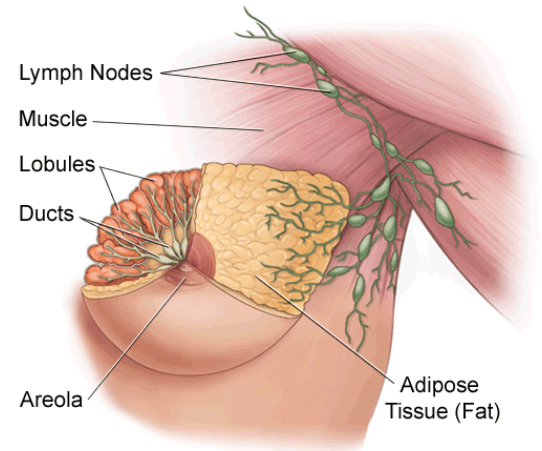


Axillary Lymph Node Surgery

Your Lymphatic System

Understanding how your lymphatic system works can be helpful as you prepare and recover from your surgery. Your lymphatic system is made up of:

- **Lymph nodes** are small, bean shaped structures located along your lymphatic vessels. Your lymph nodes filter out bacteria, viruses, cancer cells and other waste products.
- **Lymphatic vessels** are tiny tubes, similar to blood vessels, which carry out fluid to and from your lymph nodes.
- **Lymphatic fluid** is the clear fluid that travels through your lymphatic system. It carries cells that help fight infections and other diseases.



What is a Sentinel Lymph Node Biopsy?

- The purpose of a sentinel lymph node biopsy is to find out if cancer has spread from the breast to the lymph nodes under the arm.
- A tracer is injected into the breast, either the morning of surgery, or while you are asleep during surgery.
 - A radioactive tracer may be used. In this case you will go to nuclear medicine the day before or it will be given to you in the operating room on the day of your surgery.
 - Blue dye may be used. In this case the injection will be done during your surgery. Blue dye can turn your urine green or blue for a couple of days after surgery, and some patients develop a small lump right at the injection site.
 - A very small risk (0.5%) of anaphylaxis is associated with using blue dye. Meaning, 1 in 200 women will have a rare reaction to the blue dye.
 - Your surgeon may use one or both of these tracers.
- The tracer travels to the first lymph node or set of nodes under the arm that drain the breast. These node(s) are called the “sentinel node(s)”. Most women have 2-3 sentinel lymph nodes.
- The sentinel node(s) may or may not be sent to be looked at under the microscope during your surgery. Your surgeon will discuss this option with you.
- If the sentinel lymph node(s) contain cancer cells (a “positive” node), your surgeon may choose to take more lymph nodes from the underarm area. This is called an “axillary lymph node dissection”.
- In order to perform the sentinel lymph node biopsy your surgeon may make a separate incision in the underarm area. This is frequently more sensitive than the breast incision. Sometimes women experience numbness near the area that is usually temporary, but may be permanent.
- A sentinel node biopsy carries a 5% risk of lymphedema. See the Lymphedema Fact Sheet for more information on this topic.
- There are no arm restrictions if you undergo a sentinel node procedure. It is okay to use the arm you had a sentinel lymph node biopsy on for blood draw and blood pressure readings.

What is an Axillary Lymph Node Dissection?

- There are two main reasons that surgeons will recommend an axillary lymph node dissection:
 1. To remove cancer that has spread into the lymph nodes.
 2. To get more information about your cancer, if needed, to help make treatment decisions.
- The combination of a mastectomy and axillary lymph node dissection is a common procedure known as a “modified radical mastectomy.”
- You may have an incision in the underarm area. This is frequently more sensitive than the breast incision. Sometimes women experience numbness near the area that is usually temporary, but may be permanent.
- An axillary lymph node dissection may involve taking anywhere from 4-20 lymph nodes.
- An axillary lymph node dissection carries up to a 20% risk of lymphedema. See the Lymphedema Fact Sheet for more information on this topic.

Do I Need to Take Any Special Precautions After Lymph Node Surgery?

- If you have a **sentinel node biopsy**, there are no special precautions you need to take
 - Return to your normal activities gradually.
 - Shoulder range of motion exercises can be started 1-2 days after surgery. Please reference the *Post-Operative Activity Guidelines and Exercises* for some suggested activities.
- If you have an **axillary node dissection**, please discuss your activities with your healthcare team and reference the below guidelines (see box) to help reduce your risk of lymphedema.

Axillary Discomfort After Surgery

During a sentinel lymph node biopsy and an axillary lymph node dissection (via dedicated axillary incision or through mastectomy incision) there is an unavoidable disruption to the superficial sensory nerves that provide feeling to the skin in the underarm, lateral chest wall (along rib cage), and around the upper arm (specifically the back of the upper arm, but not beyond the elbow). This can cause a significant amount of discomfort in the post-operative setting and may be felt more after an axillary lymph node dissection. The symptoms can include numbness, “pins and needles,” aching, burning, and sometimes itching. This discomfort can last for up to 6-8 weeks after surgery and is expected to improve over time. In some instances, numbness in this area can be permanent.

Treatments:

- Monitor the area often to ensure there is no skin breakdown or ulceration.
- Exercise regularly to maintain proper arm and shoulder range of motion.
- Medications for nerve pain can be considered in some situations (i.e., gabapentin, pregabalin).
- Physical therapy or occupational therapy referral as needed if range of motion issues develop/persist.

Axillary Cording

Axillary cording, also known as axillary web syndrome, is a complication that may occur after axillary surgery (sentinel lymph node biopsy or axillary lymph node dissection). It is described as cord-like tissue extending from the armpit (axilla) along the inner arm to the elbow, and sometimes into the forearm, and rarely to the wrist or palm. It can present any time after surgery, but most often in the first few months. It can be painful and limit range of motion in the shoulder and sometimes the elbow, but it is not dangerous. It should resolve within a few weeks.

Treatment:

- Gently massaging of the cord-like area, preferably during or after a hot shower.
- NSAIDs (Advil, Ibuprofen or Aleve) to help decrease inflammation.
- Maintain full use of the arm and range of motion of the shoulder to limit the development of a frozen shoulder (see recommended arm exercises after surgery).
- Physical therapy referral if shoulder range of motion is limited.

Guidelines to follow after Axillary Node Dissection

- After surgery or radiation, return to your normal activities gradually.
- It is important to use your affected arm for normal, everyday activities to help you heal properly and regain strength. This includes things like brushing your hair and bathing.
- Keep your arm clean and dry, use daily moisturizer.
- Avoid tight jewelry, tight clothing, or elastic bands around the affected arm or fingers.
- Wear gloves while doing activities that might cause skin injury, such as gardening, working with tools, and using chemicals such as detergents.
- Protect your arm from sun and insects by using sunscreen and insect repellent.
- If you get a scratch, bite, burn, or break in your skin, wash the affected area immediately with soap and water, and apply antibiotic ointment.
- Avoid heavy lifting on the surgical side for 4 weeks after surgery. When you are ready, start with 2-3 pounds and see how your body reacts. Monitor for signs of swelling as you progress your activity.
- Avoid repetitive motions with the affected arm such as vacuuming for 2 weeks after surgery.
- If needed, it is ok to have blood pressure, injections and blood draws performed in either arm. There is no evidence that this will cause lymphedema. Research shows that blood draws and blood pressure should be avoided in the arm only if you have been diagnosed with lymphedema or have history of lymphedema in that arm.

For more information regarding lymphedema, please reference the *Lymphedema Fact Sheet*.