



Lymph Node Surgery

The lymph nodes under the arm are removed in order to test for the presence of breast cancer. This information is used to determine the best possible treatment options for breast cancer. There are two types of lymph node surgery done today: **sentinel lymph node biopsy** and **axillary lymph node dissection**.

Sentinel lymph node biopsy

This procedure identifies and removes the first lymph nodes to receive lymph fluid drainage from the breast. These nodes are called the sentinel lymph nodes. There is often more than one sentinel node. Once your surgeon has identified and removed the sentinel lymph nodes, they are sent to the pathologist for review and diagnosis.

Your surgeon will use a radionuclide dye, a blue dye, or a combination of both to identify the sentinel lymph nodes. The radionuclide dye is injected into the breast by your surgeon or by a radiologist in the nuclear medicine department. This is done before your scheduled surgery, sometimes the day before surgery. The amount of radiation exposure is less than a routine chest X-ray.

If blue dye is used, it will be injected into your breast by your surgeon in the operating room. You may notice a blue discoloration of your breast after surgery. This will fade in time. You may also notice a blue-green discoloration of your urine or other bodily fluids immediately after surgery.

Axillary Lymph Node Dissection

An axillary lymph node dissection removes all of the lymph nodes in the lower armpit area (known as the axilla). The fatty tissue that is removed with an axillary node dissection usually contains between six to twenty-five lymph nodes. The precise number of lymph nodes removed will not be known until the tissue is examined microscopically by the pathologist.

There are several factors that your surgeon will consider to determine if you need an axillary node dissection. These factors can include:

- Presence of cancer cells in the axilla found during diagnostic testing
- Size of the cancer in the breast
- Number of sentinel lymph nodes with cancer cells

- Amount of cancer cells seen in each lymph node

Risks and complications of lymph node surgery:

- **Allergic reactions.** It is possible, although unusual, to have an allergic reaction to the dye used for identification of the sentinel lymph node
- **Collection of lymph fluid (seroma)**

The fluid that traveled through the lymph nodes may accumulate in the space where the lymph nodes were removed. This is usually not significant and results in a small amount of swelling until your body absorbs it. If there is a larger amount of swelling and it becomes painful, aspiration of the fluid may make you more comfortable. You can call the office to make arrangements to have the fluid aspirated.
- **Injury to the intercostal brachial nerves**

These nerves run through the middle of the lymph nodes and give sensation to a small area in the back of the armpit. Every effort is made to save these nerves during surgery. However, if they are cut or stretched during the procedure, the result would be an area of numbness along the armpit and back portion of the upper arm. This may be temporary or permanent and will in no way affect function or use of the arm or hand. Please be careful when shaving your armpit as you may have decreased sensation.
- **Winged scapula (shoulder blade)**

The long thoracic nerve to the serratus anterior muscle passes through the axilla (armpit area). Cutting or injuring this nerve will result in the shoulder blade protruding (winging) out when the arm is held in certain positions (such as when pushing your hand against the wall). This complication is extremely rare and will only affect daily function when fine positioning of the shoulder is required such as pitching a baseball or serving at tennis.
- **Swollen arm (lymphedema)**

This may occur because the lymph fluids from the arm must reroute and filter through the remaining axillary lymph nodes. Because only the lower lymph nodes are removed during surgery, this complication happens much less often than it did with the more radical types of surgery done in the past. Lymphedema occurs in a small number of patients, and symptoms can range from hand swelling alone to total arm swelling. It can develop years after the lymph node surgery. If you notice any swelling of your hand or arm, please contact your surgeon. Lymphedema can be controlled with physical therapy if it occurs, but it should be treated promptly and by experienced therapists at the direction of your doctor.

Frequently Asked Questions:

- *Will I have a drain placed at the time of surgery?*

Possibly. Your surgeon will decide if a drain is needed to remove the lymph fluid from the surgical area. If a drain is placed, you will be given drain care instructions. The drains are removed in the clinic once it drains less than 25 cc (ml) of fluid over a 24 hour period x 2 days in a row.

If no drain is placed, or after a drain is removed, it is possible to collect fluid under the incision. This is not harmful, although it can be uncomfortable. Contact your surgeon if this occurs, as the fluid can be easily removed in the office with local anesthetic and a small needle to aspirate (draw out) the fluid collection.

- *Will I have pain after surgery?*

Generally there is more discomfort after axillary dissection than after a sentinel lymph node biopsy, but each patient has a different experience. You may experience post-operative pain at the incision, and possibly your back and upper arm.

- You will have a prescription for pain medication. Take it as prescribed.
- You may be more comfortable if you place a small pillow or folded cloth under the armpit.
- You may also use an ice pack for relief of moderate pain or swelling. Apply to the incision intermittently (twenty minutes on/twenty minutes off).

- *When may I shower? Use deodorant? Shave under my arms?*

- You may remove the gauze bandage on the day after surgery. Leave the thin paper strips (steri-strips) in place. You may shower and get the strips wet. Just pat the area dry when you are done. The strips will start to come off in about a week.
- Do not use deodorant until instructed by your surgeon, as it may irritate your incision. (Usually you may resume in 1-2 weeks).
- Do not shave the underarm until your incision is well healed. Watch in a mirror when you do shave, since you may have decreased sensation in that area.

- *What about my activity level—can I use my arm on the side the lymph nodes were removed?*

You may use your arm as much as it is comfortable to do so. The discomfort will lessen over a week or two, and you can increase your activity level as you feel better. It is not unusual to experience a “pulling” under your arm and have some restriction initially after surgery. Most patients benefit from therapy to help return to full arm function after surgery—such as the Saratoga Hospital Comprehensive Rehabilitation Program for Women with Breast Cancer. Your surgeon can make a referral.

- *Do I need special care for my arm after lymph node surgery?*

Because lymph nodes have been removed from under the arm, it is important to watch out for and prevent infections in the arm on that side. Avoid cuts, scratches, irritations and burns as much as possible by doing the following:

- Avoid blood drawing, injections, IV's and blood pressures on the affected side.
 - Avoid tight jewelry or clothing on the affected arm.
 - Use insect repellent and protective sunscreen.
 - Carry your purse on the opposite shoulder.
 - Wear gloves for washing dishes and using cleaners and gardening.
 - Wear padded gloves for reaching into a hot oven.
 - Use care when shaving under the arm. Consider using an electric razor.
 - Do not cut your cuticles.
 - Use moisturizer to keep your skin soft and supple.
- *When may I resume driving?*
Driving will not hurt your surgical recovery, but you must think about safety. You should not drive if you are still taking prescription pain medication. You should also wait until you can move your arm easily. It is best to drive only short distances at first and gradually increase your driving time over a few days.