A GUIDE TO

Breast Reconstruction

UPMC | MAGEE-WOMENS HOSPITAL

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Your Care Team

Your care team is here with you every step of the way. Your doctors and their support staff, social workers, and psychologists are always available to answer any questions or concerns you have about your care.

Our staff can also put you in touch with breast cancer survivors who have had experiences similar to the ones you are going through now, including experiences with reconstruction surgeries (surgeries to restore the look of breasts). Your plastic surgeon may also be able to help you meet other current patients.

Help is also available through support groups and educational meetings. Even though others' experiences, needs, and goals may be different than yours, it can be comforting to meet people who are going through similar experiences.

Why Have Breast Reconstruction

You may have many different feelings and questions after learning you have breast cancer. One question you may have is how the mastectomy (surgery to remove one or both breasts) will affect your body and your everyday activities, like getting dressed.

Although breast reconstruction does not make the body exactly the way it was before a mastectomy, it can make it look more like it used to. Breast reconstruction can be an important step in recovery. Some feel that reconstruction helped them to get their confidence back, feel whole, and return to the lifestyle they had before breast cancer.

Breast reconstruction does not increase or reduce the risk that your cancer will come back. It also does not delay diagnosing a recurrence. There is no medical need to have breast reconstruction, so you do not have to get it if you do not want to.

Many people who choose not to have reconstruction wear a breast prosthesis. This is a shaped, soft form that is worn outside of the body in the pocket of a special bra. Possible challenges with a prosthesis include; it can be hot and heavy, hard to wear with certain clothing or during activities like exercising and swimming, and it usually needs to be removed before going to bed. People with larger breasts may consider breast-reducing surgery (surgery to make the breast smaller) on their other breast so the prosthesis they need to make their breasts look more equal will not need to be as large.

Most people can get breast reconstruction. Speak with your breast surgeon and plastic surgeon to see if you are able to get breast reconstruction.

About Breast Reconstruction

There are several types of breast reconstruction that will be discussed in this guide. There is a description of each, along with the advantages, disadvantages, and potential complications that come with each type. You may want one over another for many reasons, which may include:

- Surgical risks
- Goals
- History of breast surgery
- Breast size and body type
- Amount of time to commit to recovery

Your doctor and care team will help you decide which type of reconstruction is best for you.

There can be multiple operations to recreate all parts of the breast. These include getting your new reconstructed breast to look similar to your healthy breast and nipple reconstruction. Creating equal breasts may involve having an operation on the healthy breast to change the size or shape of it. The number of operations and time between each is different for everyone.

Reconstruction is successful for most people, but a certain result cannot be guaranteed. Your doctor will work with you to create the look you want and are happy with, understanding that "perfect breasts" may not be possible.

When to Get Breast Reconstruction

You will need to talk to your doctors about when you can have breast reconstruction. There are many things to consider, such as whether you need radiation therapy after your mastectomy. Many doctors want people to wait several months after completing radiation therapy before having reconstruction.

Immediate Breast Reconstruction: This is when the plastic surgeon starts reconstruction the same day as the mastectomy. The benefits include: much of your breast skin can be used for the reconstructed breast (making it look more natural), there are fewer surgeries, and there is typically a shorter recovery time.

Delayed Breast Reconstruction: This is when you have a mastectomy and delay the first reconstruction surgery for 3 to 6 months, sometimes longer. This means your chest will be flat on one or both sides until the first reconstruction surgery. There are many different reasons why you may choose to wait to get breast reconstruction or why your doctor may want you to wait.

Nipple Reconstruction: This is done after all other parts of breast reconstruction are complete. Your areola, or the dark skin around your nipple, may be tattooed onto your reconstructed breast(s) to give color back to the area of skin around the nipple. Some people think this makes the breast look more complete.

Implant-Based Reconstruction

Implant-based reconstruction involves placing a breast implant into a pocket under the skin and/or chest muscle. The pocket is made by your plastic surgeon. This is not the same as breast augmentation surgery (surgery to make the breasts larger, done for cosmetic reasons).

This is the most common type of breast reconstruction surgery. It is especially popular with younger people who want reconstruction on both breasts and who do not want to use, or may not have, available tissue for tissue-based reconstruction. Recovery is usually faster and there are no scars outside of the breast area.

Implant-based reconstruction often involves at least 2 different surgeries. The first one may place a temporary breast implant, which can be made larger over time, to stretch the skin so a more permanent implant will fit. The temporary implant is called a tissue expander. To support the expander and a more permanent implant, human skin that is specially sterilized and has no cells, may be added. Your own cells and tissue will grow around this skin to give permanent support. The tissue expander can be placed in various positions on the chest:

- Completely under the muscle **(total submuscular)**
- Partly under the muscle **(dual plane)**
- Completely above the muscle **(pre-pectoral)**

Your surgeon will talk to you about which position may be best for you. Saline is added to the tissue expander during multiple doctor visits, which stretches the skin and muscle around the expander to make room for the

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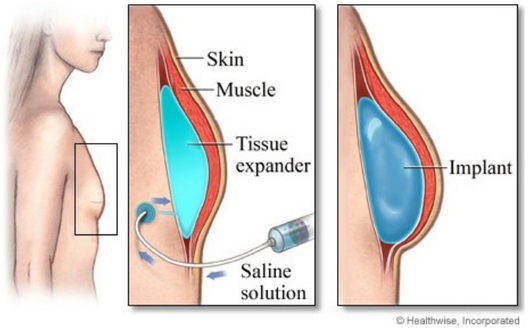
permanent implant. The saline is added using a small needle, inserted through your skin and into the expander. With each saline injection the skin and muscle around the expander may temporarily feel tight and uncomfortable as they become larger each time.

During the second surgery, the plastic surgeon will remove the tissue expander and replace it with a final implant filled with silicone or saline. This is usually done as an outpatient surgery.



Tissue Expander and Implant

Some people may be able to get direct-to-implant (DTI) reconstruction. DTI reconstruction involves placing the final implant and human skin, that is specially sterilized and has no cells, into the breast area without needing the tissue expander stage. This means you only need one reconstruction surgery. Many factors determine whether you are able to get DTI reconstruction. Your surgeon can explain these factors and suggest the best option for you.

Advantages

- Tissue expanders allow you to better choose your final breast size.
- You will not have incisions anywhere else on your body aside from the breast area.
- There are no risks to the donor site (area where tissue was taken from).
- The surgery time, hospital stay, and recovery times are shorter.

Disadvantages

- It may be hard to match the other breast.
- It may mean being flat or fairly flat chested until expansions make the breast larger.
- You will have to make multiple trips to the doctor's office during the expansion stage.
- The implant may not move like, feel as soft as, or fill a bra cup the same way as a natural breast.
- The implant may wear out and need to be replaced in the future.
- Surgeries on your other breast may be needed or wanted to make your breasts look similar.

Potential Complications

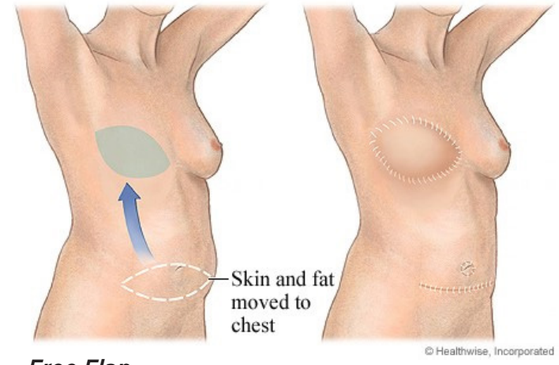
- Implant Leakage: An implant can wear out like all medical devices. The material inside the silicone shell can leak when the implant wears out. This means that your implant may need to be replaced in a future surgery. You will need to see your plastic surgeon regularly, and they may want you to have imaging done, like an ultrasound or MRI, to check the implant shell. Implant leakage does not pose any risk to your health.
- Capsular Contracture: This is when scar tissue around your implant tightens over time and makes your implant feel hard. In advanced capsular contracture, the round shape of the implant may be distorted (changed). In severe capsular contracture, the implant may feel uncomfortable or tight.
- Infection: It is very uncommon to have an infection in your implant, but if you do, your implant may need to be removed. Often, your body cannot completely get rid of the infection unless the implant is removed for several months. Your plastic surgeon will let you know when it is safe to replace.
- Additional Unplanned Surgery: People with breast implants tend to need more breast surgery over time. This surgery may be done for many reasons, such as to replace a leaking implant, treat capsular contracture, fix an implant that has moved out of place, or make the breasts look more equal. Often, these surgeries can be done as outpatient surgeries.
- Breast Implant Associated Anaplastic Large Cell Lymphoma (BIA-ALCL): BIA-ALCL is a very rare type of cancer that can form in the scar around a breast implant. This rare disease is mainly linked to textured implants. For this reason, we do not use textured tissue expanders or textured breast implants.
- Breast Implant Illness (BII): Breast implants may be linked to symptoms some refer to as breast implant illness (BII), which can include tiredness, "brain fog," muscle or joint pain, and rashes. Although there is no clear link between implants and these symptoms, some decide to remove their implants to improve these symptoms.

Tissue-Based Reconstruction

Some people who have extra tissue in their lower abdomen (belly) may be willing to have that tissue removed so it can be used for tissue-based reconstruction. Sometimes, other parts of the body with extra tissue, such as the thigh or buttocks areas, can be used for this type of reconstruction, but the abdomen is the most common place.

To move the flap of tissue (blocks of fat and skin) to the breast area, surgeons usually will create a **free flap**. A free flap is when tissue is removed from the body, moved to a new location, and reconnected with blood vessels. Typically, they will use a special microscope to do this.

You may also hear your doctor or surgeon use terms, such as, free TRAM, muscle-sparing free TRAM, DIEP, and SIEA flaps. They will decide which flap is right for you.



Free Flap

Advantages

- You can leave the hospital with a full breast reconstruction.
- The breast may look, feel, and move more naturally.
- The reconstructed breast looks more like the other breast.
- It may result in a more comfortable and permanent construction.
- The new breast changes with you over time, with slight weight changes and with aging.

Disadvantages

- Surgery time, hospital stay, and recovery times are longer.
- A long incision is placed on the belly and smaller ones are placed around the belly button.
- Possible problems with the abdominal incision healing may occur.
- There may be risk to the donor site (area where tissue was taken from).

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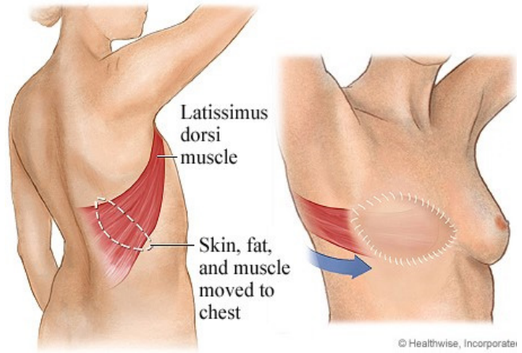
Potential Complications

- Wound Healing Difficulty: The rearrangement (movement) of tissue with flap reconstruction can lead to difficult or slowed healing in some areas such as the abdominal incision and edges of the breast flap. These generally can be cared for with wound dressings until healed.
- Bulge (lump): When there are areas of weakened and stretched muscle in the belly where the flap was created, a bulge may appear. It may be possible to see this bulge through clothing and you may need surgery if it is uncomfortable or painful.
- Flap Failure: If the blood supply to a free flap does not work, more surgery may be needed to repair the blood vessels, or the flap may need to be removed.
- Fat Necrosis (dead fat): If areas of fat necrosis happen in the reconstructed breast, you may feel hard spots that are lumps of scar tissue. These hard spots may also be sore when you touch them, and an open wound may develop if there is a large area of fat necrosis. If this happens, ask your doctor to examine you.

Combined Reconstruction with Tissue and Implant

This type of reconstruction is used in special cases when tissue is needed, but the person having the breast reconstruction does not have enough tissue (donor tissue) for the surgeon to create an entirely new breast. This reconstruction moves a flap of muscle, fat, and skin from the midback to the chest area. This flap is called a latissimus dorsi flap (LD flap). The tissue stays attached to the muscle, and the muscle stays attached to the person. The tissue flap tunnels under the skin at the side of the chest, near the underarm area, and can be used to replace skin that was affected by radiation or to create a more natural looking breast.



Latissimus Dorsi Flap

Typically, a tissue expander is used under the flap of tissue. Like implant-based reconstruction, the expander is gradually filled with saline during multiple office visits and is replaced with a final implant during a second surgery.

Using this muscle for a new purpose usually does not affect people's everyday activities unless they do heavy labor or are active in certain sports.

Both implant-based reconstruction and tissue-based reconstruction have similar lengths of operating room time, time spent in the hospital, and recovery time.

Advantages

- It allows for a safe and reliable breast reconstruction for people who are not able to get any other type of reconstruction.
- It creates a more natural looking breast.

Disadvantages

- The back may become uneven if the muscle flap is taken only from one side.
- The scar from the incision on the back may become wide or thick.
- The implant requires an expansion stage with many office visits.
- The implant may wear out and need to be replaced in the future.
- More surgery may be needed in the future to treat problems with the implant.

Potential Complications

This type of reconstruction, uses both tissue and an implant and has the same complications that implant-based and tissue-based reconstruction have. This means that many of the risks that come with implants, including implant leakage and capsular contracture, can happen as well.

Oncoplastic Reconstruction

Oncoplastic (partial) breast reconstruction may be recommended when a lumpectomy (surgery to remove breast tissue), also called a partial or a segmental mastectomy, is expected to leave a deformity (flaw) in the breast. In general, those who have a lumpectomy for early-stage breast cancer do not get reconstruction; however, for some people, the breast surgeon may ask the plastic surgeon to use ways that can reshape the breast during the cancer surgery, or soon after. This type of reconstruction saves breast tissue. The surgeon may rearrange tissue, may do a breast reduction surgery (surgery to make the breast smaller) on the healthy breast, or may transfer (move) tissue flaps.

Advantages

- It allows people to have breast reconstruction who might not otherwise be able to.
- It gives people with larger breasts, who may have been thinking about getting a breast reduction, a reduction at the same time as their cancer surgery.
- It creates a natural looking breast.
- It is generally an easier recovery compared to other reconstruction surgeries.

Disadvantages

- It is not right for everyone.
- It creates scars on the breast similar to breast reduction scars.
- Radiation is still usually required afterward.
- It requires a "symmetry" reduction on the healthy breast so the breasts look more equal.

Potential Complications

- Wound healing issues are common. When they occur, they usually heal well over time on their own. Sometimes, more surgery may be needed to improve healing.
- Loss of feeling in the nipple, temporary or permanent, may occur.
- Rarely, nipple loss may occur.
- Cancer margins are the border of the tissue removed, which is examined to see if they are "clean" or cancer fee. If the cancer margins are unknown after surgery, and later to be found positive, you may still need to get a mastectomy.

Goldilocks Mastectomy Reconstruction

Goldilocks mastectomy reconstruction uses the available skin, including the nipple, to create a new breast. This is usually done during the same time as a mastectomy. The outer skin is shaped into a higher, flatter breast, and the nipple is grafted (taken from one area and moved to another). Many times, people will need another reconstruction procedure, usually involving implants or fat grafting, in the future.

People with larger breasts, who do not smoke and who want a smaller reconstructed breast, are good candidates for this procedure. This is the best method for those who still want a breast form (shape) after their mastectomy without adding more recovery time. It is not recommended for those who have already had radiation. Surgery time is about an hour with recovery time being about 3 to 4 weeks.

Advantages

- It uses skin that would otherwise be removed.
- It allows people to keep their same breast shape and nipple-areola complex (NAC).
- It usually makes future reconstruction procedures easier for those who want them.

Disadvantages

- It is not possible for people with smaller breasts.
- It will leave additional scars on the breast.
- It may require a “symmetry” reduction on the healthy breast so the breasts look more equal.
- You may need more procedures to create a larger breast.

Potential Complications

- Nipple graft and skin loss may occur.
- It may take a long time for the wound to heal.
- Possible seroma (collection of fluid under the skin), hematoma (collection of blood under the skin), or skin infection may occur.

Fat Grafting

Fat grafting uses available body fat to help create a breast shape. It is usually done after another type of reconstruction has been completed to help improve the shape of the breast and sometimes make it look larger and more equal to the other. Fat grafting may also be used to create a new, small breast.

Liposuction (removing extra fat from under the skin) is used on available donor sites, usually the belly and thigh areas. The fat is then injected into the breasts during the same surgery. Many people choose to go through multiple rounds of fat grafting to reach their final breast size.

Advantages

- Available tissue is used to help make the breast larger and give it a better shape.
- It is usually a low-risk, short operation.

Disadvantages

- It is hard to make the breast large enough with just fat grafting. Usually, people will need another procedure.
- You may need multiple rounds to reach your final breast size.
- The amount of fat that gets grafted (gets removed and placed somewhere else) during each round varies.

Potential Complications

- Defects (flaws) in the shape of the breast can occur, as well as scars from liposuction on the belly or thighs.
- Fat necrosis (dead fat) may occur. This is when hard spots, that are lumps of scar tissue, form in the breast. The hard spots may also be sore when you touch them, and an open wound may develop if there is a large area of fat necrosis. If this happens, ask your doctor to examine you.
- Possible seroma (collection of fluid under the skin), hematoma (collection of blood under the skin), or skin infection may occur.

What to Expect After Surgery

When you know what to expect after surgery, you and your support person(s) may feel more relaxed and better prepared. Be sure to share this information with them.

You should expect some pain, so be sure to limit activity and take care of the incision. Your plastic surgeon can give you more information about your care after surgery.

Drains: The first part of breast reconstruction typically uses small suction drains that stay in your body for a few weeks after surgery. The surgeon puts these drains at the surgical site to stop fluid build-up under the skin (seromas). Small plastic tubes carry the fluid to a container outside the body. Your nurse will teach you how to care for the drains, and your plastic surgeon will decide when they are ready to come out. They will be removed in the office. Later stages of breast reconstruction may also involve drains.

Pain: It is normal to have some pain that lasts for several days or weeks after surgery. Different approaches are often used to help lessen pain after surgery. Approaches include using pain medicines as well as new and existing procedures, such as pain blocks. You will likely be sent home with pain medicine as well. The pain should not be as bad once you are home, but if it is, contact your doctor right away.

Close Monitoring: If a tissue flap was created during your breast reconstruction surgery, your care team may watch you closely during your hospital stay and check the color, temperature, and blood flow of the flap often.

Activity: Your doctor may want you to see a physical therapist before you go home. The exercises that you learn in physical therapy are important to your recovery, and it will be up to you to do the exercises regularly at home. Your care team will tell you about activities that you can and cannot do. Generally these include: Do not lift more than 5 to 10 pounds or do certain household chores such as vacuuming, lifting laundry baskets, and scrubbing floors for several weeks after your surgery. Do not drive while taking pain medicines or while having drains in place.

Clothing: You do not need to buy a special type of bra to take to the hospital when you have surgery unless your plastic surgeon tells you to. Loose-fitting clothing and button-down shirts are the most comfortable right after surgery because they let you move easily and make wound care easier. They are also less likely to affect healing and damage new tissue.

Overall Potential Complications

As with any surgery, there may be some complications after breast reconstruction surgery. People who smoke or who are very overweight are more likely to have complications, and recovery may be slower and harder for them. For this reason, your plastic surgeon may ask you to stop smoking or lose weight before getting breast reconstruction.

Skin Necrosis (dead skin): Skin necrosis happens when there is poor blood flow to the remaining breast or tissue flap. The skin that does not get enough blood turns purple, may blister, and eventually will become a thick black scab. The wound may take longer to heal, and you may need special dressings. Rarely, large areas of skin are affected, and you may need to have more surgery.

Seroma: A seroma is a collection of fluid under the skin. Suction drains are used to try to prevent this. A seroma may need to be drained in your surgeon's office or closely watched by your surgeon to see if your body absorbs the fluid. Sometimes, a seroma needs a new drain tube, which will be left in place for days or weeks.

Hematoma: A hematoma is a collection of blood under the skin. You may notice a hematoma if you have a sore area that has swelling and bruising. You also may have symptoms like weakness and dizziness. You may need surgery depending on where the hematoma is and how big it is. It is important to stop certain medicines, including herbal products and supplements, certain vitamins, and diet pills, before surgery so this is less likely to happen. Ask your doctor what medicines, vitamins, and herbal products/ supplements you should avoid. If these were prescribed by another doctor, check with them before stopping them. Tell your plastic surgeon if you have ever had any bleeding problems.

Infection: You may be given antibiotics to help prevent infection. Before you leave the hospital, you will be taught how to take care of your incision; it is important to follow these instructions. You should keep the area and dressings clean and dry. Your surgeon will let you know when you can shower again after surgery.

Breast Asymmetry: Right after surgery, you probably will have some swelling that may make your breasts asymmetrical (unequal) for a short time. Swelling and implant position usually will get better during the first 1 to 3 months after surgery. It may be several months before you can see the final result. It usually is not possible to make the new breast the exact same as the other breast. Breasts are naturally a little different even before surgery. Some differences in how the new breast fits in a bra should be expected. If asymmetry creates problems for you, you may want to have another surgery to help improve it.

In Summary

The successful treatment of your breast cancer is our top priority. The decisions you make during this time will affect the rest of your life, so you should consider all long-term and short-term goals for your cancer treatment carefully.

You should try to keep an open mind when you have your first appointments with the plastic surgeon. You may find it helpful to have a support person go to the appointments with you. Your care team can help you determine if, when, and what type of reconstruction is best for you.

Commonly Used Terms

Breast Asymmetry: Breasts that are unequal in shape and size. This is common right after surgery.

Breast Prosthesis: A soft breast form that is worn outside of the body in the pocket of a special bra.

Bulge: Lump that appears when there is an area of weakened and stretched muscle.

Capsular Contracture: This is when scar tissue around the implant tightens over time and makes the implant feel hard. In advanced capsular contracture, the round shape of the implant may be distorted (changed). In severe capsular contracture, the implant may feel uncomfortable or tight.

Delayed Breast Reconstruction: When you have the mastectomy first, and then later have the first reconstruction surgery.

Fat Grafting: Procedure that uses available body fat to fill and shape the breast.

Fat Necrosis (dead fat): When fat tissue does not receive enough blood flow and dies. This may feel like hard spots, and an open wound may develop.

Free Flap: When tissue is removed from the body, moved to a new location, and reconnected with blood vessels.

Flap Failure: When blood supply to a free flap does not work well.

Goldilocks Mastectomy Reconstruction: Reconstruction that uses available skin, including the nipple, to create a new breast.

Hematoma: A collection of blood under the skin. This looks like a sore area with swelling and bruising.

Immediate Breast Reconstruction: When the plastic surgeon starts reconstruction the same day as the mastectomy.

Implant-Based Reconstruction: Reconstruction where the breast implant is put into a pocket under the skin and chest. This is not the same as breast augmentation surgery (surgery to make the breasts larger, done for cosmetic reasons).

Latissimus Dorsi Flap (LD Flap): Reconstruction used in special cases when tissue is needed, but the person having the breast reconstruction does not have enough tissue (donor tissue) for the surgeon to create an entirely new breast. The flap of muscle, fat, and skin is moved from the midback to the chest.

Lumpectomy: Surgery to remove unhealthy breast tissue.

Mastectomy: Surgery to remove one or both breasts.

Nipple-Areolar Complex (NAC): The nipple and colored circle of skin around it.

Nipple Reconstruction: Reconstruction of the nipple-areolar complex, which is done after all other parts of breast reconstruction are complete. Tattooing may be done to give color back to this area as well.

Oncoplastic Reconstruction: Partial breast reconstruction done after a lumpectomy that saves breast tissue.

Seroma: Collection of fluid under the skin.

Skin Necrosis (dead skin): When there is poor blood flow to the remaining breast or the tissue flap. The skin turns purple, may blister, and eventually will become a thick black scab.

Suction Drains: Drains inserted to try to prevent seromas.

Tissue-Based Reconstruction: Reconstruction that moves tissue from one place on the body to the breast area.

Tissue Expander: A temporary and removable implant, gradually filled with saline during multiple doctor visits. It is eventually replaced with a final implant in a future surgery.

Notes

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