BREAST RECONSTRUCTION AFTER MASTECTOMY
PATIENT/FAMILY EDUCATION

Being diagnosed with breast cancer that requires a mastectomy can be emotionally challenging. It is normal to worry about one’s physical appearance after this type of surgery. Breast reconstruction does not bring back the missing breast. But it can result in a breast mound that is about the same size and shape as the remaining breast. Studies show that the majority of women who undergo breast reconstruction after mastectomy are pleased with the results.

The purpose of this educational material is to: increase the patient’s and loved ones knowledge about breast reconstruction; reduce anxiety about the surgery; prevent post-operative complications; and facilitate physical and emotional adjustment after breast reconstruction surgery.

THE BASICS

Breast reconstruction is an optional procedure. Some women who have mastectomy prefer to use a prosthesis and mastectomy bra. One of the advantages of breast reconstruction is that you will not have to wear a breast prosthesis.

Most women who have undergone mastectomy can have breast reconstruction although flap techniques may not be safe for women who are obese, have diabetes, heart disease, or who are planning future pregnancy.

If you are a smoker, it is important to stop smoking a minimum of 2-4 weeks before reconstructive surgery since cigarette smoking can interfere with healing of the surgical site.

There are several techniques that can be used to accomplish breast reconstruction including an implant, using tissue from another part of the body (flap) to build a breast mound, and a technique that combines a flap with an implant. All require the skills of a plastic surgeon who specializes in breast reconstruction. The type of breast reconstruction surgery you have depends on your personal preference, overall health, whether or not you have tissue that can be used to create a flap, and anticipated additional cancer treatment, like radiation therapy and chemotherapy.

Breast reconstructive surgery can be done at the same time as mastectomy (immediate reconstruction) or later (delayed reconstruction). When to have breast reconstruction is a personal decision and there is no right or wrong decision. Some women find that having immediate reconstruction helps them to cope with the emotional issues related to losing a breast.

Some women who undergo mastectomy need post-surgery radiation. Radiation to implants and flap reconstruction can adversely effect cosmetic appearance. This can complicate the timing of breast reconstruction. For example, tissue reconstruction is usually delayed until after radiation is completed. Radiation either before or after implant reconstruction causes an increased risk of capsular contraction.
The reconstructed breast will have visible scars, feel different and have different sensation from your natural breast, but it will look quite similar in size and shape to your natural breast when you are dressed and wearing a bra.

Most women who have breast reconstruction need additional surgery to the remaining breast so that it will match the shape and appearance of the reconstructed breast as much as possible. Coverage for this surgery is included in the patient’s health insurance plan. Breast reconstruction surgery is typically accomplished in several stages. Most women who undergo breast reconstruction have about 3 surgeries to achieve their final result.

DEFINITIONS

**Skin-sparing mastectomy**—removal of the nipple, areola and skin over the biopsy site. The breast tissue is removed through this surgical opening in the skin. Most of the breast skin is left intact. This type of mastectomy is commonly used when immediate breast reconstruction using either implants or a flap procedure is planned. Using the patient’s own breast skin to make the reconstructed breast achieves the most natural looking breast mound. Skin-sparing mastectomy is not an option if there is a possibility that the tumor involves the skin or if the patient has inflammatory breast cancer.

**Implant reconstruction**—implants are filled with either saline or silicone gel. Silicone-gel implants tend to feel more like normal breast tissue. Some women are concerned that silicone gel implants can impair normal immune system function but recent studies demonstrate that silicone gel implants are safe and do not increase the risk of immune system problems. Implant surgery is the simplest method of breast reconstruction and has the shortest recovery period. You will be completely asleep during the mastectomy and implant placement surgery, which takes several hours.

Most implant procedures are done in two stages. At the time of surgery, a temporary tissue expander is placed under the muscle on the chest wall. The expander has a small valve that can be accessed through the skin. Over several weeks to months after surgery, the plastic surgeon injects saline into the expander which acts like a balloon to stretch the chest muscle and skin. When the chest muscle and skin are stretched enough and the temporary expander has reached the right size, the plastic surgeon performs a second surgery to remove the expander and put in a permanent implant.

Reconstruction that places the permanent implant to form a breast mound can also be done in one stage at the time of mastectomy, especially if the size of the permanent implant is small.
Most patients who undergo implant reconstruction are discharged from the hospital the day after surgery. Recovery usually takes about 4 weeks.

Possible complications of implant reconstruction include:

- Infection
- Bleeding
- Capsular contracture—scar tissue that can form around an implant that causes tightness and hardening
- Delayed wound healing
- Allergic reaction to implant or silicone
- Implant rupture
- Decreased accuracy of mammogram

Tissue flap reconstruction—uses tissue from the lower abdomen (belly), back, thighs or buttocks to create a breast mound. You will be completely asleep during the mastectomy and flap reconstruction surgery. Surgery time, hospitalization and recovery take longer after flap reconstruction—4 to 8 hours of surgery for a flap reconstruction and 6 to 8 weeks recovery time. Many surgeons believe that this type of reconstruction results in the most natural looking breast.

Transverse rectus abdominis muscle (TRAM) flap—uses muscle, skin and fat from the lower abdominal area to rebuild the breast mound. Women who have had previous abdominal surgery or do not have sufficient abdominal tissue may not be able to have a TRAM. Removing tissue from the lower abdominal area results in a “tummy tuck,” but abdominal muscles may be weakened after a TRAM.
- **Pedicle TRAM**— flap tissue from the abdomen remains attached to its original blood supply and a tunnel is created under the skin of the abdomen to bring the flap up to the breast area.

- **Free TRAM**—flap tissue is completely disconnected from the lower abdomen and moved to the chest to create the breast mound. Microsurgery is used to connect blood vessels in the flap to blood vessels in the chest so blood supply to the flap is maintained. Free flap TRAM is typically a longer surgery than pedicle flap TRAM but some surgeons feel the result is more like a natural breast.

Deep inferior epigastric artery perforator (DIEP) or Superficial inferior epigastric artery (SIEA) flap—both are similar to a TRAM but take only fat and skin from the lower abdomen to create the flap. Since these are free flap procedures, microsurgery is used to reconnect the blood vessels to the chest area. The SIEA uses superficial blood vessels while the DIEP uses deep blood vessels. The surgeon makes the decision during surgery which vessels are best to use based on the patient’s anatomy. A similar “tummy tuck” results but without tightening of the abdominal muscles.

**Latissimus dorsi flap**— uses muscle, fat and skin from the upper back, which is tunneled under the skin to move the flap to the breast area. Since there is usually not enough fat from the donor site to make a sufficient breast mound, this type of reconstruction usually
also requires an implant. Most women experience some degree of asymmetry and weakness in their back, shoulder or arm after this type of surgery.

Superior Gluteal Artery Perforator (SGAP) Flap—similar to a TRAM but uses skin and fat from the buttock to create a breast mound. The blood vessels in the flap are reconnected to the chest area using microsurgery.

You can expect to stay overnight in the hospital several days after flap reconstruction for pain management and monitoring of the flap and donor tissue site.

Possible complications of flap reconstruction depend on the specific type of flap but include:

- Infection
- Bleeding
- Scarring
- Loss of the flap because of inadequate blood circulation to the transplanted tissue leading to failed engraftment
- Weakened muscles in the donor area
- Clotting and vascular problems

Nipple reconstruction—A procedure to create a nipple after implant or flap reconstruction. Skin is rearranged on the new breast mound to create a projection that
looks like a nipple. The tissue used to create the nipple can come from the skin over the new breast mound or skin can be taken from another part of the body. Nipple reconstruction is usually done weeks to months after breast reconstruction and is done in the hospital as an outpatient procedure.

**Areolar creation**—a darker area is tattooed around the nipple to create an areola (pigmented portion of the breast around the nipple). This procedure is usually done in the surgeon’s office a few months after breast reconstruction.

**PRE-SURGERY PLANNING**

Each method to reconstruct the breast has certain advantages and potential adverse complications. Because techniques to reconstruct the breast are constantly evolving and can be somewhat complicated, it is important that you speak with a qualified breast reconstructive plastic surgeon so that you are fully informed about the available options, specifics of the procedure, post-surgery follow-up, additional surgeries/procedures, and potential complications including pain, flap failure, infection, capsular contracture, and scarring. Additional issues you should discuss with the reconstructive surgeon include the impact of breast reconstruction on future mammogram accuracy, breast self-examination after reconstruction, and insurance coverage for the planned surgery/surgeries.

If your cancer treatment plan includes mastectomy and you are considering breast reconstruction, the general surgeon’s office will make an appointment for a consultation as soon as possible with a plastic surgeon that specializes in breast reconstruction so that necessary planning can occur before the day you are to undergo mastectomy. You should notify the general surgeon of your interest in breast reconstruction at your initial consultation appointment.

One of the best ways to learn more about breast reconstruction is through the Torrance Memorial Breast Reconstruction Mentorship Program. This program offers peer support to women with breast cancer who are planning or considering breast reconstruction after mastectomy. The program is based on the idea that a diagnosis of cancer can seem overwhelming and receiving support from someone who has been through a similar experience can help reduce anxiety and uncertainty. The program coordinator matches each breast cancer patient with a trained volunteer who is a cancer survivor and has undergone breast reconstruction at Torrance Memorial. The breast mentor offers 1-on-1 emotional and informational support. For more information, contact the Torrance Memorial Cancer Resource Center at 310-517-4665.

Once you have made a decision to proceed with breast reconstruction, the surgeon’s office will give an instruction sheet for any medical work-up that you might need to have done before the day of surgery, like blood work, chest x-ray, and electrocardiogram (EKG). You will sign an informed consent (written permission to perform the planned surgery) after the surgeon has explained the procedure(s) to you. You will be given prescriptions for medications to control pain, which you should have filled at your pharmacy before the day of surgery.
ON THE DAY OF SURGERY

If you are scheduled to undergo tumor needle localization or sentinel lymph node mapping, you will be scheduled to report for the procedure(s) at the Breast Diagnostic Center at 3275 Skypark Drive, Torrance several hours before the time that your surgery is scheduled. It is helpful if you wear a blouse or shirt that buttons up the front and no bra. A Breast Diagnostic Center staff person will escort you to the Outpatient Surgery Center in the west wing of the hospital after the procedure(s).

After you arrive in the surgery pre-op holding area, an IV will be started and the pre-op nurse will do an assessment and teaching about post-operative pain control. The nurse will ask you what your acceptable level of pain is so that we can help you achieve adequate pain control. The anesthesiologist who will give you anesthesia to put you to sleep will talk to you before surgery. You will also meet with the surgeon to answer any last minute questions, review the post-operative instructions and mark the surgery site(s) on your body.

Your family can stay with you while you are in pre-op. Once you are moved to the surgery suite, your family should go the Family Waiting Room on the 1st floor of the hospital (near the Gift Shop) if you will be staying overnight in the hospital. If you are being discharged the same day as surgery, your family should wait in the 1st floor Outpatient Wing Outpatient Surgery Waiting Area. The surgeon will inform your family when you are out of surgery and in the pre-discharge recovery area.

IN THE RECOVERY ROOM

You will awaken in the post-anesthesia care unit (PACU). You will be closely monitored by the nurse, including frequent vital signs, IV fluids and IV medications to prevent nausea and pain. Oxygen may be administered by a tube or small mask and a device will be attached to your finger to measure oxygen levels in your blood stream. EKG leads may be attached to your chest to monitor your heart rhythm. You should immediately tell the nurse if you are in pain, have nausea, do not feel well or you experience any other unexpected symptoms.

If you are staying overnight in the hospital after surgery, the Family Surgery Waiting Room volunteer will tell your family what hospital room you are going to and when you are transferred to the room so that they can visit you after surgery.

YOUR INCISION

Your incision(s) will be closed with surgical glue and/or Steri-strips (thin surgical tape) to hold the edges of the wound together, and possibly covered by a surgical bandage. If you have implant reconstruction, you may be wearing a special bra that provides the necessary support. Follow your surgeon’s instructions as far as when to remove the bra.

Pain level after breast surgery is highly individualized. At Torrance Memorial we use a pain scale of 0-10, in which 0 means no pain, 1-3 is mild pain, 4-7 is moderate pain, 8-10 is severe pain. Our goal is to achieve the level of comfort you desire. Uncontrolled pain can interfere with sleep, activity, healing and lead to additional complications. Pain medication will be offered to you to keep your pain under control but you should tell the
nurse immediately if your pain level is too high. Your pain should be well controlled before you are discharged from the hospital.

You will require one or more drainage tubes from the chest surgical site to a bulb-shaped plastic container (Jackson-Pratt drain) that provides mild suction to the incision area. If you have a flap reconstruction, you will have one or more Jackson-Pratt drains at the abdominal incision site.

To work correctly, the bulb on the drain must remain flat at all times. Empty the drain at least twice daily or more often if the bulb is not flat. Do not let the drain dangle from your wound—place it in your pocket or pin it to clothing (without puncturing the tube).

To empty the drain:
1. Wash your hands with soap and water
2. Remove the plug at the top of the drain, then turn the drain upside down and squeeze in order to empty. The drainage will be bloody on the 1st day but will gradually become pinkish then clear yellow as each day passes. Drainage should not be foul-smelling or cloudy.
3. Roll the drain up, starting at the bottom to squeeze all the air out. While keeping the bulb rolled up, reinsert the plug.
4. Measure the amount of drainage and keep a written record to give to the surgeon at your post-surgery follow-up appointment in his/her office.
5. Wash your hands after emptying the drain.

Your discharge teaching will include instruction by the nurse on how to care for the drains at home and you will be given a printed instruction sheet.

POST-SURGERY RECOVERY

Frequent deep breathing, coughing and turning to prevent pneumonia are encouraged. During your hospital stay you will be seen by the Respiratory Therapist to receive instruction on use of an incentive spirometer (devise to measure breathing).

The amount of pain you feel should decrease as each day passes. It is important that you have adequate pain control. Pain pills typically take 30-45 minutes to start working, so don’t wait for pain to become unbearable before you take the prescribed medication. Unrelieved, new, increased or unusual pain should be reported to your surgeon promptly.

Many pain medications cause side effects like drowsiness and constipation. Be sure to drink adequate fluids and use a stool softener or laxative as recommended by your doctor. If side effects are excessive or unmanageable, notify your doctor.

If you are staying overnight in the hospital, the nurses will offer you pain medication that will either be IV or by mouth, but be sure to tell the nurse whenever you have discomfort.

Some patients experience nausea and/or vomiting after anesthesia. If you are having nausea or vomiting before discharge, the surgeon will give you a prescription for medication to take at home. If you vomit more than a few times or if nausea occurs for more than 24 hours or interferes with your ability to drink a normal amount of fluids, you should notify the surgeon’s office.
Other reasons to promptly contact the surgeon’s office include increased redness, swelling or drainage at the incision or temperature over 100.5 degrees Fahrenheit.

Before you leave the hospital, be sure you know when your follow-up appointments in the surgeons’ offices are scheduled.

RECOVERY AT HOME

It is common to experience a range of sensations after breast reconstruction surgery, including tightness or pulling at the incision sites, numbness, “pins and needles” or brief, sharp twinges near the incision sites or under the arm.

Keep the incision areas clean and dry. With your surgeon’s approval, you may shower. Be sure to avoid direct spray, very hot water, harsh cleansers and talcum powder on the incisions. If the top (gauze) dressing becomes wet, you may replace it with a sterile, similar type dressing and tape. Do not remove or replace the Steri-strips (thin adhesive strips that hold the edges of the wound together). Follow your surgeon’s instructions regarding wearing a bra. If you have any questions or problems with your bandage, notify the surgeon’s office.

A general feeling of tiredness or low energy is common for days to weeks after surgery. Your normal level of energy will gradually return but you will probably need to rest more and limit some activities for the first week or so immediately after surgery.

Avoid strenuous activities and lifting, pushing or pulling heavy objects until clearance is given by your physician. Carry packages and heavier objects on your unaffected side. Range of motion of the arm on the operative side will return as you gradually resume light household tasks, usual activities of daily living and self-care.

Speak with your surgeon about when you may resume driving and return to work. Most women do not drive or return to work until after all drains are removed and until after their post-surgery follow-up visit in the surgeon’s office. You should not drive if you are taking pain medication other than acetaminophen (Tylenol®) or ibuprofen (Advil®, Motrin®).

Patients who have undergone lymph node surgery are at risk for development of lymphedema (abnormal fluid collection and swelling) in the arm on the same side as the surgery. You should avoid heavy lifting, having your blood pressure taken, blood drawn or an IV on the operative side if you have had lymph node surgery. Symptoms of lymphedema should be promptly reported to your surgeon since the condition can lead to infection, pain and disfigurement.

It is common to experience an emotional reaction after breast reconstruction. Looking at the reconstructed breast for the first time or when your spouse or partner sees the reconstructed breast for the first time can cause anxiety, sadness or a range of emotions. It is important to keep in mind that emotional adjustment to any body change takes time.

Before you leave the hospital, you will be given a discharge instruction sheet with information about symptoms that should be reported to the surgeon and bathing. Be sure you know when your follow-up appointment in the surgeon’s office is scheduled. At that
appointment you will learn the results of the pathology report and discuss additional
treatment that is recommended. The surgeon’s office will make an appointment for you
to see a medical oncologist and radiation oncologist, as indicated.

COMMUNITY RESOURCES

1. Torrance Memorial Medical Center Cancer Resource Center for information on
   all aspects of cancer diagnosis, treatment and recovery. All services are
   completely free of charge and available to anyone. (310) 517-4665 or 1st floor
   West Tower

2. Torrance Memorial Rehab Department Outpatient Oncology Rehab Program for
   assistance with physical recovery, resuming normal activities and management of
   lymphedema. A prescription from your doctor is required. Call the Rehab
   Department at (310) 325-9110, ext. 2000 for additional information.

3. American Cancer Society Reach to Recovery program for information about arm
   exercises that can promote post-operative recovery. This free program also
   provides an opportunity to share concerns with another breast cancer survivor.
   Call the Torrance Memorial Cancer Resource Center (310) 517-4665 for a
   referral.

   www.cancer.org

5. The Wellness Community South Bay Cities for breast cancer support group and
   individual and family counseling. (310) 376-3550 or
   www.wellnessandcancer.org

6. American Society of Plastic Surgeons www.plasticsurgery.org


Patient Identification
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<th>Type of Reconstruction</th>
<th>Surgery Time (hours) for each breast (not including mastectomy time)</th>
<th>Overnight stays in hospital after surgery</th>
<th>Total Recovery Time (weeks)</th>
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<td>Pedicled TRAM</td>
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<td>Free TRAM</td>
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<td>DIEP/SIEA</td>
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