



What you need to know about...

## What should I do?

At this juncture, your personal education is likely the most important tool as a breast cancer survivor to learn about lymphedema and risk reducing practices.

The National Cancer Institute's educational website for lymphedema can be found at:

<http://www.cancer.gov/cancertopics/pdq/supportivecare/lymphedema/healthprofessional/page1>

The National lymphedema network's position paper on lymphedema can be found at:

<http://www.lymphnet.org/pdfDocs/nlnriskreduction.pdf>

### **Treatments for lymphedema may include:**

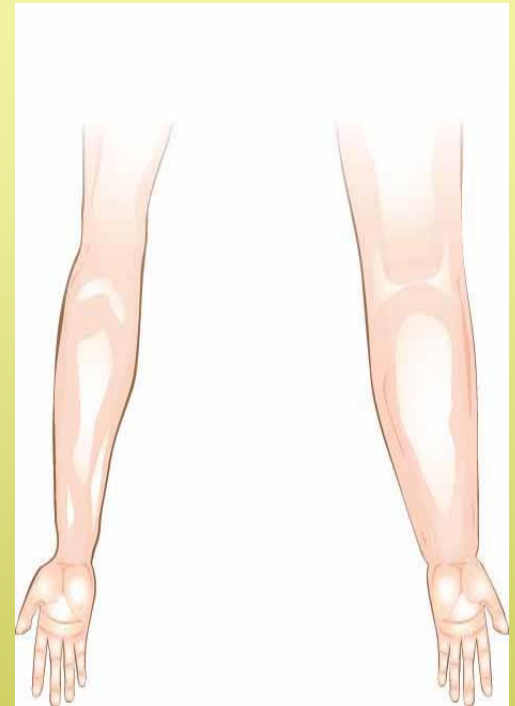
- Compression garments or sleeves
- Manual lymphatic drainage (MLD)
- Light exercise
- Pneumatic compression pump
- Antibiotics for cellulitis

Central Ohio Surgical Associates works in collaboration with the physical therapists and massage therapists at MCHS to prevent, diagnose, and treat lymphedema after breast cancer surgery.

American College of Surgeons,  
Commission on Cancer (CoC)  
American College of Surgeons, National  
Accreditation Program for Breast  
Centers (NAPBC)  
American Society of Breast Surgeons  
Comprehensive Breast Center  
at  
Central Ohio Surgical Associates

Please note that this pamphlet is intended to be a review, and should not be used as a substitute for talking with your doctor about your medical concerns.

*Providing compassionate, patient-centered, evidence-based surgical care*



## Lymphedema

COMPREHENSIVE BREAST CENTER AT  
CENTRAL OHIO SURGICAL ASSOCIATES



## Lymphedema- FAQs

### What is the lymphatic system?

The lymphatic system is a complex system of lymph nodes, lymph vessels, organs (thymus and spleen), and lymph fluid. The four main functions of the lymphatic system are transport of certain fluids from tissue, absorption of fatty acids from the digestive system, transport of white blood cells (WBCs) from the bone marrow, and assisting with fighting infection during an “immune response”. A lymph node is a gland that filters bacteria and lymph fluid and contains WBCs. Lymph nodes are found throughout the body and just in the axilla (armpit) there are about 20-30 lymph nodes.

### Can you remove lymph nodes?

Yes. Most people have between 500-700 lymph nodes throughout their body. Removal of some lymph nodes will not affect your body’s global ability to fight infection. However, removal of lymph nodes can cause symptoms later on, called lymphedema.

### During breast cancer surgery, where are lymph nodes removed?

They may be removed from the armpit/axilla



## Lymphedema- FAQs

### What is a lymphedema?

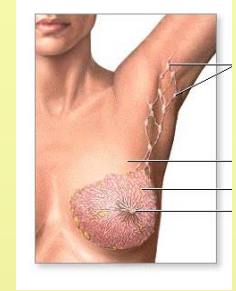
Lymphedema is an accumulation of lymphatic fluid in the soft tissue that causes swelling, most often in the arm or leg, occasionally in other parts of the body. Lymphedema can develop when lymphatic vessels are missing (primary), or when lymph vessels are damaged or lymph nodes removed (secondary). Secondary lymphedema is much more common.

### What are the symptoms of lymphedema?

The symptoms of lymphedema can sometimes be vague, and may include: a full sensation in the limb, skin feeling tight, decreased flexibility in the hand, wrist or ankle, difficulty fitting into clothing in one specific area, or ring/wristwatch/bracelet tightness. More severe symptoms can include a rash or cellulitis (redness and warmth) to the limb.

### Do most people get severe lymphedema after breast cancer? When does it occur?

Thankfully, no! If a patient develops lymphedema after breast cancer surgery, 80% of the time it is within the first 3 years.



## Lymphedema- FAQs

### What causes lymphedema after surgery for breast cancer?

According to the National Cancer Institute, “Lymphedema is one of the most poorly understood, relatively underestimated, and least researched complications of cancer or its treatment”.

### These are thought to be risk factors for the development of lymphedema:

- 1) Axillary lymph node biopsy. Sentinel lymph node (SLN) biopsy carries a 5-17% risk, depending on how one measures the symptoms and length of follow up. The risk was may be as high as 30% with full axillary node dissection. For those undergoing a SLN biopsy, lymphedema tends to be mild.
- 2) Radiation to the axilla
- 3) Obesity (BMI of 30 or higher increased risk of lymphedema 3.6% in one study)

### These factors remain controversial on the development of lymphedema:

- 1) Blood pressure and IV’s on the surgery side
  - 2) Air travel
  - 3) Hot and cold temperature fluctuations
- Light exercise does not increase the risk of lymphedema, but should be started gradually.