



PATIENT & CAREGIVER EDUCATION

Lymphedema and Breast Cancer

This information will help you understand what lymphedema is and your risk for developing it.

About Your Lymphatic System

Your lymphatic system has 2 functions:

- It helps fight infection.
- It helps drain fluid from areas of your body.

Your lymphatic system is made up of lymph nodes, lymphatic vessels, and lymphatic fluid (see Figure 1).

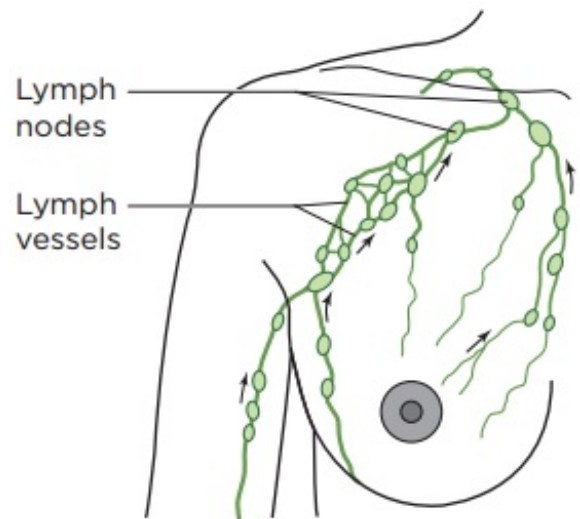


Figure 1. Normal lymph drainage

- **Lymph nodes** are small bean-shaped glands located along your lymphatic vessels. Your lymph nodes filter your lymphatic fluid, taking out bacteria, viruses, cancer cells, and other waste products.
- **Lymphatic vessels** are tiny tubes, similar to blood vessels, that carry lymphatic 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.

During surgery for breast cancer, your doctor may remove some of your lymph nodes to see if the cancer has spread. The lymph nodes that may be removed are:

- **Sentinel lymph node(s).** These are the first node(s) in your axilla (armpit) that receive drainage from the breast tumor. This node(s) is identified by injecting a special dye into your breast.
- **Axillary lymph nodes.** These are a group of nodes in your axilla that drain the lymph fluid from your armpit and arm. If any cancer cells are found in your sentinel node(s), additional axillary lymph nodes may be removed. The number of nodes varies from person to person.

Sometimes, removing lymph nodes can make it hard for your lymphatic system to drain properly. If this happens, lymphatic fluid can build up in the area where the lymph nodes were removed. This extra fluid causes swelling called lymphedema.

Lymphedema can happen in the arm, hand, breast, or torso on your affected side (the side where your lymph nodes were removed).

Understanding Your Risk of Developing Lymphedema

Most people will not develop lymphedema, but some will. It's difficult to determine the risk of developing lymphedema

because:

- There is no standard test for diagnosing lymphedema.
- Disruption of lymph nodes affects people differently.
- Lymphedema can develop soon after surgery, or it can develop years later.
- Current cases of lymphedema can be caused by older treatment methods.

Studies show that the risk of developing lymphedema is different based on how the lymph nodes are removed (see Figure 2). There are 2 types of surgeries used to remove lymph nodes.

- Sentinel lymph node biopsy: between 1 and a few lymph nodes are removed from the armpit to check for cancer. With a sentinel lymph node biopsy, the risk of developing lymphedema is low.
- Axillary lymph node dissection: more lymph nodes are removed from the armpit. This is done to remove additional lymph nodes that may have cancer. With axillary lymph node dissection, studies show the risk of developing lymphedema is higher than with a sentinel node biopsy.

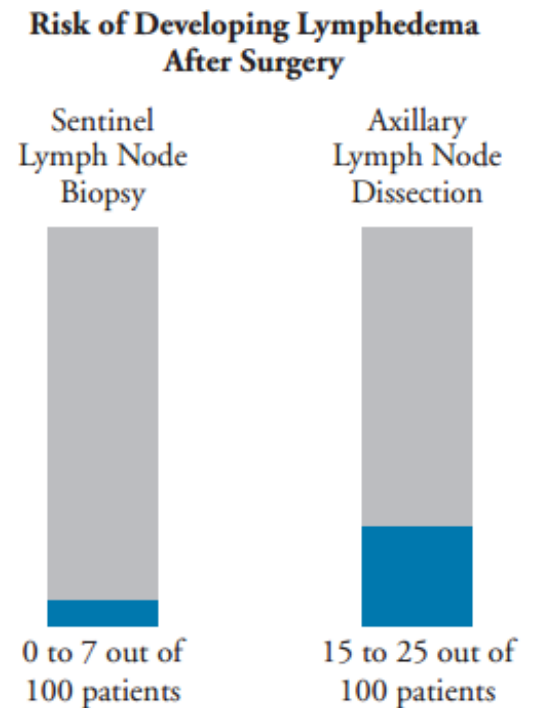


Figure 2. Risk of developing lymphedema after different surgeries

Damage to your lymphatic system can also increase your risk of developing lymphedema. The following things can damage your lymphatic system:

- Radiation therapy to the armpit
- An infection after surgery
- Severe injury to your surgical area (such as a serious burn or wound)
- Tumor growth
- Weight gain after treatment, or being overweight

Reducing Your Risk of Developing Lymphedema

There is no way to know who will develop lymphedema, but there are things you can do to reduce your risk.

- Maintain or safely work towards a healthy body weight.
- Exercise and stretch your muscles on a regular basis. When you resume exercise and activity, make sure to build up slowly and gradually. If you feel discomfort, stop and take a break. Talk with your doctor or nurse about which exercises are right for you.
- If you get a cut or scratch on your affected arm or hand, clean the area with soap and water and apply antibacterial ointment such as Bacitracin[®] or Neosporin[®]. Cover the area with a bandage.

- If you get a burn on your affected arm or hand, apply a cold pack or run cool tap water over the burn for 10 to 15 minutes. Then clean the area with soap and water and cover it with a bandage.
- Watch for signs of infection, including redness, swelling, increased heat, or tenderness.

Signs of Lymphedema

Some mild swelling after surgery is normal. The swelling may last for up to 6 weeks, but it's temporary and will gradually go away. You may also feel pain or other sensations, such as twinges and tingling, after surgery. These feelings are common and aren't necessarily signs of lymphedema.

If you're at risk of developing lymphedema, watch for these signs:

- A feeling of heaviness or aching in your breast, arm, hand, or fingers.
- A tight feeling in the skin of your arm, hand, or breast.
- Less flexibility in your arm, hand, or fingers.
- Swelling or changes in your skin, such as tightness or pitting (skin that stays indented after being pressed).

If you have any signs of lymphedema, or you're not sure, talk with your doctor or nurse.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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