

LYMPHEDEMA

WHAT IS THE LYMPH SYSTEM?

Our bodies have a network of lymph vessels and nodes that drain and carry lymph fluid much the same way that blood vessels move blood through the body. Lymph fluid contains proteins, salts and water, as well as white blood cells, which help us fight infections. Within the lymph vessels there are valves which work with muscles to help move the fluid through the body. Lymph nodes serve as filters for harmful substances and help us fight infection.

WHAT IS LYMPHEDEMA?

Lymphedema is a build-up of lymph fluid in the tissues. This build up causes swelling, usually of the arms or legs. There are 2 types of lymphedema:

- Primary lymphedema is found in people born with genes that put them at an increased risk of developing lymphedema because lymph nodes or vessels are missing or are not working the way they should. This type of lymphedema is not common.
- Secondary lymphedema can happen as a result of cancer, cancer treatments, or anything that changes a normal, healthy lymph system.

WHAT CAUSES LYMPHEDEMA?

Any change in the structure of the lymph system puts a person at risk for lymphedema. For example, during surgery for cancer the doctor may remove some of the lymph nodes near the tumor to see if the cancer has spread. Some lymph vessels that carry fluid from the arms or legs to the rest of the body may also be removed because they are wrapped around the lymph nodes. Taking out lymph nodes and vessels changes the way the lymph fluid flows in that part of the body, making it harder for lymph fluid in the arms or legs to circulate to other parts of the body. If the remaining lymph vessels cannot remove enough of the fluid in the area, the excess fluid builds up and causes swelling. Radiation treatment can affect the flow of lymph fluid in the arms or legs by causing scarring of the lymph nodes and vessels, which also increases the risk for lymphedema.

The lymph fluid that collects in the tissues can be very uncomfortable. It can keep nutrients from reaching the cells, interfere with wound healing, and lead to infections. Lymphedema can be a long-term condition, but there are ways to manage it.

WHO GETS LYMPHEDEMA?

Lymphedema can become a problem after surgery or radiation treatment of

any type of cancer, but it is most often linked to treatments for breast cancer, prostate cancer, pelvic area cancers (such as uterine, vulvar, or cervical cancer), lymphoma, and melanoma. Most often, lymphedema affects the arms or legs, but it can happen in other areas too. If lymphedema occurs after breast cancer treatment, it can affect the area around the breast and underarm as well as the arm closest to the surgery. After cancer in the abdomen or pelvis has been treated, lymphedema may appear as swelling of the abdomen, genitals, or one or both legs. Sometimes, the cancer itself can cause a blockage of the lymph system and result in lymphedema. Infections that restrict lymph flow can also cause lymphedema.

WHEN DOES LYMPHEDEMA DEVELOP?

Lymphedema can start right after surgery. This is called temporary lymphedema. It is usually mild and goes away within 1 to 2 weeks. It can also happen 6 to 8 weeks after surgery or radiation. Again, this type of lymphedema usually goes away in a few weeks. The affected area may look red and feel hot. It's treated by raising the arm or leg and taking medicines to reduce inflammation.

The more common form of lymphedema develops slowly over time. It may show up many months or even years after cancer treatment. The swelling can range from mild to severe. People who have many lymph nodes removed and/or radiation therapy may have a higher risk of developing lymphedema. But doctors do not fully understand why some patients are more likely to have problems with fluid build-up than others. Although we still have a lot to learn about lymphedema, there are ways that you can care for yourself to reduce your chances of having future problems.

SIGNS OF LYMPHEDEMA

The signs of lymphedema may include:

- a full or heavy feeling in the arm, leg, or genitals
- a tight feeling in the skin of the arm, leg, or genitals
- less movement or flexibility in your hand, wrist, or ankle
- trouble fitting into clothing in one specific area, such as the sleeve of your jacket or your socks being tight
- your ring, watch, and/or bracelet feel tight but you have not gained weight

Early on, the lymphedema may be relieved by raising the affected limb; the skin usually remains soft. But if the problem continues, the limb may become hot and red and the skin hard and stiff.

If you have had lymph nodes removed or radiation treatment, you may want to carefully look at your body in front of a mirror. If you notice any of the signs listed above, and if they last for 1 to 2 weeks, call your doctor.

HOW TO PREVENT AND CONTROL LYMPHEDEMA

Although there are no scientific studies to show that people can prevent lymphedema, most experts recommend following these basic guidelines,

which may lower your risk of developing lymphedema or delay its onset:

Avoid infections, burns, and injuries

Try to avoid infections, burns, or injuries to the area where cancer was treated, and to the arm or leg just beyond it. Your body responds to these events by making extra fluid. Lymph nodes and vessels that have been damaged or removed make it harder to get rid of this extra fluid, and this can trigger lymphedema.

- Keep the affected limb clean. Careful skin care may reduce the risk of lymphedema by helping you avoid infections. Dry the creases between your toes after bathing.
- Keep your hands, feet, and cuticles soft and moist by regularly using moisturizing lotion or cream. Push cuticles back with a cuticle stick rather than cutting them with scissors.
- Clean and protect any openings in the skin caused by cuts, scrapes, insect bites, hangnails, or torn cuticles by washing with soap and water. Then put an over-the-counter antibacterial cream on any openings and cover the area with a clean bandage. Check with your doctor, nurse, or pharmacist if you are not sure what to use. For burns, apply a cold pack or cold water for 15 minutes, then wash with soap and water and put on a clean, dry dressing.
- Watch for early signs of infection, such as pus coming from a cut or scrape, rash, red blotches, swelling, increased heat, tenderness, chills, or fever. Call your doctor right away if you think you may have an infection.
- Use an electric shaver for removing underarm and leg hair; it is less likely to cut or break the skin than a blade razor or hair removal cream.
- If you are outdoors in warm weather, use an insect repellent to avoid bug bites. If a bee stings you in the affected limb, clean and raise the limb, apply ice, and call your doctor if there are signs of infection (see above.)
- Protect your limb from sunburn. Use sunscreen that is labeled "SPF 15" or higher and try to stay out of the sun during the hottest part of the day.
- If your arm is affected, use an oven mitt to avoid oil splash burns when frying and steam burns from microwaved foods or boiling liquids.
- Your affected limb may not feel temperatures as well as it did in the past. Test bath water temperatures with an unaffected limb.
- Avoid extreme heat, such as from hot tubs and saunas. Heat can increase fluid build-up.

If your arm is affected:

- Whenever possible, have your blood drawn, IVs, and injections given in your unaffected arm. Have flu shots and vaccinations in your unaffected arm or somewhere else. Let all the members of your health care team know that you are at risk for lymphedema.
- Wear protective gloves when doing household chores involving chemical

cleansers or steel wool, gardening, yard work, and perhaps while washing dishes.

- Wear a thimble when sewing to avoid needle and pin pricks.
- Use oven mitts instead of hot pads.
- Keep pets' claws trimmed to avoid scratches.

If your legs are affected:

- Always wear well-fitting, closed shoes instead of sandals or slippers. Do not go barefoot.
- Keep your feet clean and dry. Wear soft protective socks (cotton or padded types).

Avoid excessive pressure or constriction

Constriction or squeezing of the limb may increase the pressure in nearby blood vessels, which can lead to increased fluid and swelling (much like water building up behind a dam.) Lymphedema also seems to happen with air travel, possibly because of the changes in cabin pressure. Suggested precautions include:

If your arm is affected:

- Wear loose jewelry, clothing, and gloves.
- Avoid using shoulder straps when carrying briefcases and purses.
- Wear a loose-fitting bra so that the straps do not dig into your shoulder. Following mastectomy, use a lightweight prosthesis (breast form). A heavy prosthesis may put too much pressure on the collarbone.
- Avoid having your blood pressure taken in the affected limb.
- Wear a compression sleeve on the affected arm when you travel by air if you fly often or for long flights. A well-fitted compression sleeve may help prevent swelling by helping to squeeze the lymph fluid through the remaining vessels before it builds up. However, careful fitting is required, since any garment that is tighter near the top can actually reduce the lymph flow even more. Talk to your doctor or physical therapist about whether you should be fitted for a sleeve to wear during air travel. Try to keep the arm raised above the level of your heart and flex it often during the trip.

If your legs are affected:

- Avoid socks, stockings, or undergarments with tight elastic bands.
- Do not cross your legs when sitting.
- Wear a compression stocking on the affected leg when you travel by air if you fly often or for long flights. Ask your doctor or therapist about being fitted for this.
- Most people with leg lymphedema benefit from wearing a compression stocking while walking around. A compression stocking can help squeeze

the lymph fluid through the remaining vessels before it builds up. The stocking must be fitted to apply the right pressure while avoiding too much tightness near the top of the stocking.

Try to Avoid Muscle Strain

- It's important to use your affected limb for normal everyday activities so that you to heal properly and regain strength. For example, you should use your arm to brush your hair and bathe. Movement and some exercise help drain lymph fluid from the limbs. If you've had surgery or treatment for cancer that has affected your lymph nodes, ask your doctor or nurse when you can begin to exercise and what type of exercises you can do. But overuse of the limb can cause injury and lymphedema in some people. It's a good idea to follow these suggestions whenever possible:
- Use your affected arm or leg as normally as possible. The goal is to get back to doing what you did before your surgery once you are fully healed, usually about 4 to 6 weeks after surgery or radiation treatment. But if you used the affected limb a lot in strenuous activity, you may need to change your routine, as noted below.
- Exercise regularly but try not to over-tire your limb. Before doing any strenuous exercise (such as weightlifting, biking, or tennis) talk with your doctor, nurse, or physical therapist about your specific goals and limitations so that you can decide what level of activity is right for you. Ask your doctor or physical therapist if you should be fitted for a sleeve or stocking to wear during strenuous activities.
- If your arm or leg starts to ache, lie down and raise it above the level of your heart.
- Avoid vigorous, repeated activities, heavy lifting, or pulling.
- Use your unaffected arm or both arms as much as possible to carry heavy packages such as groceries, handbags, or children.
- Watch for early signs of infection: rash, red blotches, swelling, increased heat, tenderness, chills, or fever. Call your doctor right away if you think you have an infection.

WHEN TO CALL YOUR DOCTOR OR NURSE

- If you notice any swelling, with or without pain, that lasts for 1 to 2 weeks. This could signal the cancer has returned or be a sign of lymphedema.
- If any part of the affected area feels hot, looks red, gets tender (sore when touched), or swells suddenly. These symptoms could signal an infection and you may need antibiotics.
- If you develop a temperature of 100.5° F or higher that is not due to a cold or flu.

LYMPHEDEMA TREATMENT

If you are diagnosed with lymphedema, there are treatments to reduce the

swelling, prevent it from getting worse, and decrease the risk of infection. This treatment, often called Complex Decongestive Therapy (CDT), includes skin care, massage, special bandaging, exercises, and fitting for a compression sleeve. Most often the treatment is prescribed by your doctor and given by an experienced therapist. Lymphedema should be treated by a physical therapist or other health care professional who has gone through special training. Seeking and getting treatment early should lead to a shorter course of treatment to get your lymphedema under control.

While most insurance companies will pay for this treatment, some do not cover the cost of compression garments and dressings. Check with your insurance company about coverage for these therapies.

Works cited

Adapted from the American Cancer Society

www.cancer.org