill” to the desired size. This process is discussed on page 11.

You and your plastic surgeon may decide this surgery is right for you if you want a shorter surgery and recovery time. This may also be the best type of reconstruction for you if you want both sides reconstructed with less extensive surgeries. This surgery would not be the best choice if you want the most natural looking breast or are unable to come to weekly visits for “fills” or expansions.

The length of this entire reconstruction process varies. Your doctor guarantees that the breasts will not look exactly the same when every–thing is completed. The position of the scars, the way the breast heals, and the difference in the amount of fat left on the mastectomy flaps all play a role in the completed look of your reconstruction. Your doctor will do his/her best to make your breasts as even as possible. Additional procedures such as liposuction and fat grafting may be beneficial, but may not be covered by your insurance.

Why can’t I have a permanent implant after the breast tissue is removed, why do I need a tissue expander first?

For breast reconstruction, the implant needs to be placed under the muscle. That muscle and skin needs to be stretched before placing the implant. A tissue expander is used to stretch the skin and muscle to make up the lack of skin from the mastectomy. Once the tissue expansion process is complete, the tissue expander will be replaced with a permanent implant.
What is the difference between breast augmentation and breast reconstruction with an implant?

The main difference between breast reconstruction and breast augmentation done for cosmetic enhancement is that in breast reconstruction, the implant under the skin and muscle creates the look of a restored breast mound. Therefore, irregularities on the implant under the surface of the skin will be more noticeable in a reconstructed breast because the breast tissue has been removed. In augmentation, breast tissue remains in place and the implant sits underneath the breast or underneath the breast and muscle.

<table>
<thead>
<tr>
<th>Implant Reconstruction</th>
<th>Augmentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No breast tissue left after mastectomy</td>
<td>Breast tissue in place</td>
</tr>
<tr>
<td>Tissue expander needed to stretch skin/muscle to create pocket for the implant</td>
<td>No expander needed</td>
</tr>
<tr>
<td>Saline or Silicone implant used</td>
<td>Saline or Silicone implant used</td>
</tr>
<tr>
<td>Covered by insurance</td>
<td>Self pay if cosmetic <em>(Unless needed for symmetry with a breast cancer diagnosis)</em></td>
</tr>
<tr>
<td>MRI needed to watch for rupture of implant <em>(Silicone only)</em></td>
<td>MRI needed to watch for rupture of implant <em>(Silicone only)</em></td>
</tr>
<tr>
<td>Will need to be exchanged at some point, not a lifetime device</td>
<td>Will need to be exchanged at some point, not a lifetime device</td>
</tr>
<tr>
<td>*Capsular Contracture possible</td>
<td>*Capsular Contracture possible</td>
</tr>
</tbody>
</table>

*Capsular Contracture will be discussed in Section 1.2 of this book.*
What to expect with tissue expansion

During your tissue expansion process, or “fill,” you will come into the clinic to meet with a member of your plastic surgery team. Your nurse or doctor will use a small needle to fill your expander every week with 50-100 cc’s of normal saline through a small port on the surface of your expander. This process expands the muscle to make room for when the permanent implant is placed.

Possible side effects of the tissue expansion:

Some patients may experience one or all of the following symptoms:

- Tightness or fullness of the breast
- Soreness
- Muscle spasms
- Pain

These symptoms usually last from 1-3 days after your tissue expansion, but may last longer.

For these symptoms, your doctor may recommend:

- Ice packs or warm compresses, such as a moist washcloth. Wrap in a towel and place in a plastic bag to avoid placing directly to your skin.
- Acetaminophen (Tylenol®), Ibuprofen (Advil®) or a muscle relaxant called Metaxalone (Skelaxin®).
- Do not use a heating pad anywhere on your body. You may have lost some of your sensation from the surgery and will not be able to tell if too much heat is being applied and may burn yourself.

Call your doctor’s office if you experience:

- Redness
- Fever
- Deflation of the expander
  (You will notice a change in the shape and size of your breast. The tissue will become less firm. This is not an emergency and will not harm you. However, please call your nurse as you will need to be seen by your plastic surgeon.)
- Extreme pain

I found it helpful to use an ice pack after the expansion process. The ice pack was helpful for the first 24 hours after expansion. I used the ice pack about once an hour as needed for only 20 minutes at a time. My doctor told me it was important to not place it directly onto the skin but to have something like a towel between the ice and my skin.
1.2 Types of Reconstruction

CONTINUED

What should I wear?

You may want to wear a two-piece outfit such as pants and a top that either buttons or zips up the front to be most comfortable during this process. You may be asked to remove your shirt and change into a gown.

Can I do normal activity after an expansion?

Yes, you may resume your regular activities after an expansion. Ask your doctor if you have more questions about any specific activities.

Am I able to fly while I have tissue expanders?

Yes, you are able to fly while the tissue expanders are in place. Your expanders do not have any components that set off any alarms on the airport scanners.

Am I able to have an MRI?

If you have an integrated or internal port in your expander, you cannot have an MRI performed while it is in place since it contains metal. An MRI is allowed if you have a remote or external port. If you are unsure which type of port you have, please ask your doctor or nurse.

Exchanging your expander for a permanent implant

The surgery for the expander exchange is an outpatient procedure. This means you do not stay overnight in the hospital. There is minimal pain with this and you can return to work when your plastic surgeon says it is OK.

• The technique and placement of the scars will be determined by your plastic surgeon at your second phase planning appointment.
• You will have a dressing in place over your incision prior to discharge.
• Drains are normally not required with this surgery, however if your surgeon thinks it is necessary one may be placed.
• Outer dressings may be removed 3 days after surgery. Dressing instructions will also be provided at discharge from the recovery room.
• The doctor will see you in his/her clinic about 1 week later.
**What is the difference between saline and silicone?**

Breast implants, whether saline or silicone, all have a silicone shell. Both types of implants come in a wide variety of shapes, sizes and profiles. Saline implants are inserted into the body without fluid in them. Once in position, the implants are filled with sterile saline (salt water) to the volume you and your plastic surgeon decide. Silicone implants are pre-filled by the manufacturer. Implants are placed under the muscle for improved coverage, whether for reconstruction or augmentation.

- Rippling of the implant is more visible with saline than with silicone implants. This occurs with reconstruction because of the lack of overlying tissue used to cover the implant.
- There is a smaller scar when saline implants are used for reconstruction.
- There is a lower risk for *capsular contracture* with saline implant than with silicone implants.
- If a saline implant were to rupture, it is seen fairly quickly because of the deflation.
- Silicone implants do not deflate when ruptured. This is why your doctor may order breast MRIs to make sure a rupture has not occurred.

In the past, there were fears about the use of silicone implants due to concerns about silicone leaking. The U.S. Food and Drug Administration (FDA) has since determined that silicone breast implants are safe for both reconstruction and cosmetic reasons.

Discuss with your surgeon any concerns you may have about implants. Implants need to be replaced with surgery at some point in your lifetime. Implants can also leak or tear or develop scar tissue— but these things can be managed effectively by your surgeon.
What are my risks with this type of reconstruction?

Your plastic surgeon will advise you of the risks and benefits of this procedure if she/he feels this procedure may be of benefit to you. As with all surgeries, there are some possible complications with this surgery. Your plastic surgeon will discuss each of these with you at your appointment and again on the day of your surgery.

The possible complications are:

- Infection
- Bleeding
- Scarring
- Muscle and nerve injury
- Asymmetry (breasts not even)
- Deflation of the implant
- Capsular contracture
- The need for further surgery

**Infection** If an infection does occur, it is important that it is caught right away. Signs and symptoms of an infection include: redness or heat at the site, a cloudy drainage at the incision that has a bad odor, or an increase in your temperature. We want to catch any signs of infection early in the reconstruction process so there is a better chance the reconstruction can be saved. You may need to be admitted to the hospital and started on IV antibiotics through a vein in your arm. Depending on how bad the infection is, you may need an additional surgery to remove your expander or implant, wash out the cavity, and place a new expander or implant. In some cases, the expander or implant may need to be removed while the infection heals and a new one placed at a later surgery.

**Bleeding** It is possible, though unusual, to experience bleeding during or after surgery. Should bleeding occur, it may require emergency treatment to drain accumulated blood (hematoma). A hematoma can occur at any time following breast surgery. Do not take any aspirin or anti-inflammatory medications for 10 days before or after surgery, as this may increase the risk of bleeding.

Talk to your surgeon about any non-prescription “herbs” and dietary supplements you take, as these can also increase the risk of surgical bleeding.

**Scars** Your plastic surgeon will use the same incision your breast surgeon used to remove the breast (mastectomy). This incision is usually diagonal and runs along the middle of the breast. You can read more about taking care of your scar in Section 3.3.

**Capsular Contracture** Scar tissue that forms around the implant and squeezes the implant is called capsular contracture. There are 4 grades of contracture (I-IV) that range from soft to hard. Your plastic surgeon may tell you to massage your implants once a day for 5 minutes. Talk to your plastic surgeon about what she/he recommends.
Fat Necrosis or Oil Cyst from Fat Grafting  Patients will frequently develop contour abnormalities after mastectomy and reconstruction that can be minimized with fat grafting. Fat is injected after harvesting it from elsewhere on the body. When the fat is injected, it fills up the skin and smooths out contour abnormalities. It will frequently result in small nodules under the skin that can be felt. These can be fat lobules, fat necrosis, or oil cysts. Typically they are not visible, but are able to be felt. Many women after breast cancer are obviously very concerned about any small mass that can be felt under the skin. If this nodule is in an area where fat was injected, it can typically be followed by the patient and the doctor. Occasionally if the mass changes or is in an area where no fat grafting took place, an ultrasound will be ordered. This is a very effective test to determine if the mass is a fat left behind or potentially something that needs further workup such as a biopsy.

Muscle and nerve injury  There is the potential for injury to deeper structures including nerves, blood vessels, muscles, and lungs during any surgical procedure. The potential for this to occur varies according to the type of procedure being performed. Injury to deeper structures may be temporary or permanent.

Asymmetry  Some breast asymmetry naturally occurs in most women. Differences in breast and nipple shape, size or symmetry may also occur after surgery. Additional surgery may be necessary to correct asymmetry after breast reconstruction.

Need for further surgery  Many variable conditions may influence the long-term result of breast reconstruction with TRAM abdominal muscle flap surgery. Secondary surgery may be necessary to perform additional tightening or repositioning of the breasts.

How long will I be in surgery?  Your surgery may take 1 to 2 hours if you are having one breast reconstructed and 4 hours when both breasts are reconstructed. You will then go to the recovery room and a member of the plastic surgery team will talk to your family. After about 30 minutes to an hour you will go to your hospital room, usually on the 5th floor of the main hospital.

How long will I be in the hospital?  Most patients are in the hospital overnight and go home the next day. You should expect to get out of bed to sit in a chair that evening. You may also be asked to get up and walk around.

How long will it take for me to recover from the surgery?  Some women require 6 weeks and others only require 2 weeks. It is not possible to determine ahead of time how the surgery will affect you. One week after your surgery, you will see your plastic surgery team to evaluate your recovery.
Will I have dressings in place?

You may or may not have a dressing in place. Your incision is closed with absorbable sutures, which means stitches will not need to be removed later. There may also be small strips of paper adhesive over the incision called steri-strips. If these strips are used, they should remain in place until they fall off by themselves or in about 2 weeks, whichever comes first. The outer dressing may also include a white piece of telfa which is secured into place with a thin piece of clear tape called Tegaderm™. In most cases, however, you will not have a dressing and instead closed with Dermabond™, a type of surgical glue.

At home the next day it is OK to shower. If there are dressings over your incision, they are waterproof and it is OK to get them wet as well as the steri-strips if the dressing is removed. Do not allow the water jet from the shower to directly hit the steri-strips; just let the water gently roll over your shoulders. Blot dry when you are done. Do not soak in a tub or get in a pool or hot tub until advised by your plastic surgeon. If you have a dressing (not steri-strips alone) take these dressings off by the third day after surgery (post-operative).

DRAIN CARE You will have drains placed at the time of surgery that exit your skin on the lower side of your chest. These are small tubes that drain any excess blood or fluid. You and your caregiver will be taught how to take care of your drain(s) before you go home from the hospital. Each drain is secured in place with a single small black suture. When you are at home, expect the drains to be uncomfortable. This is normal. Please refer to the Surgical Drain Care section at the end of this book for more instruction.

friendy tip

When I was at home, I would wear my husband’s button up shirts and pin the drains to the inside of the shirt. It was more comfortable walking around the house, and it was comforting wearing his shirt. There are also soft camisoles you can buy with internal pockets specific for the drains. These were very comfortable and sometimes easier than having to pin the drains inside of a shirt.
**PAIN CONTROL**  Your pain will be controlled by oral pain medication (taken by mouth). If you need more pain medication while you are in the hospital, you may have a small button that you can push called a PCA (patient controlled analgesia) that will give you pain medication by an IV in your arm. These medications may cause nausea, so there will be other medications to help prevent this. You will be discharged home the next day with oral pain medication, antibiotics, and a stool softener. If your pain is not controlled by the pain medication provided to you at home, please call the clinic to notify your nurse. After hours, you will be connected to the plastic surgery team on call.

**ACTIVITY**  You should not resume any exercise activity until the drains are removed. Do not go for long walks around the neighborhood, go shopping for hours or go to a baseball game where there is a lot of physical activity. You want to take it easy until the drains are removed. The more exercise and activity you are involved in, the longer you will have to keep the drains. Motion does not allow the skin to stick down to the underlying muscle and tissue. This does not mean you must keep your arms still or remain immobile in bed. It is recommended you do normal household activities, such as your hair and preparing dinner, but it is important that you do not physically strain yourself. During this time of recovery, it may be helpful to arrange for extra help with cleaning, driving, and running errands. You will not be able to drive until you are off of your pain medication, which may be a couple of weeks.
1.2 Types of Reconstruction

CONTINUED

Latissimus Dorsi Flap Surgery with or without Tissue Expander

A latissimus dorsi flap or “lat flap” is done either at the time of your mastectomy, or after the mastectomy has been done and your breast cancer has been treated. This reconstruction may be an option for you if you have had radiation or have had a failed flap procedure. In this procedure, your back muscle and skin are moved to the chest to make a new breast.
This procedure requires a scar on the side of your chest under your arm or along your bra-line on the back.

The plastic surgeon will likely place a tissue expander (like a deflated balloon) under your skin and muscle. Some fluid may be placed at the time of the surgery so when you wake up you will have small contour. Once you are expanded to the size you and your plastic surgeon decide upon, the expander will be replaced with an implant. Tissue Expansion is discussed on page 11.

Taking the back muscle is always a concern for patients. It will not limit you from reaching up to take things from high shelves or keep you from activities such as playing golf, tennis, or swimming.

**How long is the surgery?**

The surgery takes about 3 hours for one side. Based on the amount of skin that needs replacing and the length of the scars, it may take longer. Doing both sides usually takes about 6 hours. You will then go to the recovery room and a member of the plastic surgery team will talk to your family. After about 30 minutes to an hour you will go to your hospital room, usually on the 5th floor.

**How long will I be in the hospital?**

You will spend the night in the hospital, possibly two nights. You will be able to have a meal and should expect to get out of bed to sit in a chair that evening. You may also be asked to get up and walk around.

**How long will it take for me to recover from the surgery?**

Expect to take 6 weeks off work after your surgery. Some patients require 6 weeks and others only require 2 weeks. It is not possible to determine ahead of time how the surgery will affect you; plan on telling your employer 4-6 weeks. You will see the plastic surgery team 1 week after your surgery. They will look at the incisions and possibly remove the drains. Drain removal is often a relief to women after having them for a week or two. The removal occurs in the doctor’s office and most women do not experience pain when they are removed.

**Will I have dressings in place?**

You may or may not have dressings in place. Your incision is closed with absorbable sutures, which means stitches will not need to be removed at a later appointment. There may also be small strips of paper adhesive over the incision called steri-strips. If these strips are used, they should remain in place until they fall off by themselves or in about 2 weeks, whichever comes first. The outer dressing may also include a white piece of telfa which is secured into place with a thin piece of clear tape called Tegaderm™. In most cases, however, you will not have a dressing and instead closed with Dermabond™, a type of surgical glue.
At home the next day it is OK to shower. If there are dressings over your incision, they are waterproof and it is OK to get them wet. If the dressing is off, the steri-strips may also get wet. Do not allow the water jet from the shower to directly hit the steri-strips; just let the water gently roll over your shoulders. Blot dry when you are done. Do not soak in a tub or get in a pool or hot tub until advised by your plastic surgeon. If you have a dressing (not steri-strips alone) take these dressings off by the third day after surgery (post-operative).

**DRAIN CARE** You will have drains placed at the time of surgery that will exit your skin on the lower side of your chest. These are tubes that drain any excess blood or fluid. You will be taught how to take care of your drain before you go home from the hospital. Each drain will be secured in place with a single small black suture. When you are at home, expect the drains to be uncomfortable. This is normal. Please refer to the Surgical Drain Care section at the end of this book for more instruction.

**PAIN CONTROL** Your pain will be controlled by oral pain medication (taken by mouth). If you need more pain medication, you will have a small button that you can push called a PCA (patient controlled analgesia) that will give you pain medication by an IV in your arm. These medications may cause nausea, so there will be other medications to help prevent this. You will be discharged home the next day with oral pain medication, antibiotics, and a stool softener. If your pain is not controlled by your pain medication, please call the clinic to notify your nurse. After hours, you will be connected to the plastic surgery team on call.

**ACTIVITY** You should not resume any exercise activity until your drains are removed. Do not go for long walks around the block or go shopping for hours or go to a baseball game where there is a lot of physical activity. You want to take it easy until the drains are removed. The more exercise and activity you are involved in, the longer the drains will be in place. Motion will not allow the skin to stick down to the underlying muscle and tissue. This does not mean to keep your arms still remain immobile in bed. You can do normal household activities, do your hair, prepare dinner, but do not strain yourself. During this time of recovery, it may be helpful to arrange for extra help with cleaning, driving, and running errands. You will not be able to drive until you are off of your pain medication, which may be a couple of weeks.
Abdominal Tissue Flap Reconstruction Surgery

Abdominal Tissue Flap reconstruction moves tissue from the abdomen to the chest for breast reconstruction. It is done either at the time of your mastectomy, or after the mastectomy has been done and your breast cancer has been treated. Flap reconstruction is typically used for patients who have had a history of radiation or want their reconstructed breast to match their native breast or do not want an implant. This type of surgery requires an incision on the lower abdomen from hip to hip. If you do not have excess abdominal tissue, you may not be a candidate for this type of flap reconstruction.

What are the types of abdominal tissue flaps?

There are 2 types of abdominal flaps that are used to reconstruct breasts. You and your plastic surgeon will discuss which is best for you:

TRAM (Pedicle) Flap: This type of flap uses tissue and muscle (including skin, fat, and blood vessels) from the lower tummy wall to reconstruct a breast mound. It is pedicled (left attached to its base and then tunneled under the skin to the chest area).

DIEP (Deep Inferior Epigastric artery Perforator) Flap or Muscle Sparing free TRAM: This type of flap procedure uses fat and skin from the same area as in the Tram flap, but does not use the muscle to form the breast mound. Blood vessels from the abdominal tissues are attached to chest wall blood vessels with special microscopes. Sometimes a small piece of muscle (about the size of a postage stamp) needs to be taken in addition to the skin, fat and blood vessels. This is called a muscle sparing FREE TRAM. Abdominal wall function after surgery is similar for the DIEP and Muscle Sparing FREE TRAM.
TRAM (Pedicle) Flap

Flap reconstruction may require three surgeries.

- The first of these surgeries is called a delay procedure and is done 2 weeks prior to the flap reconstruction surgery. Your plastic surgeon will place permanent clips on the blood vessels that supply blood to your rectus muscle, or the muscles on each side of your abdomen, to re-route the blood flow. Your plastic surgeon will inform you if you should need this surgery. The DIEP flap does not require a delay procedure.

- The second surgery is the flap reconstruction where the muscle and tissue are moved to form a breast.

- The third is the nipple reconstruction and any lifting or adjusting of the native breast or reconstructed breast is done to make the breasts as even as possible. Nipple reconstruction is discussed in Section 1.4.

Taking the rectus abdominis muscle, or the muscles on each side of your abdomen, is always a concern for patients. These muscles are used when doing sit-ups. This type of surgery will not limit you from reaching up, taking things off of high shelves, picking things up off the floor or prevent you from doing things such as playing golf, tennis, or swimming. It will not limit your activities of daily living.

If only one breast is reconstructed, only one of the two rectus abdominus muscles will need to be taken. After bilateral (both breasts) mastectomies and reconstruction, both rectus abdominus muscles are needed. Therefore, sit-ups would not be possible but you can still do crunches. Even without your rectus muscles, you have other muscles called external obliques, internal obliques, and transversus muscles that will help compensate for the missing muscle.

A piece of mesh is used under the skin on the abdominal wall to enclose the abdomen muscles. Without the mesh, and without the muscle, the abdomen can become weak and a bulge can form. This is not a true hernia, but some people may call it that. This normally does not happen if mesh is placed. The mesh will not disrupt any future surgeries in your abdomen. The mesh becomes incorporated in the tissues and acts just like any other layer of the body.

This surgery takes about 4 hours for one side; both sides can take up to 8 hours. Based on the amount of skin that needs replacing and the length of the scars, it may be longer. When you wake up you will have a breast. You will be sore mainly in the abdomen. You will be in a flexed position (not lying completely flat) in the bed and will need to remain flexed like this for the first 10 days. You may be most comfortable in a recliner.

What to expect after the TRAM Flap

When the staff is helping you walk on your first day after surgery, you will need to walk in a bent over position. This takes tension off of the abdominal incision line. Walking like this over time may cause a low back ache, which is to be expected.
You will have drains placed at the time of surgery. The drains for your breast(s) will exit your skin on your lower chest and you will also have 2 below your abdominal scar. These are small tubes called JP drains that drain any excess blood or fluid. Each drain will be secured into place with a single small black suture. Please refer to Surgical Drain Care section at the end of this book for more instruction.

**PAIN CONTROL** After your surgery and while you are in the hospital, your pain is controlled by oral pain medication (taken by mouth). If you need more pain medication, you will have a small button that you can push called a PCA (patient controlled analgesia) which will give you pain medication by an IV in your arm. These medications may cause nausea. If you experience nausea be sure to tell your nurse. With the abdominal surgery you’ll want to prevent vomiting. There are medications that can help prevent vomiting so please talk to your doctor or nurse.

You will receive oral pain medication, antibiotics and a stool softener when you are discharged to go home the next day. If your pain is not controlled by the pain medication prescribed to you, please call the clinic to notify your nurse. After hours, you will be connected to the plastic surgery team on call.

**ACTIVITY** You can do normal household activities, do your hair, prepare dinner, but do not strain yourself. During this time of recovery, it may be helpful to arrange for extra help with cleaning, driving, and running errands. You will not be able to drive until you are off of your pain medication which may be a couple of weeks.

**DIEP Flap or Muscle Sparing Free TRAM**

These procedures usually require two surgeries. The first procedure involves removing the lower abdominal wall skin and fat tissue along with the blood supply and re-implanting it to the chest wall. Blood vessels from the abdominal tissues are attached to the blood vessels on the chest wall (or sometimes blood vessels in the arm pit area) with the aid of a microscope. This is called microvascular surgery.

The main reason to consider this type of procedure over a more traditional TRAM flap is to minimize the abdominal wall weakness that can occur after removing the rectus muscle “or the six pack.” The DIEP flap or muscle sparing free TRAM procedure tries to leave all or most of the muscle intact. Like a tummy tuck, this operation also leaves a a long scar across your lower stomach which is usually concealed by undergarments.

This procedure takes considerably longer than other procedures because microsurgery is performed. Operating time for the procedure typically lasts 6 to 8 hours, in addition to mastectomy procedure time (if the reconstruction is done at the same time). If this surgery is for both breasts then it might take 8-12 hours.

The second surgery is for nipple reconstruction (discussed in Section 1.4) and any lifting or adjusting of the remaining breast or reconstructed breast to improve the overall symmetry. This second procedure is usually a 1-2 hour outpatient procedure and is 3-6 months after your first procedure.

For DIEP, Muscle Sparing Free TRAM, PAP or TUG we may obtain imaging of the blood vessels in your thigh using either a CT scan or MRA. This helps with mapping without the surgical plan before your operation.
friend ly tip

I found that after surgery, it was easier to eat several small meals during the day. Your stomach will feel “tight” after surgery and you will feel full quickly.

Studies have shown that women who abdominal flap reconstructions, (TRAM, DIEP flap or free TRAM) have the highest short and long term satisfaction as well as improved quality of life. On the other hand, these procedures are complex and require longer time under anesthesia; therefore, not everyone is a candidate. Additionally, previous abdominal surgeries and a lack of abdominal tissue may prevent you from having these procedures. You and your plastic surgeon will determine what’s best for you.

What to expect after the DIEP or Muscle Sparing Free TRAM

With the DIEP, the first 24-72 hours your nurse will assess the blood flow to the flap either through a hand held Doppler machine or by listening to the flow of the internal Doppler wires. For the first 24 hours after surgery, you are kept from eating or drinking anything in case you need to go back to the operating room to fix problems with the blood supply to your flap.

As more time goes by, the nurse will check the flap circulation less and less. You will most likely be discharged 5 days after your surgery. You may need to avoid caffeine within the first 2 months. Caffeine may cause your blood vessels to constrict which can affect blood flow to your flap. Additionally, you may be told to take aspirin for 1-2 months after your surgery. Your surgeon will discuss this with you.

When the staff is helping you walk the first day after surgery, you will need to walk in a bent over position. This takes tension off of the abdominal incision line. Walking like this over time may cause a low back ache, which is to be expected. Remember, you will only need to walk bent over for the first 10 days, after this you can start to stand up straight again.

You will have drains placed at the time of surgery that will exit your skin on your lower chest from your breasts and below your abdominal scar. These are small tubes called JP drains that drain any excess blood or fluid. Each drain will be secured into place with a single small black suture. Please refer to the Surgical Drain Care section at the end of this book for more instruction.

PAIN CONTROL Your pain is controlled by oral pain medication (taken by mouth). If you need more pain medication, you will have a small button that you can push called a PCA (patient controlled analgesia) that will give you pain medication by an IV in your arm. These medications may cause nausea. If you experience nausea be sure to tell your nurse. With the abdominal surgery you’ll want to prevent vomiting. There are medications that can help prevent vomiting so please talk to your doctor or nurse. You will be discharged home with oral pain medication, antibiotics, an anti-nausea pill, and a stool softener. You may also be told to take aspirin after the surgery. If your pain is not controlled by your pain medication, please call the clinic to notify your nurse. After hours, you will be connected to the plastic surgery physician on call.
**DRESSINGS** Your incisions are closed with stitches that dissolve, so no stitches need to be removed. There may be small strips of paper adhesive over your suture or stitch line called steri-strips. These should remain in place until they fall off by themselves or in about 2 weeks, whichever comes first.

The dressings placed over your incisions in the operating room are water-proof, and are called Tegaderm™. These dressings will be removed by your surgical team 2 to 3 days after surgery. It is OK for the steri-strips to get wet in the shower. Don’t allow the water jet from the shower to directly hit them, just let the water roll over your shoulders gently. Blot them dry when you are done. Do not soak in a tub or get in a pool or hot tub until advised by your plastic surgeon.

**ACTIVITY** You can do normal household activities, do your hair, prepare dinner, but do not strain yourself. During this time of recovery, it may be helpful to arrange for extra help with cleaning, driving, and running errands. You will not be able to drive until you are off of your pain medication which may be a couple of weeks.

**Thigh Flap Reconstruction Surgery**

In thigh flap reconstruction surgery, tissue from the upper inner thigh or back of the thigh is used for breast reconstruction. Similar to abdominal tissue flap reconstruction, this can be done either at the time of your mastectomy or after your mastectomy and your breast cancer has been treated. Thigh flap reconstruction is usually used when the abdomen is not available for use as a donor site. Most commonly, the upper inner thigh is used for breast reconstruction in the following situations:

- Very thin women who do not have enough abdominal fat to create new breasts
- Previous tummy tuck which has already cut the abdominal vessels
- Failed TRAM or DIEP flap reconstruction
- A preference to not use the abdomen
- A “pear-shaped” body shape

There are 2 types of thigh tissue flaps – Transverse Upper Gracilis (TUG) and Profunda Artery Perforator (PAP) flap. You and your plastic surgeon will discuss which is best for you.

For both thigh flap surgeries, the scar is located in the groin or crease of the lower buttock. The tissue of the upper thigh is particularly soft and is sculpted into shape to create a breast. The difference between the TUG flap and the PAP flap is the choice of blood vessels that supply the flap tissue. In addition, the TUG flap usually takes a small amount of the inner thigh muscle (gracilis muscle) with the flap, while the PAP flap does not take any muscle at all.

For both flap surgeries, skin, fat, and blood vessels are moved from your upper thigh. It’s similar to having an inner thigh lift, this will make your thighs tighter.
1.2 Types of Reconstruction

CONTINUED

TUG Flap

The Transverse Upper Gracilis (TUG) flap reconstruction surgery uses skin, fat and the gracilis muscle from the inner thigh to recreate the breast. The gracilis muscle is one of many muscles in the leg. Since it is not the primary muscle there is no loss of functioning in the leg and no limitations to your activities of daily living. Additionally, because this muscle is small there is no risk of developing a hernia or bulge at the donor site.

This surgery takes about 4 hours for one side; both sides can take up to 8 hours.

PAP Flap

The Profunda Artery Perforator (PAP) flap reconstruction uses the blood vessels that run through the thigh muscle called the adductor magnus muscle to supply blood to the fat and skin in the back of the thigh. The PAP uses these blood vessels as well as a section of skin and fat from the back of your inner thigh. The vessels of the PAP flap are located close to the groin, which makes it possible to hide the donor site scar within the groin and lower buttock crease. The PAP flap is designed a bit farther back on the leg than the TUG flap. The scar is not visible from the front and is usually well hidden from the back. In addition, it is located away from the lymph nodes of the groin, which lowers the risk of lymphedema in the leg. It is considered a muscle-sparing type of flap since no muscle is used with the PAP.

The surgery takes about 4 hours for one side; both sides can take up to 8 hours.

What to expect after the TUG or PAP Flap surgery

With the PAP or TUG flap reconstruction, the first 24-72 hours your nurse will assess the blood flow to the flap either through a hand held Doppler machine or by listening to the flow of the internal Doppler wires. For the first 24 hours after surgery, you are kept from eating or drinking anything in case you need to go back to the operating room to fix problems with the blood supply to your flap.

As more time goes by, the nurse will check the flap circulation less often. You will need to avoid caffeine for 1-2 months. Caffeine may cause your blood vessels to constrict which can affect blood flow to your flap. Additionally, you may be told to take aspirin for a few weeks to 1-2 months after your surgery. Your surgeon will discuss this with you.

You will most likely be discharged in 4 to 5 days after your surgery.
You will have drains placed at the time of surgery that will exit your skin on your lower chest from your breasts and upper thighs. These are small tubes called JP drains that drain any excess blood or fluid. Each drain will be secured into place with a single black suture. Please refer to Surgical Drain Care section at the end of this book for more instruction.

PAIN CONTROL After your surgery and while you are in the hospital, your pain is controlled by pain medication (taken by mouth). If you need more pain medication, you will have a small button you can push called a PCA (pain controlled analgesia) that will give you pain medication by an IV in your arm. These medications may cause nausea. If you experience nausea be sure to tell your nurse. You will be discharged home with oral pain medication, antibiotics and a stool softener. If your pain is not controlled by the medication provided to you at home, please call the clinic to notify your nurse. After hours, you will be connected to the plastic surgery physician on call.

DRESSINGS Your incisions are closed with stitches that dissolve, so no stitches need to be removed. Stitches around the belly button may need to be removed, There may be small strips of paper adhesive over your suture or stitch line called steri-strips. These should remain in place until they fall off by themselves or in about 2 weeks, whichever comes first.

The dressings placed over your incisions in the operating room are water-proof, and are called Tegaderm™. These dressings will be removed by your surgical team, 2 to 3 days after surgery. It is OK for the steri-strips to get wet in the shower. Don’t allow the water jet from the shower to directly hit them, just let the water roll over your shoulders gently. Blot them dry when you are done. Do not soak in a tub or get in a pool or hot tub until advised by your plastic surgeon.

ACTIVITY You can do normal household activities, do your hair, prepare dinner, but do not strain yourself. During this time of recovery, it may be helpful to arrange for extra help with cleaning, driving, and running errands. Avoid any heavy lifting and strenuous activities for 4 to 6 weeks. A compression girdle should be worn for 6 to 8 weeks after your surgery. You will not be able to drive until you are off of your pain medication which may be a couple of weeks.

For DIEP, Muscle Sparing Free TRAM, PAP or TUG we may obtain imaging of the blood vessels in your thigh using either a CT scan or MRA. This helps with mapping without the surgical plan before your operation.
Possible complications with abdominal and thigh flap surgeries

Below is a listing of possible complications with flap surgery. If you have any questions, please discuss them with your surgeon.

**Infection**  An infection is unusual after this type of surgery. Should an infection occur, treatment including antibiotics, hospitalization or additional surgery may be necessary. Infections when a breast implant is used are harder to treat than infections in normal body tissues. If an infection does not respond to antibiotics, the breast implant may have to be removed. After the infection is treated, a new breast implant can usually be reinserted.

**Scarring** All surgery leaves scars, some more visible than others. Although good wound healing after a surgical procedure is expected, abnormal scars may occur within the skin and deeper tissues. Scars may be unattractive and of different color than the surrounding skin tone. Scar appearance may also vary within the same scar. Scars may be asymmetrical (appear different on the right and left side of the body). There is the possibility of visible marks in the skin from sutures. In some cases, scars may require surgical repair or treatment.

**Muscle and nerve injury** There is the potential for injury to deeper structures including nerves, blood vessels, muscles, and lungs during any surgical procedure. The potential for this to occur varies according to the type of procedure being performed. Injury to deeper structures may be temporary or permanent.

**Asymmetry** Some breast asymmetry naturally occurs in most women. Differences in breast and nipple shape, size or symmetry may also occur after surgery. Additional surgery may be necessary to correct asymmetry after breast reconstruction.

**Need for further surgery** Many things may affect the long-term result of breast reconstruction with TRAM abdominal muscle flap surgery. Secondary surgery may be necessary to perform additional tightening or repositioning of the breasts.

**Partial or total flap loss** Partial or total loss of the flap may occur due to poor or compromised blood supply. If a partial flap loss occurs it can cause fat necrosis. A total flap loss will require a different type of reconstruction surgery to recreate the breast mound. This happens extremely infrequently (about 1 percent of the time).

**Abdominal Bulge or Abdominal Hernia** This can occur with any abdominal flap surgery (TRAM flap, DIEP, or muscle sparing free TRAM). It happens when the internal organs push through a weak spot in the abdominal wall. It can be prevented with mesh placement. Whether or not you need mesh will be determined by your plastic surgeon at the time of surgery.
1.3 Nipple Sparing Mastectomy and Reconstruction

Nipple Sparing Mastectomy is a mastectomy in which all the breast tissue is removed without removing the nipple or the pigmented skin around the nipple, which is called the areola. In a traditional mastectomy, the nipple and areola are removed. **Only a few women are candidates for nipple sparing mastectomy.**

Your breast team will determine if you are a candidate for a nipple sparing mastectomy, based on the following requirements.

1. The cancer is in a single location and is ductal carcinoma in situ (DCIS), invasive ductal, invasive lobular, or a sarcoma.
2. The whole area of cancer is 5cm or smaller.
3. The tumor margin (the distance between the tumor and the edge of the surrounding healthy tissue) is greater than 2cm away from the edge of the entire areola and greater than 2cm from where the areola sits against the chest wall.
4. Your lymph nodes must be negative and you will have a sentinel lymph node biopsy on the side of the breast with cancer at the time of the mastectomy.
5. If you have not been diagnosed with cancer but you want to remove one or both of your breasts to reduce your risk of cancer, you may be eligible for a nipple-sparing mastectomy.
6. Your breasts are estimated at a size less than 600 grams. Your surgeon will decide the size of your breasts.
You are NOT a candidate for nipple sparing mastectomy if:

1. You have been diagnosed with extensive ductal carcinoma in situ and the size of the tumor is larger than 5cm.

2. You have had radiation to the breast area (such as Mantle radiation for lymphoma).

3. Within the past three years you have had nipple-areola surgery (duct excision, circumareolar incisions).

4. The invasive cancer is greater than 5cm in size, appears to be more than one tumor, is within 2cm from the edges of the areola - or is within 2cm from where the areola sits against the chest wall.

5. Axillary lymph nodes are identified as suspicious either through your doctor examination or the fine needle aspiration.

6. You are smoking within 6 weeks of the planned surgery.

7. Your body mass index (BMI) is greater than 35.

8. You are not a candidate for immediate breast reconstruction.

9. The size of your breasts are too large or you have a significant amount of drooping of your breasts. This will be determined by your team of breast surgeons and plastic surgeons.

Reconstruction in women having nipple sparing mastectomies

Women having a nipple sparing mastectomy are generally candidates for immediate breast reconstruction with either implant reconstruction or using their own body tissue from the abdomen, thighs or buttck. Implant reconstruction with a nipple sparing mastectomy can occur as either a one or two operation process. The one operation process does not require the need to expand the chest skin and muscle. Women who select this option must be relatively small breasted with a small amount of droop of the nipple. Additionally, the reconstructed breast will be about the same size as your native breast and may still require future revisions. The two operation process places expanders first to stretch the chest skin and muscle over time, and then the second operation is to exchange the expanders for permanent implants.
Important things to consider about nipple sparing mastectomy:

While this procedure has become more common and patients generally have improved cosmetic outcomes, it is important to mention some of the issues that may happen.

• The blood supply to the nipple and areola is weak after a nipple sparing mastectomy. Blood carries oxygen. If the nipple does not receive enough oxygen because of the weak blood supply to the nipple, necrosis (tissue death) of the nipple can occur. This happens in 3 percent to 20 percent of the cases. There are many reasons why this happens, including experience of the surgical team, choice of incision, breast size (there is an increased risk in larger breasts), and on how well the breast tissue is removed from behind the nipple and areola. Sometimes necrosis happens to only the most superficial layers of the skin and complete healing occurs within a few weeks. If loss of the nipple does occur, nipple reconstruction is an option.

• Most likely, the nipple will have little to no sensation.

• Controlling the nipple position can be difficult as tissue scars down and heals. While plastic surgeons do their best to control the position of the nipple during the reconstructive process, it is not always easy to have the nipples heal in a perfect and symmetrical position. Patients who naturally have nipple in the wrong position may not be good candidates for this procedure.
1.4 Nipple Reconstruction

Nipple reconstruction is done approximately 2 to 3 months after your reconstruction and is an optional procedure done in the outpatient area. Timing of this procedure is determined by your plastic surgeon. This time is necessary because it can take this long for your breast/implant to finalize its shape. If the nipples are placed too soon after the reconstruction, location of the nipples may look displaced or crooked. The technique for creating nipples can be done numerous ways and the best method for you will be decided by discussing it with your plastic surgeon.

The nipple projection, or how far your nipple sticks out, will be about 50 percent larger than you are expecting at the time of the reconstruction. This is because we know the projection will shrink by at least 50 percent over the first several weeks. At the time of your 6 week follow up, you will have a better idea of the final size. The projection can always be made smaller by a simple procedure in clinic or in the surgical procedure room (as determined by the surgeon). This is typically done about 6 months after the nipple reconstruction. Making the projection larger is more difficult, which is why the nipples are made larger to start.

Time taken off work will be minimal and varies depending on the type of nipple reconstruction that is done. Nipple reconstruction can be done in either a special procedure room or in the main operating room. The room used varies with the type of reconstruction chosen and whether there is a need for any other breast adjustments.

**Dressings** The type of dressing you have after nipple reconstruction will depend on your plastic surgeon’s preference. The dressing may be in place anywhere from 1 to 8 weeks. You will receive specific instructions from your plastic surgery team at your appointment on how to care for the dressing.

**Pain Control** You will go home with prescriptions for both pain medication and antibiotics. Please take them as directed by your doctor or team. If your pain is not being controlled on what has been recommended for you, please call your plastic surgery team.

**Areola Tattoo Process**

The timing of nipple coloration is dependent on the type of reconstruction you have had and whether it is necessary. This will be determined by your plastic surgeon. This can be done at Moffitt in a special procedure room and you may be able to return to work after this procedure.

If nipple tattoo is not covered by insurance or if your co-pay is significant, you may wish to explore other options with your plastics team.
2.1 Tips for Your Operation

Suggestions to cope with the stress of your upcoming surgery

• Ask for information necessary to best prepare you for your surgery and plan ahead for your recovery. Having clear expectations of recovery time and needs will help reduce fear, frustration, and disappointment if setbacks or delays occur.

• Find out what helps other patients and families cope with cancer.

• Communicate your needs to your medical team. Every patient is an individual and you know yourself best. Information about your unique needs can be helpful to your team in making decisions about your care during your hospital stay.

• Ask for help and support from family, friends, and others. Accept that you will have limitations and will likely need some assistance when you return home - most patients do.

• Accept that sadness, anxiety, and fear are a normal part of the experience. If these feelings become stronger, continue, or interfere with your recovery seek professional help.

• Consider talking with your social worker or other healthcare professional, or attending a support group. Having someone who cares and will listen to you can be very helpful. Social workers are members of your medical team and will assist you and your family with tools to cope with your emotions, information about resources for support, and plan for your discharge following surgery.

• Get spiritual support through prayer, meditation, or whatever spiritual practice serves as a source of comfort for you. If you prefer to speak with a chaplain or someone in Pastoral Care, please call 813-745-2856.

What happens before surgery?

You are required to meet with the anesthesia department prior to your surgery day. An appointment is scheduled for you and usually takes about 45-90 minutes.

During your appointment, a member of the anesthesia staff will record your height, weight, and vital signs (such as blood pressure, pulse, respiration and temperature). The nurse will also ask questions about your symptoms and any allergies you may have. The doctor and nurse will take your medical history and perform a physical examination. Please bring an accurate list of all medications you currently take, including dosages and any vitamins or herbal supplements you may take. You will be instructed regarding which medications you can and cannot take before your surgery.
During this time, the schedulers will help you schedule any additional tests or preparations ordered by your doctor. Depending upon the type of operation planned and your surgeon’s preferences, the following may occur:

- An X-ray or other radiological procedure of your chest or other parts of your body may be taken.
- You may have an electrocardiogram (EKG) and/or breathing test to familiarize the doctor with your heart and lung functions before your operation.
- You will receive instructions not to drink or eat anything after a specified time.

If required by your surgeon for your type of surgery, you may have a blood sample drawn called a “type and screen” in case a blood transfusion is required. Your surgeon will discuss this with you further if this will be necessary.

**MRSA pre-op screening**

Prior to your surgery, you will be screened for MRSA (Methicillin-Resistant Staphylococcus Aureus). MRSA is a common resistant germ found in the nose or on the skin that is resistant to antibiotics commonly used to treat it.

It is important for your surgeon and health care providers to know if you are carrying MRSA. In order to do this, samples will be collected to test for MRSA. This is done by swabbing the inside of your nose with a cotton swab. Occasionally, additional samples may be collected throughout your treatment. Knowing whether you, or others, are carrying MRSA will help prevent the further spread of this germ.

You will be contacted in 3-4 days if your test is positive for MRSA. If you are found to carry MRSA, you will be given a prescription and instructions on how to decrease the amount of this germ on your skin before your surgery. Specific instructions are explained in the handout, *Pre-Operative Treatment for MRSA*.

If you test positive for MRSA, you will be on “contact precautions” while in the hospital. This means that health care staff will be wearing gloves and gowns while caring for you to help prevent the spread of MRSA. Contact precautions are described in the handout, *Contact Precautions for Multiple Drug Resistant Bacteria and Clostridium Difficile*.

Please ask your doctor or nurse if you have any questions or concerns regarding this information.
Please review the following checklist, which will prepare you for your surgery:

**Pre-surgery checklist**

- **Stop diet pills** 30 days before surgery. Tell your doctor if you are taking any diet pills.
- **Remember to take your blood pressure medications** the morning of surgery.
- **Stop all herbal medications** 2 weeks before surgery.
- **Stop smoking** (this includes nicotine patches and gum). If you need assistance, Moffitt offers a Patient Tobacco Treatment Program with a wide range of services available to help you quit smoking. For more information, call 813-745-8811 or e-mail TobaccoTreatment@Moffitt.org.
- **Discontinue alcohol** 2 weeks before surgery.
- **Please be aware** that we ask you to stop all aspirin or aspirin-like products 7 to 10 days prior to your surgery. This includes ibuprofen and Aleve®, Advil® or Motrin®. If you are on Coumadin (warfarin) or other blood thinners, please consult your cardiologist on when you need to discontinue this prior to your surgery.
- **You may continue to take** Acetaminophen (Tylenol®).
- **We ask you stop taking** Vitamin E, herbal supplements, and green tea 7 to 10 days before to your surgery.
- **Do not wear** hairpins or makeup on the day of surgery.
- **Please keep any of your valuables**, especially jewelry, at home and do not wear jewelry to the hospital.

**Friendly tip**

Before my surgery, I prepared my house. I knew I would have problems lifting my arms, so I made sure my cups and dishes were at an easy level to reach. I put most of them on my counter. They were there when I needed them and I didn’t have to worry about lifting my arms. I also had a lot of meals prepared and frozen so I wouldn’t have to worry about cooking.
Day of surgery

- If you wear contact lenses or eyeglasses, you will be asked to remove them and put them in a safe place.

- If you wear dentures, you will be asked to remove them and place them in a special container. One will be provided to you if needed.

- All patients are required to wear surgical caps in the operating suite. One will be provided to you on your day of surgery.

- Approximately 30 to 60 minutes before you are taken to surgery, you may be given some medication, usually a shot or a pill to help relax you. Be sure to use the bathroom before taking this medication. If you receive medication before the surgery begins, try to lie quietly and relax. You should not get out of bed after receiving this medication.

- If you use an inhaler, you may be asked to bring it with you the day of your surgery. It will be labeled with your name and given to the anesthesiologist who may give you a dose sometime during the surgery process. The inhaler will be given back to you in the recovery room.

What happens during the surgery?

On the day of your surgery, you will be registered and taken to the surgical holding area along with one caregiver or family member (your caregiver or family member can stay with you until you are taken into the operating room).

When you are in the surgical holding area, you will meet an anesthesiologist, as well as a nurse anesthetist. They will review your chart and medical history with you. Before you receive any medication, you will also meet with your surgeon. They will again explain the surgical procedure(s) to be performed as well as any risks involved with the procedure. It is very important to ask any questions you may have. You will then be asked to sign a Patient Consent Form stating you give the surgeon and/or their assistant your permission to carry out the procedure.

Once this has taken place, you will be assisted into a gown and onto a stretcher. An I.V. will be started and any surgical site markings will be made. When the surgical team is ready for you, two of the team members will come with a stretcher and take you to the operating room.

If you are having a flap type of procedure, your surgeon will use a skin marker to draw on and confirm the incisions. These markings will guide the surgery.

After you arrive in the operating room and before your surgery begins, you will be given an anesthetic. The anesthesiologist will explain the type of anesthesia you will receive.
Staff trained in every aspect of surgical care will attend to you while you are in the operating room. A tube called a Foley catheter may be placed in your bladder to drain urine, and a sequential compression device or “SCDs” will be placed on your legs to prevent the formation of blood clots.

Once your surgery is completed, you will be moved to the recovery room until the effects of the anesthesia wear off. A member of the recovery team will be with you at all times, watching you closely and frequently checking your recovery progress. In an effort to assure the comfort, safety, and privacy of all patients, visitors are limited in the recovery room area. We understand that surgery is a difficult time for patients and loved ones. Protecting our patients’ well-being and privacy are priorities for us.

While in the recovery room you may have oxygen and an I.V. for any necessary fluids. The length of time each person is in the recovery room varies, but it is usually anywhere from 30 to 90 minutes. When you are “fully recovered” from the effects of the anesthesia, a recovery room nurse will take you to your room or will assist you with the discharge process if you are going home the same day as your surgery. Rarely will you be required to stay in the recovery room for longer than expected (30-90 minutes).

If you are spending the night in the hospital, you will be transported to your room as soon as a bed is available. Your loved ones will be notified of your room number and location to wait for your arrival. Your pain and nausea will be controlled and staff will make every effort to keep you as comfortable as possible during the time you are in the recovery room. Your primary nurse will be waiting to help transfer you from the stretcher to your bed and help you settle in.

**What can my family expect when I’m in surgery?**

During the time you are in surgery, your loved ones may check in at the Volunteer Desk in the surgical waiting area on the second floor to enhance communications and make their stay more comfortable. If they decide to leave the waiting room and visit the cafeteria or go for a walk, they should leave a cell phone number or request a pager at the Volunteer Desk. This allows us to reach them if they are not in the waiting room. They may also enjoy visiting our Patient Library and Welcome Center located across the hall from the surgical waiting room. Staff and volunteers are available to help locate educational materials. In addition, internet access is available for research or to develop a CarePages® site for you, a website friends and family can access to follow your day-to-day progress.

The best way for your loved ones to keep track of your progress through surgery is by the tracking board in the Surgery Waiting Room. This board gives up-to-date information on your progress. An update will be provided to your loved ones by a member of the surgical team after surgery.
What can I expect after surgery?

You will probably still be sleeping when you return to your room. The nursing staff will keep a close watch over you. You may or may not experience the following: sore throat, bleeding on your dressing, pain, nausea, or vomiting. Should you experience any of these symptoms, please notify your nurse. You will be offered something to eat and drink if your doctor feels you are ready.

Other things you may experience after surgery:

- You will be asked to move your legs and wiggle your feet and toes often to improve the blood circulating in your legs. Your nurse will remind you.

- Some patients are given elastic hose to wear to help blood circulation in the legs. You may still have on the compression boots from surgery. These will be removed as you become more awake and active.

- No matter how good you may feel it is important to call a nurse to help you the first time you get out of bed. Continue to ask for assistance until you are sure you feel strong enough to be on your own.

- You are likely to experience some discomfort after your surgery. The amount will vary from patient to patient and with the type of surgery performed. Your doctor will leave orders for pain medication with the nurse. Please tell your nurse as soon as you begin to have pain, as it is easier to control if medication is given before the pain becomes severe.
2.2 Smoking Precautions

Smoking impairs your ability to heal by reducing circulation to the skin. It is very important to avoid smoking and nicotine-containing products prior to your surgery. It is recommended to not smoke and avoid second hand smoke and cigarette replacements, such as nicotine patches or nicotine gum prior to surgery. There are several resources available to help you quit smoking.

What kind of help is available?

There are a wide range of services and products available to help smokers quit, such as:

- One-on-one and group support
- Behavioral and supportive therapy
- Quit smoking classes
- Support for family and caregivers
- Prescription medications
- Complementary wellness therapies such as yoga, meditation, and relaxation exercises
- Telephone support and online groups

Which type of treatment is safe and appropriate for me?

Quitting smoking involves learning new behaviors. By providing you with a complete plan, we can help you learn how to control your smoking urges and recognize your triggers. Our team works closely with you to determine an appropriate plan based on your individual diagnosis while also addressing both your physical and emotional needs.

Who will help me?

We have a team of specially trained professionals to help you. We are prepared to help you with your personalized plan. Our team of professionals consists of:

- Pharmacists
- Physicians
- Nurses
- Counselors
- Certified Tobacco Treatment Specialist

For more information, call 813-745-8811 or e-mail TobaccoTreatment@Moffitt.org.
2.3 Advice from Other Patients Who Have Gone Through This Journey

My advice is to organize your life ahead of the surgery. Some examples of what I learned from this experience is to have meals ready to be re-heated, pay bills, do laundry, and plan ahead so you won’t have to do anything during those first 10 days you are home. Recruit the help of family and friends to help out until you can start doing things on your own. It was also very helpful if you have a TRAM, to have a recliner at home to sleep in since you have to maintain a bent position for the first 10 days or so, until the stitches from the belly area come off.

~ Monica S.

Get plenty of rest! You may be anxious to get back to your normal routine, but you need your rest to allow your body to recuperate. Listen to your body (and your doctor). Be patient and give yourself time to heal...take it slow.

~ Brenda P.

I found it helpful to have a pillow to put over the abdomen incision while riding in the car.

~ Monica V.

Before the surgery, discuss your preference of breast size with your plastic surgeon and make sure she/he understands what you want. Since they are the experts, their opinion is very important and certainly welcomed, but, ultimately, you’re the one who will live with them and it’s important to be happy with your decision.

~ Monica S.

Designate someone to provide updates to family and friends. You will not feel like talking to numerous people and repeating the same information.

~ Brenda P.

Having a portable phone nearby was useful. Remember to use the answering machine if you don’t want to talk. It is okay to ignore phone calls.

~ Monica V.

Lots and lots of pillows! Long king sized pillows were great to place upright behind back in chairs or under your knees in bed.

~ Tracy R.

Pain medications can cause constipation. Be sure to have stool softeners on hand. Walking, eating food rich in fiber and drinking a lot of fluids also helps.

~ Brenda P.
3.1 What to Expect After Surgery

Healing and recovery times vary for each person.

Please remember you are unique and as such your experience after surgery may be different. Below are a few general statements of what you can expect.

- You will feel tired and sore for approximately 2 to 4 weeks. It is important to listen to your body and take the time you need to heal and recover.

- Reconstructed breasts do not have the same feeling and sensation as natural breasts. Normal sensation to the breast cannot be restored. In time, some feeling may return.

- This surgery will produce some scars. Most scars will fade substantially over time. It may take 1 to 2 years.

- To help with managing your scar(s), your surgeon or nurse will discuss scar massage methods with you. These are also discussed in Section 3.3.

- If you are only having one breast reconstructed, there will be a difference in the reconstructed breast and your natural breast. The reconstructed breast may feel firmer and look flatter or rounder than your natural breast.
3.2 Instructions When You Go Home

General Information

• Your post op visit is approximately one week after surgery. This appointment is made for you before you leave the hospital. Call The Center for Women’s Oncology if you are not sure of the appointment day and time. This number is 813-745-8410. There will be other follow-up appointments scheduled as needed.

• You may have one or more surgical drains. You will be given instructions of the care of these drains and how to record your drainage while in the hospital. Record output at 8 a.m. and 8 p.m. The drains will be removed in 1-3 weeks. The drain(s) must have less than 30 ml (2 teaspoons) of fluid per day for 2 days. If the drains are still not ready at 3 weeks, they must be checked by your plastic surgeon.

• You will need someone to drive you home after your surgery and help you at home for the first week, depending on your type of reconstruction.

• Get plenty of rest.

• Eat a balanced diet.

• Decreased activity, pain medications, and anesthesia may cause constipation. Try to increase your fiber intake and fluids, especially water. Continue to take the stool softener prescribed by your doctor. If you still do not have a bowel movement after 2-3 days, call your doctor.

• Take pain medications and antibiotics as prescribed. Resume all home medications unless otherwise instructed by your doctor.

• Continue to avoid alcohol after surgery. This is especially important while you are taking pain medications.

• Absolutely no smoking! This can delay healing and increase your risk of complications. To learn more about how to quit smoking, please call our Tobacco Treatment Specialist 813-745-8811 or e-mail TobaccoTreatment@Moffitt.org

ACTIVITY

• Start walking as soon as possible. Avoid lifting anything heavier than a gallon of milk.

• Do not drive while you are on pain medication or while you have drains. You may resume driving once your drains are removed and you have full range of motion in your arms.
WHEN TO CALL THE NURSE

- Increased redness along the incision or increased swelling or bruising of the breast(s)
- Swelling and redness or streaking that persists after a few days
- The breast has a change in temperature or feels hot to the touch
- Increased or severe pain, not relieved by pain medication
- Any side effects of the medicines such as: rash, nausea, headache or vomiting
- Temperature above 101.5°F, or chills
- New or increased drainage around the incision (especially if there is a foul odor)
- Bleeding from the incisions not relieved by light pressure
- Any loss of feeling or motion

CONTACT INFORMATION

- Call your plastic surgery nurse during regular business hours at (813) 745-8410. You may also refer to the phone number listed for your individual surgeon on your “Doctor’s Contact Card.”

- Call this same number after business hours or on weekends. The doctor or resident on call will be notified.

- After breast reconstruction, please ask for your plastic surgery team first. They will address concerns about surgical drains, wound care, antibiotic therapy, and pain medications.
3.3 Managing Your Scar

Scars result when the body repairs skin wounds caused by surgery, accident or disease. They are the natural result of the healing process. The longer it takes a wound to heal and the more damaged the skin, the greater the chance of a noticeable scar.

The location on the body as well as your age and skin type will affect the way a scar forms. Older skin tends to scar less visibly whereas younger skin tends to over-heal resulting in larger and thicker scars. Scar formation and scar maturation are ongoing processes. Scars continue to grow and change throughout the recovery process which may take from 12 to 18 months. Scar massage is an effective way to decrease scar tissue build up and help make scars less noticeable. Massage will not help soften a scar older than 2 years.

What Is Scar Massage?

Scar massage is one method of softening and flattening scars. It serves several important functions:

- Promoting collagen remodeling by applying pressure to scars
- Helping to decrease itching
- Providing moisture and flexibility to the scar

When should I start massaging my scars?

You should start massaging your scars 2 weeks after surgery. Wait until the sutures have been removed and all scabs have fallen off by themselves. Do not pull off any scabs.
How do I do scar massage?

Use the pads or soft tips of your fingers to massage the scar and tissue around the scar. Massage in all three directions.

**Circles:** Using two fingers make small circles over the length of the scar and the skin surrounding it.

**Vertical:** Using two fingers massage the scar up-and-down.

**Horizontal:** Using two fingers massage the scar from side-to-side.

How much pressure do I apply?

You should apply as much pressure as you can tolerate. Begin with light pressure and progress to deeper and firmer pressure as you go. Massage lotion in, applying enough pressure to make the scar area lighten in color or turn white.

How often should I massage my scar?

Massage should be done 2 to 3 times daily for 10 minutes each time.

How long is massaging necessary?

You should massage your scars as instructed for at least 6 months following your surgery or injury. Massaging for more than 6 months will not hurt your scars and may actually prove beneficial.
When should I stop massaging?

Stop massaging and contact your doctor if you experience any of the following:

- Redness
- Bleeding
- Scar feels warmer than the skin around it
- More pain than usual at the site of the scar

What else should I know about scars?

While your scars are healing, you should avoid sun exposure. Sun exposure may cause your scars to hyper pigment, or turn darker than the surrounding skin. You should use sun block with an SPF (sun protection factor), of 35 or greater and wear protective clothing at all times. Keep your scars away from the sun for at least one year following your surgery.

What lotion should I use?

- Use any moisturizing lotion or cocoa butter that will keep your skin soft and supple.
- Do not use heavily perfumed lotions.

*Examples of lotions or products you may want to use:*
- Silicone Strips worn 12 hours every day for 6 months
- Silicone Gel - Scar Gel-Scar Fade
- Arbonne®
- Eucerin®
- Nivea®
- Aveeno®
- Mederma®
Proper nutrition through a balanced diet is very important before and after your surgery to help in your healing and recovery. Each day your diet should include 5 or more servings of fruits and vegetables, protein at every meal, plenty of whole grains, and 2 to 3 servings of dairy products. Eating this way will ensure your body is getting the protein, energy, vitamins and minerals to rebuild tissue and prevent infection.

Nutrients found in whole foods, rather than processed foods, work together to help you maintain your strength, heal your surgical site, maintain immune function and rebuild blood and fluid lost during surgery. Processed foods usually contain high amounts of salt and fat and are low in the nutrients your body needs to function at its best.

Foods high in protein include meats, fish and seafood, eggs, cheese, milk, yogurt, milk, nuts, beans, lentils, and some grains. These foods are especially important for healing, repair of tissues and immune function. Fruits and vegetables are rich in vitamins and minerals, antioxidants, and other nutrients that also aid in healing, fight infection and help reduce risk for cancer recurrence.

Dietary supplements such as vitamins, minerals, and herbs are not recommended due to the potential interaction with other medications and possible side effects of taking these in high doses. Over the counter herbal supplements are not tested for safety and many have been found to cause harm after they have been on the market for anyone to use.

High doses of some vitamins can interfere with blood clotting time and others can interfere with the action of medications. It is always best to get nutrients through foods, including vitamins and minerals; however, there may be times when your doctor prescribes a supplement for a specific reason. Be sure to discuss any over the counter dietary supplements with your doctor, dietitian, or another member of the health care team before deciding to take them. They can provide the proper guidance in the context of your treatment plan.

It is also important to drink enough fluids during the weeks before your surgery and after your surgery. Most people need about 6 to 8 cups of fluid each day to stay well hydrated. If you are physically active or spend a lot of time outside in the heat, you may need more. Thirst is not always the best indicator of proper hydration so it is important to pay attention to the amount of fluids you are drinking. Any fluids (except alcohol) count toward your daily intake. It is best to limit your intake of sugary drinks because they do contain a great deal of calories, but very little nutrition and can lead to unwanted weight gain.
**Maintaining a healthy weight** is not only important for your recovery but is also one of the best ways to reduce cancer risk. Excess body fat is known to increase risk for cancer recurrence and can also lead to blood sugar problems and heart disease especially if you have this in your family history.

If you have too much body fat, your doctor may recommend you lose weight prior to surgery to help you to heal better and improve your tolerance to surgery.

The best way to lose weight is through a balanced diet with portion control combined with physical activity. The Nutrition Therapy Department at Moffitt has a team of registered dietitians who can help you achieve your goals for a healthy weight before or after your surgery.

**WELLNESS AND HEALING SERVICES**

Moffitt Cancer Center’s Integrative Medicine Program offers many healing and wellness services and integrates safe and effective complementary therapies with conventional treatments to improve the quality of life for our patients during and after cancer treatment. Integrative Medicine staff can meet with you at no charge to review the benefits of various integrative therapies and you will receive a plan that is specific to your circumstances.

Some of the free services provided include:

- Gentle Restorative Yoga
- Meditation
- Guided Imagery
- Relaxation classes

These services are also available for inpatients. Speak to your care team to schedule a visit during your inpatient stay. For more information or to schedule an appointment, please call the Integrative Medicine Program at 813-745-6052.

Licensed massage therapists, who are trained to work with cancer patients, are also available to provide relaxation massage therapy. If you would like a massage while you are hospitalized, ask your physician to request this service. Outpatient massage is available by appointment and for a fee, but if you have financial concerns please let us know and other options may be available. To make an appointment, call 813-745-4630.
Many women describe their breasts as an important part of their sexuality and sense of self. After treatment for breast cancer many women have difficulty engaging in sexual activity and physical intimacy. Some women describe having difficulty adjusting to changes in their bodies and in their physical appearance. Many women feel less attractive after surgery for breast cancer; often they fear that their spouse or partner will find them less desirable sexually. These feelings are normal. Treatment can, and often does, affect a woman’s sexuality.

Frequently, women respond to these feelings by avoiding touch, by withdrawing emotionally and physically from their partners. A partner may be confused by this, unsure of how to approach their partner and are afraid of hurting or pressuring their partner after breast cancer.

Many women believe that breast reconstruction will resolve their feelings, help them adjust to the changes in their bodies, and solve problems in their relationship. It takes time to heal, both physically and emotionally, after breast reconstruction. Here are some things to keep in mind while you consider breast reconstruction and while you are healing from your surgery.

- Open communication and honesty, with yourself and your partner, are key to addressing concerns about your sexuality after breast reconstruction.
- It’s important not to assume how your partner feels about you, the changes to your body and about sexual activity.
- Breast reconstruction will not resolve problems in a relationship that may have existed before a diagnosis of breast cancer.
- You may feel your body has betrayed you. Be gentle with yourself.
- After breast reconstruction, if you are not engaging in what you consider sexual activity, be affectionate with each other. Begin reconnecting physically with your partner by spending time together, touching, hugging and experiencing pleasurable touch.
- Keep an open mind about exploring new and different ways to be sexual, with yourself and with your partner. Explore ways to stimulate and enhance sexual feelings.

Talk to your health care team if you have questions or concerns about your sexuality and sexual activity after breast reconstruction.
Insurance Coverage for Reconstructive Surgery

In most cases, the Federal Women’s Health and Cancer Rights Act of 1998 requires that insurance companies pay for breast reconstruction for women who have undergone a mastectomy. In some cases, an insurance company may not pay for breast reconstruction. Be sure that you are informed about your company’s policies for coverage.

Check with your state insurance commissioner’s office or your health insurance provider to find out which services are covered by your state’s laws and your health plan.

For more information on coverage of breast cancer-related services by state, visit the National Cancer Institute’s State Cancer Legislative Database’s website or the American Society of Plastic Surgeons’ website.

If you are employed and need forms completed for your employer, please see one of our Patient and Family Disability Specialists to help. Patient and Family Disability Specialists can be reached at 813-745-2356.
What is the Role of a Caregiver?

As a caregiver, it is just as important for you to be informed about the patient’s procedure and recovery as it is for the patient. Moffitt embraces the principles of patient and family centered care, which is an approach to care that encourages the partnership of patients, family members and health care providers. You as a caregiver, whether related by blood or not, are welcome to be with your loved one during clinic visits and hospital stays. You are an important part of their care and recovery.

In order to provide the best care to your loved one, it’s also important for you to stay physically and emotionally healthy. This section was written specifically for caregivers to help you take care of your loved one, as well as yourself.

Understanding the emotional needs of your loved one

Where there is a diagnosis of cancer, worry, and fear are usually not far behind. These emotions can be a constant companion especially in the early days of diagnosis and staging.

It is not unusual for patients to experience a range of emotions during their cancer experience. This is a normal reaction. Shock, at the initial stage, fear and worry longer term. Anger can be just under the surface for many patients who wonder, “why me.” “I eat well and exercise,” or “I nursed my babies,” or “no one in my family has had breast cancer,” are common responses. These statements and others like them reflect the ongoing discomfort that patients experience as they adjust to their diagnosis.

Understanding the emotional needs of the patient can be very hard for you as the caregiver. You may feel helpless and overwhelmed especially if your loved one is depressed. It is important at these times to just listen. There may be few answers but most patients are not asking for answers from their caregivers. They appreciate the “safe place” their caregiver may provide just by listening.

Time is an important factor in the healing process. Returning to “normal” may take more time than you had hoped or it may not return at all. If this happens, a “new normal” will have to be established. Be patient, your loved one may simply need more time to adjust.

It is also important to recognize not everyone copes with the stress of illness and treatment in the same way. However, if you are concerned that your loved one is not coping, please talk to a member of the health care team. There are clinical social workers on staff at Moffitt who can assist the patient/and or caregiver with adjusting to these changes.
Understanding your emotional needs

As the caregiver, you can help your loved one cope with their emotions, but it is important to realize you are also impacted. Caregivers many times focus their energy on the patient and neglect their own needs and concerns. Feelings of being overwhelmed, frustrated, guilty, angry and sad are common emotions caregivers may experience. It is normal to feel positive and negative emotions when taking care of someone as they recover. If you have questions about the emotions you are feeling, please talk to someone on your loved one’s medical team, such as the social worker.

Grieving the loss of her breast

Surgery, effects of anesthesia and the fear related to a cancer diagnosis can be exhausting and some patients may need a little more time to recover and feel like themselves again.

For many women it is necessary to take some time to grieve the loss of one or both breasts. This may be difficult for the caregiver to understand. For the caregiver, the removal of the breast with reconstruction may be a huge relief that the cancer is gone. The patient, however, may need time to adjust to this way of thinking. Life has been turned upside down and patients and family members need time to process all that has happened. You may find that you and your loved one are processing this at different speeds. Remember, this takes a different amount of time for everyone involved.

In the event that over time the patient does not seem to be getting better a psychosocial evaluation may be necessary. The initial assessment may be done by a clinical social worker at Moffitt. It may be a situational depression which can be addressed with short term counseling or a referral to a psychiatrist may be indicated for a more clinical depression.

Relationship changes

Adjustment and change are constant themes throughout the cancer experience. This is also true in relationships. Some patients who have been very independent may now have the very difficult task of asking for assistance. Some caregivers struggle with not knowing what to do to be helpful. They don’t want to “take over” yet they see the situation has changed. The patient may have been the “rock” or “supermom” and it is a difficult role to surrender. Children often move between trying to do too much or acting as though nothing has changed. It is important to acknowledge everyone’s feelings and reactions at this time.
Keeping the lines of communication open is a key factor during this process. Patients and caregivers are usually interested in knowing what the other needs, both physically and emotionally. When patients and caregivers can state their needs clearly and directly, it makes it easier to know how to help. When you share feelings with each other it gives you both the opportunity to give and receive support. This strengthens your bond and helps reduce the feeling that you’re going through this alone. “Checking in” with all members of the family can help ensure everyone’s needs are being addressed. Clinically trained social workers at Moffitt can help with opening the lines of communication with children and families.

Additionally, you should keep the lines of communication open with your loved one’s medical team. As the caregiver, you are an important member of the health care team. Your observations and insights are helpful during the recovery process. If you have questions about what is a normal or abnormal recovery, ask. Talking with you medical team about your concerns and asking for help can reduce the stress and burden of caregiving.

You may also find it helpful to meet and talk with other caregivers. Moffitt offers Family & Friends Support Group once a week which allows caregivers the opportunity to share experiences. If you’d like to learn more about this support group, please talk to your loved one’s social worker, or call 813-745-8407.

**Sexuality and intimacy**

There are physical and emotional changes that may occur after surgery that impact women differently. Feelings may range from relief to deep sadness and it is very personal. This may affect sexuality and her sense of self.

Great strides have been made in plastic surgery and we are fortunate to have such gifted surgeons at Moffitt. Reconstructive surgery is different from breast augmentation, and the results are not the same. It may take a period of adjustment as, over time, scarring lessens. In the beginning, it may be difficult for you or your partner to accept these changes. You both may worry about how the other will react.

**Taking care of yourself as a caregiver**

The National Family Caregivers Association offers suggestions as to how caregivers can better advocate for themselves. Some things are beyond the control of a caregiver. There are, however, choices caregivers can make to improve their emotional and physical health.
KNOW YOURSELF

- It is very important to be aware of your strengths and limitations.
- Establish clear boundaries as to what you can and cannot do.
- Learn to say “no” and when to ask for help.

BE PROACTIVE – MAKE GOOD CHOICES

Once you recognize your strengths and limitations choose to communicate these in a way that is clear to others.

Take charge of your own well-being. Choose to care about your health, both emotionally and physically.

Choose to plan for the future by addressing the need for a legal decision maker if needed. Advanced planning avoids the need to make critical decisions in a crisis situation.

GATHER INFORMATION

As a caregiver, you are often an extra set of eyes and ears for the patient. Choose to learn. The more information you have, the more confident you will be in your caregiver role.

Asking for help from others

It is sometimes difficult for caregivers to ask for help. Caregivers may know they need it – but don’t ask. Below are some reasons why caregivers may feel uncomfortable asking for help:

I don’t want to be a burden – rather than being a burden, allowing people to help is a gift a caregiver gives to others. Most people want to help. Don’t deprive them of the opportunity to help. They are probably waiting for you to ask and feel helpless and frustrated when you don’t.

I don’t know what kind of help to ask for – it is often helpful to make a list of those chores, activities and obligations that others can easily do. Examples are grocery shopping, walking the dog, taking the children to school or taking the patient to an appointment so you can rest.
Other people are busy too – that is true, but most people will find the time to help a caregiver who needs rest and renewal. They may even thank you for the chance to help or be useful in a situation that makes them feel helpless, too.

I don’t want my loved one who is going through this to feel abandoned – Many patients want the caregiver to take care of themselves and are glad to see them take a break and ask for help. In fact, many patients wish the caregiver would take a break to relieve them of the guilt they feel about requiring so much help from the caregiver.

Finding a balance between meeting the needs of your loved one and taking care of your own needs can be challenging. If you are having difficulty coping with the stress of caregiving, you are not alone. Many caregivers have very high expectations of themselves, feel responsible for the patient’s recovery and worry about not measuring up.

If you are overwhelmed and find that you need more help and support than friends or family can provide, it is important to speak with a professional about the situation. The patient’s social worker is a good place to start. You can request the services of a social worker by contacting 813-745-8407.

If you are a caregiver, remember: Asking for help is not a weakness – it is a gift you give to others and to yourself.
**Glossary**

**Asymmetry:** When two breasts do not match in shape or size.

**Breast reconstruction:** A breast implant or the women’s own tissue is used to rebuild the shape of the breast after a mastectomy.

**Capsular contracture:** When scar tissue forms around the implant, it tightens and squeezes the implant.

**Delayed reconstruction:** Reconstruction done at a later date.

**DIEP (deep inferior epigastric artery perforator) flap:** A type of flap procedure that uses fat and skin from the same area as in the TRAM flap, but does not use the muscle to form the breast mound. This is microscopic surgery to join the blood vessels in the flap to the blood vessel on the chest.

**Free Tram:** In this kind of surgery the tissue for reconstruction is moved entirely from another area of the body and the blood and nerve supplies are surgically reattached with special microscopes.

**Immediate reconstruction:** Reconstruction done at the same time as the mastectomy.

**Latissimus dorsi flap:** This procedure tunnels muscle, fat, and skin from the upper back to the chest to create a breast mound.

**Mastectomy:** The removal of the entire breast; not including the muscles.

**Necrosis:** Cell and tissue death from lack of blood supply to the tissue.

**Nipple sparing mastectomy:** The removal of all the breast tissue without removing the nipple or the pigmented skin around the nipple (areola).

**PAP (profunda artery perforator) flap:** A procedure that uses skin and fat from the back of the upper thigh, but does not use the muscle to form the breast mound.

**Pedicle flap:** Tissue that is surgically removed, but the blood vessels remain attached and are tunneled from the original site to the area where the tissue is to be attached.

**Prosthesis:** Man-made body part to substitute for one that has been removed, such as an external breast form to fill out a bra cup.

**Radiation therapy:** The treatment of cancer using high-energy rays or particles to kill or shrink cancer cells. After a lumpectomy, radiation therapy is used to destroy any cancer cells left behind after surgery.

**SCDs (sequential compression device):** A device placed on your legs while you are in bed in the hospital as a measure to prevent the formation of blood clots.

**Saline-filled implant:** Has a silicone shell and is filled with sterile salt water (saline).

**Symmetry:** When two breasts match in shape and size.

**Tissue expander:** A balloon-like material placed beneath the skin and the chest muscle. It is inflated with saline over a period of time until there is enough room to add an implant in place of the natural breast. The tissue expander is placed during a second reconstructive surgery.

**TRAM transverse rectus abdominis muscle flap:** A procedure that uses tissue and muscle from the lower tummy wall to reconstruct a breast mound. It can be a pedicle (left attached to its base and then tunneled) or free flap (cut free from its base and transplanted to the chest).

**Tumor margin:** The distance between the tumor and the edge of the surrounding healthy tissue.

**TUG (transverse upper gracilis) flap:** A procedure that uses skin, fat and the gracilis muscle from the inner thigh to reconstruct a breast mound.
Surgical Drain Care

The JP drain removes excess fluid that the body produces as a result of surgery. The fluid is a mixture of lymphatic fluid, blood cells and debris. Healing can occur more efficiently by removing the fluid. The amount of fluid collected by the drain is related to the extent of the surgical procedure. This means, the more active you are, the more fluid will be produced. The color of the fluid usually begins as cranberry (blood tinged) and as the days after surgery go by, the color becomes pink or yellow. Sometimes increased activity can cause the color of the fluid to become cranberry after it has been yellow.

It is important to keep the drain tubing open. This is done by “stripping” the tubing and emptying the bulb three to four times each day for the first 3 days only. We have provided a chart (see page 59) to help you keep track of the drainage. When you are at home expect the drains to be uncomfortable. This is normal.

The drain cannot be removed until it is putting out less than 30cc’s (or 2 tablespoons) for 24 hours or advised by your plastic surgeon. It is important to keep this area clean. When showering, it is also OK for the water to hit directly on the drainage tubes coming out of your skin. Use soap and water to clean the drain at the insertion site and dry them off with a clean towel. Apply a small amount of antibiotic ointment (Bacitracin, Neosporin®, Polysporin, or any local antibiotic cream you have at home) to the drain site after the shower.

You should not resume any exercise activity until your drains are removed. Do not go for long walks around the block or shopping for hours. You want to take it easy until the drains are removed. The more exercise and activity you are involved in, the longer the drains will be in, because the motion will not allow the skin to adhere to the underlying muscle and tissue. This does not mean to keep your arms still and remain immobile in bed. You can do normal household activities such as comb your hair, prepare dinner, but do not strain yourself by doing activities such as vacuuming or heavy lifting.
Procedure

1. Wash hands thoroughly before caring for your drain. To strip the drain, follow these steps:

2. Hold the site where the drain exits your body with your hand on the opposite side of your body. This can prevent pulling on the drain site. Place the tubing between your forefinger and your thumb. You may use an alcohol wipe to hold the tubing.

3. Begin where the tube exits your body and gently strip the tubing, moving the fluid and any clots toward the bulb.

4. Repeat the procedure at least 3-4 times each day. The bulb should always be compressed for it to work properly.

5. Empty the bulb to keep it free of fluid, which can cause heaviness and unnecessary pulling. Do not touch the inside of the cap. Each time you empty the bulb, measure the amount of fluid and write this down on the record sheet. Do this each time you strip the drain tubing.

6. Measure the fluid for a 24-hour period.

Potential problems with the drain

Whenever something is placed in the body, there is a possibility of infection. If you develop a fever or chills, call your doctor right away. Signs and symptoms of an infection are: redness that increases at the drain site, heat at the drain site, cloudy fluid, fluid that has a bad odor and an increase in your temperature. It is common for fluid to drain around the site. Sometimes this happens if the body makes more fluid than can be drained. Call the clinic if no fluid is being collected in the bulb or if you think fluid is collecting around the drain site under your skin.

Drain removal

- The drain is removed by the nurse or doctor at your first post-op visit provided the amount of fluid is 30cc (2 tablespoons) or less for 2 straight days OR left in up to 3 weeks after surgery, whichever comes first. Call the clinic for an appointment when the drain is ready to come out if not removed at the first visit.

- Once the drain is removed, do not swim or soak in a tub for 2 days.

- It is OK to shower. The site will close by itself within 3 to 4 days.

- Fluid may continue to ooze from the incision until the site heals. The body will now absorb the fluid it is producing.

- If the body cannot absorb the fluid it produces fast enough, the fluid will begin to collect in and around the surgical site. This is called a seroma and requires medical attention. If this begins to happen, call the clinic as soon as possible.

- To help with the healing process, keep the site as clean and dry as possible.
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Recommended Resources

**Aphrodite Reborn Women’s Stories of Hope, Courage and Cancer**
By Dr. Loren Eskenazi. A copy is also available in Moffitt’s Patient Library and Welcome Center and in The Center for Women’s Oncology waiting room.

**American Society of Plastic Surgeons**
Website includes a before and after photo gallery of breast reconstruction.
http://www.plasticsurgery.org/Reconstructive-Procedures

**www.breastcancer.org**
Discusses different breast reconstruction types with a photo gallery of women and their stories about their reconstruction experiences (search “photos”).

**Facing Our Risk of Cancer Empowered**
Offers a password protected photo gallery of real women to share their experience and a discussion board open to anyone. www.facingourrisk.org/photogallery

**Lotsa Helping Hands**
Create a free, private Community web site to organize family and friends during times of need. Use the calendar in your private Community to match volunteers to needed tasks. Send announcements to keep everyone up to date. Tap into resources from leading caregiver and health organizations.
http://www.lotsahelpinghands.com

**Young Survival Coalition**
Offers dialogues by women about reconstruction in an open bulletin board. YSC also offers a helpful list of Question and Answers about breast reconstruction. www.youngsurvival.org

**Cancer Care**
Cancer care offers free support, information and financial assistance to cancer patients and their caregivers. They provide telephone counseling and caregiver support groups, teleconferences, and podcasts of educational workshops. http://www.cancercare.org

**American Cancer Society**
The American Cancer Society (ACS) site has a section specifically for caregivers. Type “Caregivers” in the box under How Can We Help? There is a helpful guide about caring for the patient with cancer at home that lists common problems and possible solutions. An online community is also available for caregivers to exchange practical information and support one another in a secure place. http://www.cancer.org