

What is lymph?

Lymph is a clear fluid that contains white blood cells. Lymph vessels run all through the body and carry lymph fluid and cells. Lymph from tissues and organs drain into the lymph vessels and is carried to the lymph nodes where it is filtered. The lymph nodes near the breast (see image on the right) may be affected by procedures related to breast cancer.

What is lymphedema?

During surgery for breast cancer, some of the lymph nodes in the underarm area (axillary nodes) may be removed. They are checked to see if cancer cells are present. When these nodes are removed or are affected by radiation therapy, some of the lymph vessels can become blocked. This may prevent lymph fluid from leaving the area.

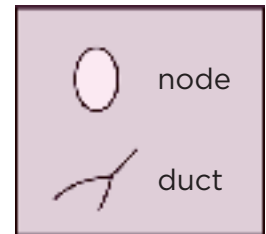
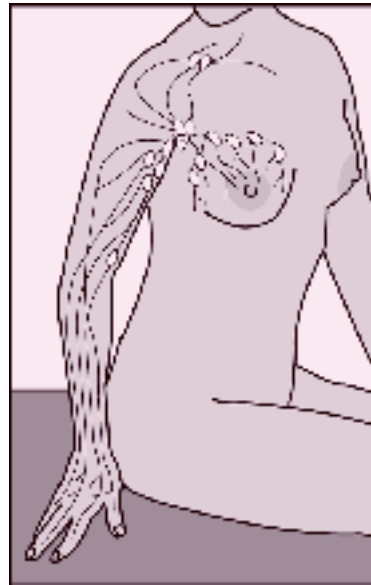
Lymphedema [lim-fa-DEE-ma] occurs when lymph fluid collects in the arm (or other areas such as the hand, fingers, chest or back) causing it to swell. It can occur weeks after surgery, within a few months or even years after treatment. Fortunately, most survivors don't get lymphedema.

What to look for

If you notice early signs of lymphedema, talk to your doctor. Signs may include:

- Swelling in the arm or hand (for example, you may notice a tighter fit of rings or watches)
- Feeling of tightness, heaviness or fullness in the arm or hand
- Feeling of tightness in the skin or a thickening of the skin
- Pain or redness in the arm or hand

See your doctor as soon as you notice any of these signs or any changes in your arm.



Lymph fluid drains through ducts. The fluid travels from your hand, up your arm and to your axillary nodes.

Who is at risk?

Lymphedema is related to axillary surgery and radiation therapy, but it is not clear why some survivors get lymphedema and others do not. Some factors that increase risk include:

- Removal of a large number of axillary nodes during surgery
- Radiation therapy to the axillary area
- A combination of axillary surgery and radiation therapy to the axillary area
- Having a large number of axillary nodes that contain cancer
- Infections in the area after surgery
- Obesity

Modern surgery removes fewer axillary nodes, so:

- Lymphedema is less common now than in the past.
- The cases that do occur are less severe in terms of the impact on movement and the way the arm looks.

Tips that may reduce your risk

We do not know how to prevent lymphedema. Injury or infection to the arm may trigger it. So, it is best to take steps to reduce the risk of injury or infection. Although the tips below have not been proven in clinical trials, they may work for some people:

- Treat infections of the at-risk arm and hand right away.
- Wear gloves when doing house or garden work.
- Keep skin clean and well-moisturized.

- Use the opposite arm when having blood drawn, getting injections or having blood pressure taken.
- Avoid sunburn and excess heat from saunas, hot baths, tanning and other sources.
- Do not cut the nail cuticles of the at-risk hand.
- Use insect repellent when outdoors.
- Avoid injuries, including scratches and bruises, to the at-risk arm.
- Rest the at-risk arm in an elevated position (above the heart or shoulder).

Treatments for lymphedema

Although there is no cure for lymphedema, many treatments can restore some movement and reduce the pain and swelling. Check with your insurance company to see if your treatment choice is covered. Standard lymphedema treatment includes complex decongestive therapy. This approach aims to decrease swelling and lymphedema-related infection through a combination of:

- Skin and nail care
- Compression bandages or sleeves (these apply pressure around the arm and help push lymph fluid out of the arm)
- Exercises (closing and opening a fist, for example)
- Manual lymphatic drainage (a special type of massage)
- Physical therapy

Other treatments may include:

- Weight bearing exercise
- Compression device (a pump connected to a sleeve that inflates and deflates to apply pressure to the arm)

- Surgery
- Weight loss

Before starting any of these therapies, discuss them with your doctor.

Resources

Lymphatic Education & Research Network
516-625-9675
www.lymphaticnetwork.org

National Lymphedema Network
1-800-541-3259
www.lymphnet.org

The National Cancer Institute
1-800-4-CANCER
www.cancer.gov

Related fact sheets in this series:

- Axillary Lymph Nodes
- Breast Cancer Resources
- Breast Cancer Surgery

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