

Lymphedema and Breast Cancer



MASSACHUSETTS
GENERAL HOSPITAL

CANCER CENTER

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People who have been treated for breast cancer are at risk for developing lymphedema (limf-ah-deema). This pamphlet will give you information about lymphedema and its treatment.

What is lymphedema?

Lymphedema is swelling caused by fluid that collects in tissue under the skin. This fluid is called “lymph.”

What is the lymphatic system? What is its job?

Lymph fluid, lymphocytes (white blood cells), lymph vessels, and lymph nodes are part of the body’s lymphatic system. The lymphatic system removes cell waste and protects the body from infections and disease. It does this by collecting extra fluid, proteins, and other substances from the body’s tissues. It is moved through the body in tiny vessels that are much smaller than veins. Bean-shaped lymph nodes filter the fluid to remove waste and bacteria. Other lymph vessels carry the lymph back to the bloodstream.

What causes lymphedema?

Both surgery and radiation to the lymph nodes can block the flow of lymph. This causes the mild swelling that often happens after surgery and radiation, which usually gets better as you heal. The swelling that does not go away or increases may be lymphedema.

When does lymphedema develop?

Though breast cancer-related lymphedema may develop weeks,

months, or even years after lymph node surgery or regional lymph node radiation, most occurs within three years of surgery.

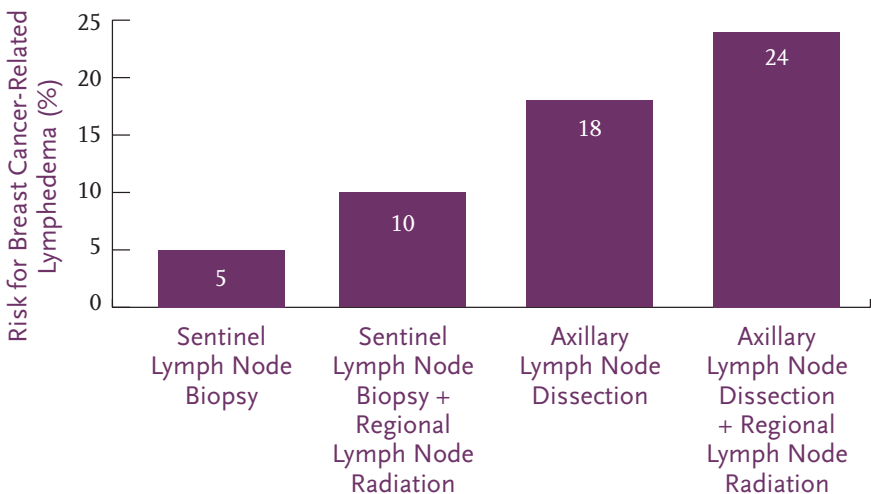
What is my risk of developing lymphedema?

Not everyone who undergoes breast cancer treatment will develop lymphedema. The graph below shows risk for developing lymphedema based on treatment type.

Risk factors for lymphedema include skin infections (cellulitis) and being very overweight (obese) at the time of breast cancer diagnosis further the risk for breast cancer-related lymphedema.

Sentinel lymph node biopsy is a biopsy taken of the sentinel node or nodes. The sentinel nodes are the first lymph nodes into which a tumor drains from the breast.

Two-Year Risk of Breast Cancer-Related Lymphedema by Treatment Type



Regional lymph node radiation includes radiation to the lymph node regions around the breast, including the axillary nodes (under the arm), the supraclavicular nodes (above the collar bone) and the internal mammary nodes (near the center of your chest).

Axillary lymph node dissection is when, after a sentinel node biopsy that has found cancer in some of the nodes, the surgeon removes more nodes under the arm to see the extent of the cancer in the lymph node region. The surgeon does not remove all of the lymph nodes under the arm during an axillary lymph node dissection.

How will I know if I have lymphedema?

Lymphedema can begin anywhere in the area of your body that was treated. This can include your chest, arm, or back. For example, if you had surgery on your right breast, these areas could develop lymphedema:

- The area from the center of your chest to your right shoulder or breast
- Under your right arm
- Down your right arm
- Along your right side
- Your right hand

The lymph fluid can collect in your hand alone, only at your elbow, or in your whole arm.

Some early signs of lymphedema can be:

- Puffiness or swelling of your hand or arm
- Clothing, bra, or jewelry feeling tighter than usual
- Jewelry or clothing leaving a dent or mark on your skin
- A feeling of fullness in your breast, chest, or arm
- A heavy feeling in your arm

Is there a way to diagnose lymphedema?

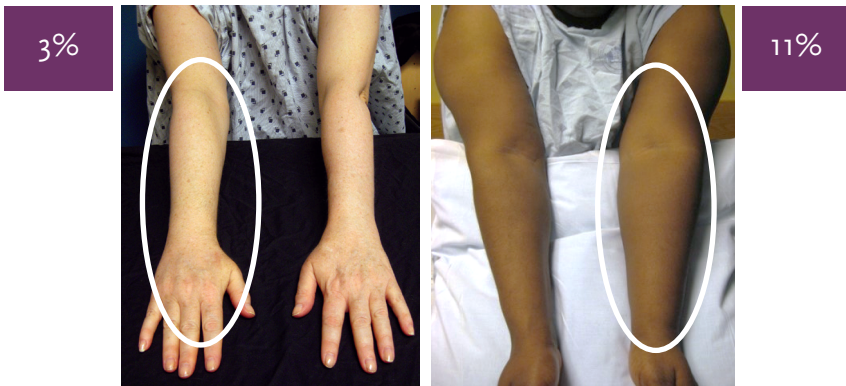
We diagnose lymphedema by measuring your arm and by how your arm looks and feels. There are many ways to measure your arm for lymphedema. We use a device called a perometer, which is a reliable, valid, and painless way to measure for lymphedema. We may measure your arm with a perometer before you have surgery. Measurements will also be taken after surgery according to your risk factors for lymphedema. Measurements may vary over time and will increase if you are developing lymphedema.

A perometer is used to measure this woman's arm volume.



We have a lymphedema screening program at Mass General Cancer Center. Our hope is that diagnosing lymphedema at an early stage will improve the outcome of treatment.

We watch patients carefully for signs of lymphedema for years after treatment. The pictures below show different levels of swelling.



Can lymphedema be treated?

Yes, lymphedema can be treated and treatment can be effective. Your treatment team can refer you to a Certified Lymphedema Therapist. The goals of treatment are to reduce swelling and discomfort. Treatment can help to put you in control of the swelling.

There will be a period of trying to reduce the swelling in your arm, or a “reduction phase.” During this phase, treatment may include bandaging your arm and/or manual lymphatic drainage. This is a special type of massage for lymphedema. You may learn to bandage or do the massage and/or your therapist may do this for you.

Once your swelling decreases you may be fitted with a compression sleeve to use during the day and/or at night.

Throughout your treatment for lymphedema you will learn how to exercise to help move the fluid. Exercise allows the muscles to pump and the skin to stretch.

Can I prevent lymphedema?

There is no medical proof that lymphedema can be prevented. In the past, patients treated for breast cancer had been told that certain behaviors/activities caused their lymphedema. There is no medical proof that these behaviors/activities cause lymphedema.

There are things you can do to take care of the health of your arm. You should:

- Practice good skin care
- Maintain an ideal weight
- Exercise regularly
- Be aware of your body's response to any activity or injury

How can I protect myself from skin infections?

Skin infections can put you at risk for developing lymphedema. Try to avoid infection as best you can. Of course, you will get cuts and scrapes from time to time. As long as these are healing normally, there is no cause for concern.

To protect yourself, you should:

- Wash cuts with soap and water.
- Wear gloves while gardening, doing dishes, or housework.
- Protect yourself from insect bites.
- Use skin cream to avoid chapped, dry, or broken skin.
- Avoid sunburns. Use sunblock with an SPF of 30 or more.
- Avoid scratches or bites from pets.

- Be careful with sharp objects or edges.
- Try to push back your cuticles (the skin around your nails) rather than cutting them. Always use instruments that have been cleaned well when caring for your nails.

IV's, needle punctures, or blood pressure readings on your treated side

- If you have had regional lymph node radiation or axillary dissection, use your non-treated arm first for IV's, needle punctures, or blood pressure readings. However, if you need to use your treated side for these procedures, you may do so.
- If you have had only a sentinel node biopsy, your risk of lymphedema is low and you may use whichever arm you prefer for these procedures.

Contact your treatment team right away if an area of your arm or chest becomes red, painful or swollen, or if you have fever or chills. These symptoms can be signs of infection, which should be treated quickly.

Exercise and Activities

Regular exercise is good for your circulation, helps you reach or maintain your ideal weight and can help in controlling swelling. There are many good research studies on the effect of exercise on lymphedema. If done safely and progressed slowly, exercise does not cause lymphedema in those who are at risk, and does not worsen it in those who have lymphedema.

Approach an exercise program slowly and mindfully, letting your arm guide you in how quickly to increase your activities. Our goal is to help you return to the activities you enjoy and that are part of your daily lifestyle.

Activities such as walking, swimming, yoga, stretching and weight lifting are all good choices. Exercise should be prescribed by a healthcare professional. Ask your treatment team for more information.

Everyone's triggers for lymphedema are different. Some things to keep in mind are:

Lifting heavy objects

- The amount of weight that is safe to lift is different for each person. It is best to start by lifting lightweight objects. Start with one pound.
- Slowly increase the weight you lift but pay attention to how your body reacts. You should be able to lift a weight comfortably and get tired after lifting it 10-12 times. Pain and swelling after an activity are signs that you are doing too much.

Repeated movements

- For most people repeated arm movements such as mopping, vacuuming, painting, rowing, weight lifting, and using exercise machines are not a problem. However, some patients feel these types of activities may have triggered their lymphedema.
 - Most of these patients report having done a lot of one activity at a time, for example cleaning a full floor of windows or raking leaves for 3 hours. Start with a short period (15-30 minutes) of activity and progress slowly.
- As you do activities, be aware of any symptoms in your arm or hand. If your arm or hand swells or hurt during or after an activity, you should stop or decrease the force or amount of time you use your arm and hand in this way.

Hot tubs or saunas

- The heat from hot tubs or saunas has been a problem for some people.
- If you are going to use a hot tub or sauna, start slowly and watch your body for signs of swelling.

Airplane travel

- Drink water before, during, and after your flight. Staying hydrated can help to keep fluid moving.
- Stretch your arm often while waiting to board and during the flight.
- If you do not have lymphedema, there is no evidence that you need to wear a compression sleeve as “prevention” when traveling.
- If you have lymphedema, use a compression sleeve when flying. A compression sleeve should be professionally fitted and feel comfortable on your arm.

Be mindful but not fearful about using your arm.

Please talk with your treatment team about any concerns or questions you have about developing lymphedema.



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Cancer Center Community Providers

Through our network of collaborations, patients have access to the latest cancer treatments and targeted therapies, early phase clinical trials, timely referrals for second opinions, and improved coordination of care.

Visit massgeneral.org/cancer/community or ask your care team for more information about what services are offered at each site.

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Concord, MA 01742 | 978-287-3436

Mass General/North Shore Cancer Center
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Danvers, MA 01923 | 978-882-6060

Mass General Cancer Center at Newton-Wellesley Hospital
2014 Washington Street,
Newton, MA 02462 | 617-219-1200

Mass General Cancer Center at Cooley Dickinson Hospital
30 Locust Street, Northampton,
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Mass General Hematology/Oncology Service at Martha's Vineyard Hospital
1 Hospital Road, Oak Bluffs,
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MA 02554 | 508-825-8100

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