Breast Reconstruction Surgery

Options after a mastectomy

UW Medicine
UNIVERSITY OF WASHINGTON MEDICAL CENTER

This handout explains the most common procedures that are used at University of Washington Medical Center (UWMC) to reconstruct a breast after mastectomy. At the Center for Reconstructive Surgery, our goal is to help your body regain as much form and function as possible.

Your clinic visits will be at the UWMC Center for Reconstructive Surgery 3rd floor surgery pavilion.

About Breast Reconstruction

Some patients choose breast reconstruction for a variety of reasons, and some patients prefer to have a flat aesthetic closure, instead of breast reconstruction. This handout outlines some of the options available to you. Please discuss your options and choices with your surgeon.

You will first meet with your breast surgeon to determine if a mastectomy is recommended. The next consultation will be with a plastic surgeon to outline options for reconstruction. Reconstruction can take place at the time of mastectomy or later.

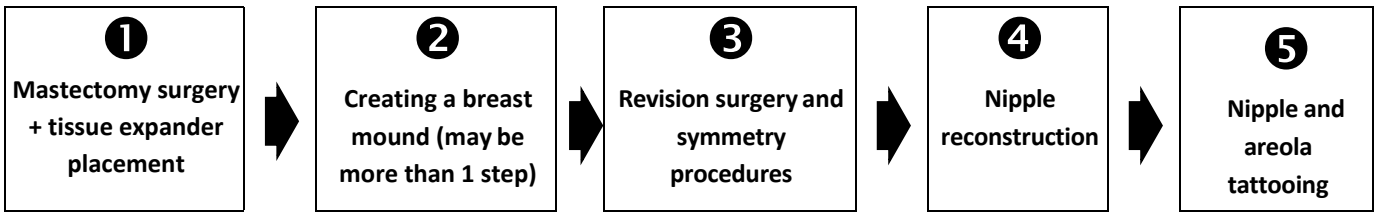
The timeline and type of breast reconstruction may depend on:

- Whether you have had chemotherapy, radiation, or other breast cancer treatments
- Your breast size and shape, and whether you have a history of breast surgeries
- Other health conditions such as:
  - Obesity, with a body mass index (BMI) greater than 35
  - Diabetes
  - Heart disease and other *co-morbidities* (medical conditions)

Talk with your provider about which type of breast reconstruction is right for you. Your surgeons will help create a care plan that meets your needs.

Reconstructive Surgery Process

Breast reconstruction involves many steps with a minimum of 3 months between each portion. The whole process often takes about 1 year or more.

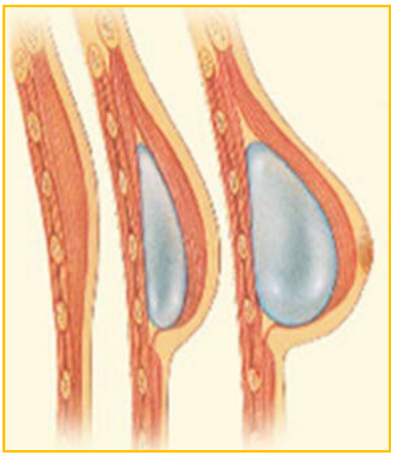


Step 1: Mastectomy and Tissue Expanders

The first step in breast reconstruction usually happens when you have a mastectomy. If the mastectomy and tissue expander placement cannot be done at the same time, the expander can be placed 2 weeks or more after your mastectomy. Your plastic surgeon will talk with you and decide the best time to place the tissue expander.

Tissue expanders are placed in the breast area either above or below your pectoral (chest) muscle. Tissue expanders are firm devices that your provider slowly fills with saline (salt water) over time. This helps stretch the skin and tissue to get ready for the next step of reconstruction. The tissue expander does not show what your final breast will look or feel like.

Expansion Process: Filling the tissue expanders usually begins 3 weeks after they are placed. You will go to the clinic every 1 to 3 weeks for 4 to 5 visits. At each visit, we will use a needle to add saline through a metal port in the expander. This slowly stretches the area until it reaches the breast size you want.



A tissue expander stretches the skin and muscle to create a pocket for the permanent breast implant.

Step 2: Creating a Breast Mound

The second step in breast reconstruction is surgery to create a new breast shape, called a breast mound. Your surgeon may use a permanent implant, tissue from another place on your body, or both. If you had chemotherapy, this surgery usually happens at least 1 month after your treatment ends. If you had radiation, surgery is done at least 6 months after your radiation is finished.

During your Step 2 surgery, you may have:

- Permanent implant *(see page 5)*
- *Autologous tissue transplantation* (when your own tissue is used to replace damaged tissue)
  - *DIEP* (deep inferior epigastric perforator) flap *(see page 6)*
  - Latissimus dorsi flap *(see page 8)*
  - *TUG* (transverse upper gracilis) flap *(see page 10)*
  - Other options, which your surgeon may discuss with you

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Step 3: Revisions and Symmetry

The third step in breast reconstruction is changing the shape and size of your new breast(s). This is called *revision surgery.* During this step, we may use *liposuction* to gently remove fat from your belly, hips, or thighs. Then we move this fat to your new breast to help it look more natural. This is called *fat grafting.*

- If you had reconstruction on only 1 side, we may do surgery on your other breast, so they look the same. This may include a breast lift, breast reduction, or *augmentation* (making your breast larger).
- These surgeries are usually *outpatient procedures*, meaning you will go home the same day.
- Some patients have more than 1 revision surgery to get the breast shape and size they want. These surgeries will be about 3 months apart so that your body has time to heal.

Step 4: Nipple Reconstruction

In *nipple reconstruction*, the surgeon gently lifts and folds the skin on your new breast to form a raised area that looks like a nipple. This procedure is usually done in the clinic using local anesthesia (medicine that numbs the incision area).

Nipple reconstruction is usually done about 3 months after revision surgery. In some cases, nipple reconstruction can be done during your revision surgery (step 3) when you are under *general anesthesia* (medicine that makes you sleep).

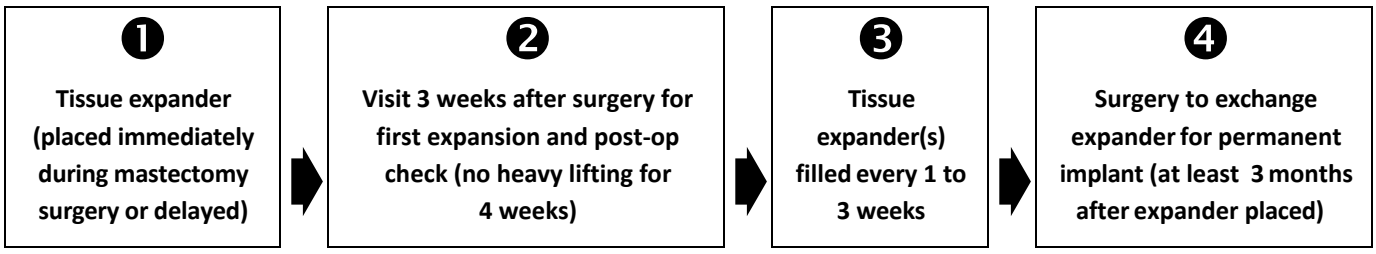
Step 5: Nipple Tattooing

Nipple tattooing adds permanent *pigment* (color) around your new nipple(s) to create an image of an *areola* (the darker area around your nipple). This is done in the clinic about 6 months after nipple reconstruction. You may need another tattoo appointment about 6 weeks later.

If you do not want nipple reconstruction, you can still get a 3D tattoo that looks like a nipple and areola.

Breast Reconstruction with Implants

Timeline for Reconstruction with Implants



When you are ready to start reconstruction, your surgeon will remove your tissue expander(s) and place a permanent *breast implant* (a soft, round pouch filled with salt water or silicone gel). This is called implant exchange. This will be outpatient surgery, and you will go home the same day.

Very rarely, implants may be placed immediately after your mastectomy. Talk with your surgeon about whether this is an option for you.

At one of your clinic visits, before we place your final implant, we will talk with you about your goals and the different types of implants. Sometimes your cancer treatment may delay this step.

Common Risks of Implant Surgery

- **Infection**: It is possible to get a *seroma* (fluid collection) or an infection after tissue expansion or permanent implant surgery. This usually happens in the first few months after surgery. If you get an infection, you will need to take antibiotics either by mouth or by IV (intravenous line).

  If an infection is severe, we may need to remove your expander or implant. Your surgeon will talk with you about whether it is possible to replace your expander or implant.

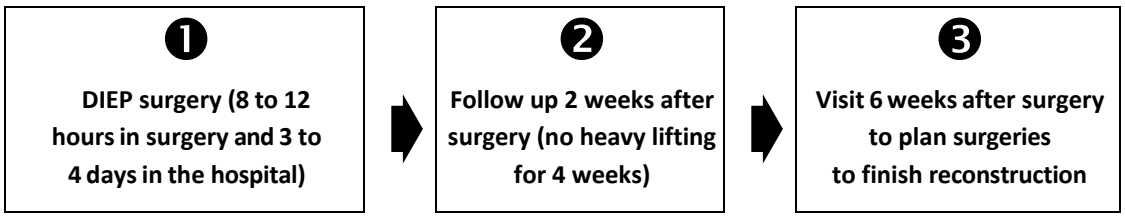
- **Rupture:** As implants age, the risk of implant *rupture* (leaking) increases. We recommend you have an MRI scan 5 years after implant placement to check for rupture. If your implants rupture, you will need another surgery to replace the damaged implant. Ruptures are usually not life-threatening or an emergency, but it is important to talk with your doctor as soon as possible. The material often stays inside the scar tissue around the implant and doesn't spread.

- **Capsular Contracture:** Sometimes, the scar tissue in the area around the implant gets painful, hard, and tight. This is called *capsular contracture*. It is one of the most common problems after implant surgery. Capsular contracture is more likely to occur if you have had radiation treatment. If it happens, you will likely need another operation to replace the implant.

- **Other** C**omplications:** There are other possible problems including rippling and wrinkling around the implant, or breast asymmetry (when your breasts look different).

Breast Reconstruction with DIEP Flap

Timeline for DIEP Surgery

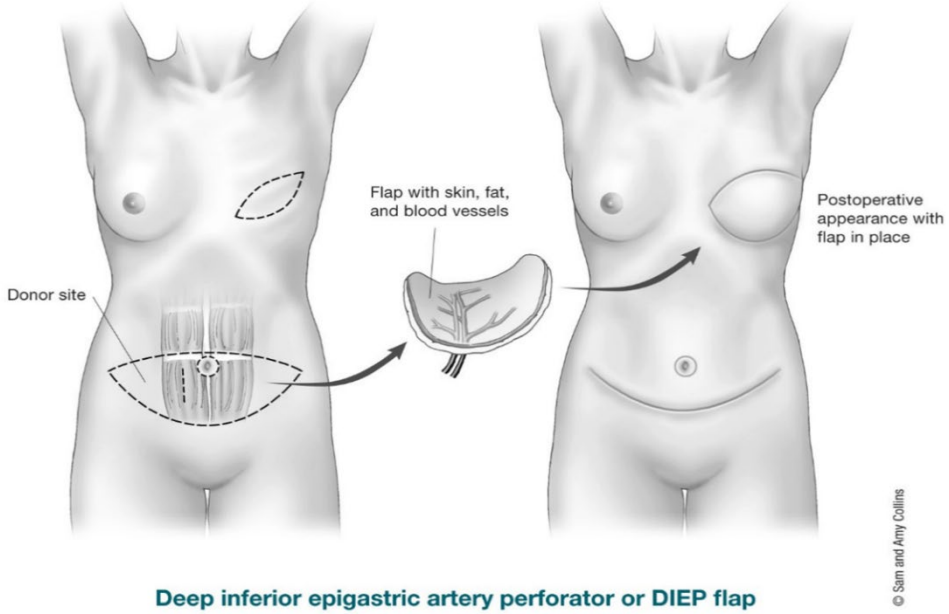


DIEP (deep inferior epigastric perforator) flap surgery includes taking skin, fat, and blood supply from your lower abdomen (belly) to reconstruct your breast after a mastectomy.

Before DIEP surgery, an imaging procedure called a computed tomography (CT) scan is done to find DIEP blood vessels in the lower abdomen. Your surgeon will remove the flap from your abdomen and then connect the arteries and veins in the flap to vessels in your chest. This is done using microsurgery, meaning your doctor will use a microscope and tiny instruments to connect blood vessels.

When this surgery is done, you will have a scar on your chest and from hip to hip below your belly button. You will also have a scar around your belly button and breasts.

DIEP surgery is more complex than other types of reconstruction. It takes about 8 to 12 hours. After this surgery, you will need to stay in the hospital for about 3 to 4 days, with 24 hours in the intensive care unit.



Deep inferior epigastric artery perforator or DIEP flap

Tiny branches of the deep inferior epigastric artery feed the skin and underlying tissue of the DIEP flap.

During surgery, the DIEP flap is carefully moved to the mastectomy site.

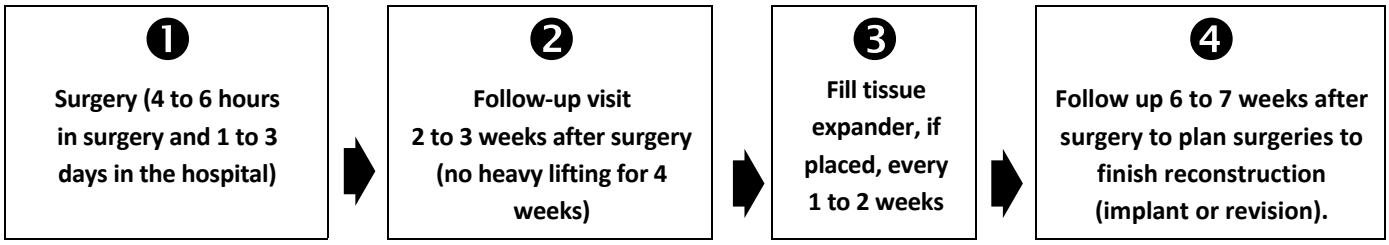
Common Risks of DIEP Surgery

- **Infection:** It is possible to get an infection after DIEP surgery. If you get an infection, you will need antibiotics you take by mouth or by IV (intravenous line). An infection can also contribute to delayed wound healing.
- **Risk of Flap Failure:** DIEP flap surgery is usually successful, but there is a 1% to 3% chance that there will be a problem with the flap it must be permanently removed. This usually happens during the surgery or while you are in the hospital. If this happens, your surgeon will talk with you about your other options for reconstruction.

  To help prevent problems with your flap tissue, you will need to follow strict activity and lifting instructions for 4-6 weeks after surgery.
- **Fat Necrosis:** Some of the fat we move to your breast may not survive. This is called *fat necrosis* and it can cause small, hard lumps to form. These are usually absorbed into your body. They can also be removed during later steps of revision surgeries.
- **Other DIEP surgery complications include**:
  - Breast asymmetry (when breasts do not match perfectly)
  - Slow wound healing
  - Abdominal weakness or bulge
  - Seroma (fluid collection)
  - Scarring

Breast Reconstruction with Latissimus Dorsi Flap

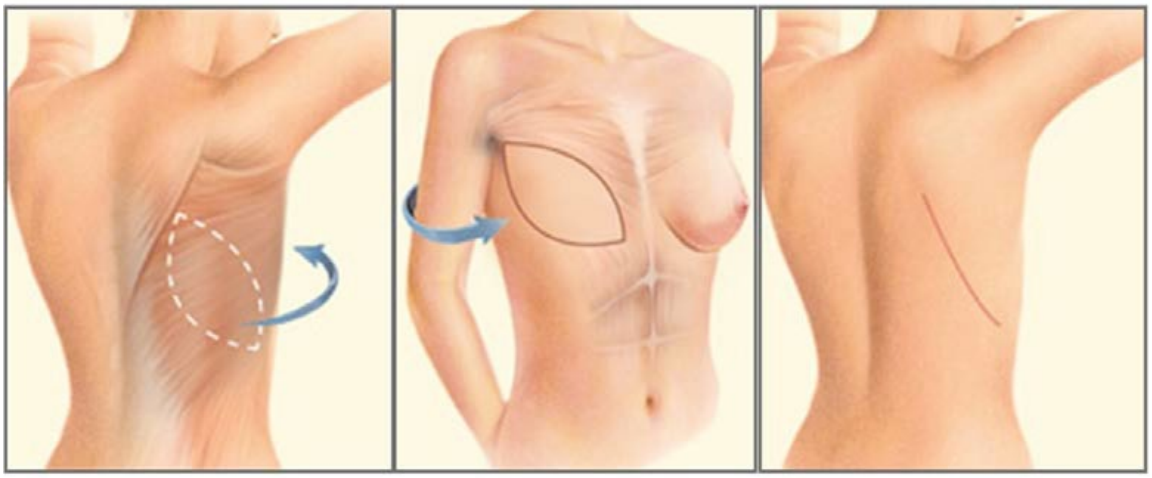
Timeline for Latissimus Dorsi Flap Reconstruction



The *latissimus dorsi* muscle is on your upper back. In a *latissimus dorsi flap reconstruction*, this muscle and connected fat and skin are rotated toward your chest to reconstruct your breast. This type of surgery may be an option if you have tight skin after your mastectomy or if you have had chest wall radiation. Surgery takes typically 4 to 6 hours under general anesthesia.

If your latissimus dorsi flap is not large enough for a full breast reconstruction, your surgeon may place a tissue expander beneath the muscle. This will later be switched with an implant.

After surgery, you will stay 1 to 3 nights in the hospital. You will have scars on your back where the muscle was taken and on your chest where the reconstructed breast is created.



Latissimus dorsi flap reconstruction

Common Risks of Latissimus Dorsi Flap Surgery

- **Infection:** It is possible to get an infection after latissimus dorsi flap surgery (with or without a tissue expander and implant). If you get an infection, you will need to take antibiotics by mouth or by IV (intravenous line). Infections can also slow down wound healing.
- **Rupture:** As implants age, the risk of implant *rupture* (leaking) increases. We recommend you have an MRI scan 5 years after implant placement to check for rupture. If your implants rupture, you will need another surgery to replace the damaged implant. Ruptures are usually not life-threatening or an emergency, but it is important to talk with your doctor as soon as possible. The material often stays inside the scar tissue around the implant and doesn't spread.

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- **Capsular Contracture:** Sometimes, the scar tissue in the area around the implant gets painful, hard, and tight. This is called *capsular contracture*. It is one of the most common problems after implant surgery. Capsular contracture is more likely to occur if you have had radiation treatment. If it happens, you will likely need another operation to replace the implant.
- **Risk of Flap Failure:** Latissimus dorsi flap surgery is usually successful, but there is a chance that there will be a problem with the flap and part of the muscle will lose its blood supply. This usually happens during the surgery or while you are in the hospital. If this happens, your surgeon will talk with you about your other options for reconstruction.

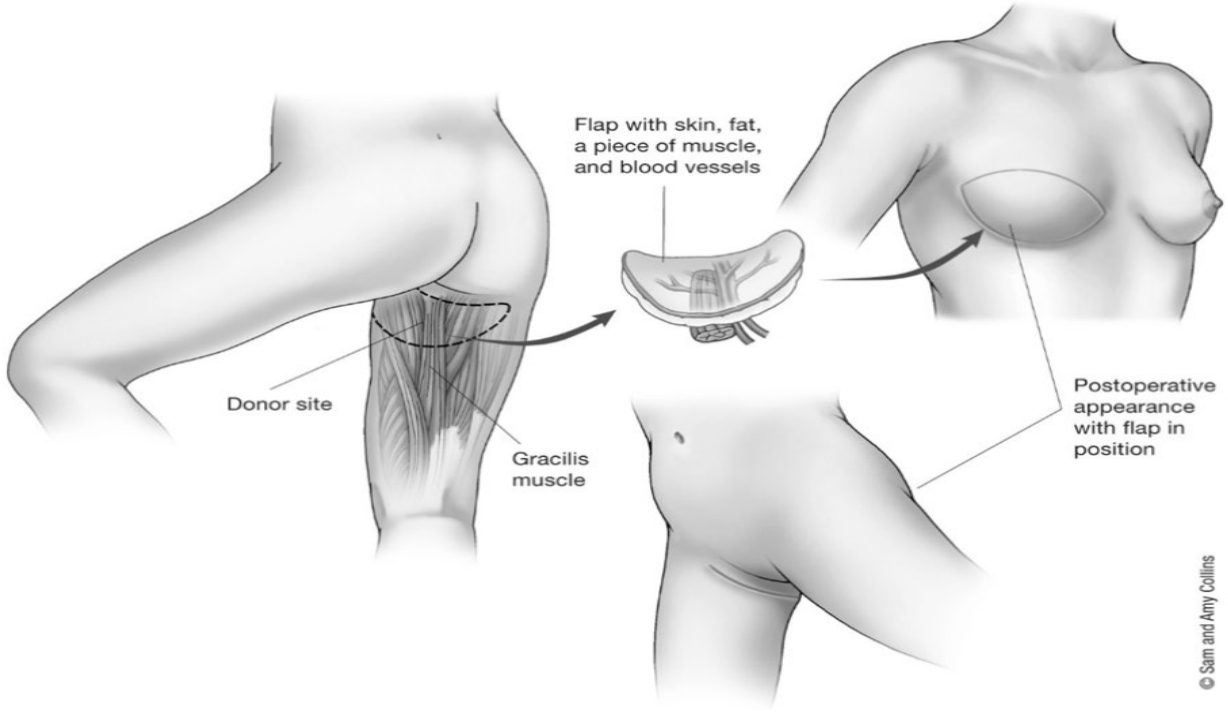
  To help prevent problems with your flap tissue, you will need to follow strict activity and lifting instructions for 4-6 weeks after surgery.

Other Types of Breast Reconstruction

Talk with your if you need to consider other types of breast reconstruction. This may involve using your own tissue from your thigh or your buttocks.

Your surgeon will talk with you about the benefits and risks of these different surgeries. The recovery timeline and risks for these surgeries is similar to the DIEP flap surgery. These other options may include:

- **TUG (transverse upper gracilis) Flap:** Skin, fat, muscle, and blood vessels from the upper inner thigh are moved to the chest wall. They are connected to new breast site using *microsurgery*. This means the doctor uses a microscope and tiny tools to connect small blood vessels.
- **SGAP (superior gluteal artery perforator) Flap:** This surgery also uses skin, fat, and blood vessels, but they are taken from the upper buttock. This leaves a scar at or near the upper panty line.



TUG (transverse upper gracilis) flap surgery

Overview of Surgery Risks

Some of the risks related to surgery include:

- Problems from anesthesia, for example respiratory (breathing) or gastrointestinal (such as nausea and vomiting)
- Bleeding
- Blood clots
- Infection
- Slow wound healing
- Scarring
- Flap loss (due to blood-flow problems)
- Risks from implants (such as rupture or contracture)

Increased Risk

You have a higher risk for complications after surgery if you:

- Use nicotine products
- Have a BMI over 35
- Have diabetes with a hemoglobin A1C over 7
- Have *co-morbidities* (medical conditions) such as cardiovascular concerns or anti-coagulation needs

If you have any of these increased risk factors, we may ask you to wait to have surgery until these issues are controlled or resolved.

Questions You May Have

Can I talk with other patients who have gone through the kind of reconstruction I am thinking about?

Yes. If you want to talk with other patients, please tell your doctor. This might take some time as we need to reach out to these patients for permission to share their reconstruction experiences. You may also be able to connect with people through social media support groups.

When can I have my surgery?

After your consult visit, a patient care coordinator (PCC) will talk with you about dates for your surgery. Your dates will depend on your schedule, the surgeon's schedule, and whether you have any health risks.

How much time will I need to take off work?

Patients' recovery time at home varies. It depends on the type of surgery you have, how quickly you heal, and whether you have any problems from the procedures. It will also depend on the type of work you do. Please discuss this with your surgeon during your visit.

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What should I bring to my clinic visits?

We suggest that you bring a list of questions, a notepad and pen, and a support person to all your visits. It can be hard to remember everything you and your surgeon talk about. Writing down what you learn and having a support person there will help.

Which websites provide reliable information?

Try these websites:

- www.diepflap.com
- www.PlasticSurgery.org
- www.BreastReconstructionMatters.com

How long until my reconstruction is complete?

It can take up to a year or more to finish all the steps of reconstruction. It depends on your rate of healing, your cancer treatments, and whether you have any problems from the procedures.

Notes and Questions to Ask

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Questions?

Your questions are important. Contact your doctor or healthcare provider if you have questions or concerns.

During Clinic Hours (Monday through Friday except holidays, 8am to 5pm):
If you have any questions or concerns, we recommend messaging your surgeon through EPIC MyChart. Please include a photo if applicable.

You may also call the Center for Reconstructive Surgery at 206.598.1217, option 2.

Urgent Needs Outside of Clinic Hours
If you have an urgent care need after hours, on weekends, or holidays, please call 206-598-6190 and ask to speak to the plastic surgeon on call.

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