

Treating Lymphedema - Pneumatic Compression System

Compression garments are commonly used to:

- improve circulation of blood and lymph
- treat lymphedema
- prevent blood clots

Compression can be done with special socks or stockings, manual compression therapy, and pneumatic systems. Pneumatic systems are powered by compressed air or compressed inert gases. You may have seen such a device used on a hospitalized person's legs when they cannot get up, move, or walk. These pneumatic compression devices (also called sequential compression devices) are sleeves worn on the legs. They continually inflate and deflate to keep blood and lymph circulation moving.

In lymphedema, the lymphatic vessels are not draining properly. The vessels may have been removed during surgery or they may be damaged or blocked. The area that isn't draining normally will start to swell with excess lymph. This abnormal fluid buildup can cause chronic inflammation and fibrosis (scar tissue), damage tissue, slow wound healing, and damage the skin in that area. (See last page for more about the lymphatic system.)

The Flexitouch Plus is a pneumatic compression system that can be used at home to treat lymphedema. It moves the abnormal fluid buildup and prevents the fluid from re-accumulating back in that area. Here's how it works:

- Each garment has multiple chambers that are connected to a controller.
- You can program the controller.
- When in use, the chambers inflate and deflate.
- Only 1 chamber is inflated at a time, and for only a few seconds. This creates a wave-like pressure.
- The pressure moves fluid (lymph) from the damaged area where it has collected to healthy areas where the fluid can be reabsorbed naturally.
- The sequence of events in this pneumatic compression system is similar to the motions used during manual lymph drainage (MLD) therapy.

The company that make the Flexitouch, Tactile Medical, also offers a national network of product specialists and trainers, reimbursement experts, and clinicians. Address: 3701Wayzata Blvd, Suite 300, Minneapolis, MN, 55416. **Phone:** 612-355-5100. **Website:** <https://tactilemedical.com> FAQs on Flexitouch System FAQs: <https://tactilemedical.com/flexitouch-plus-faq/>

This guide focuses on lymphedema in the upper trunk and arms.

The Flexitouch Plus system should not be used if you have:

- heart failure, acute pulmonary edema
- acute circulatory disease: Acute thrombophlebitis, acute deep venous thrombosis, acute pulmonary embolism)
- severe peripheral artery disease (PAD)
- an active infection or an inflammatory disease in your skin, arms, or legs such as acute cellulitis
- any condition or circumstance where increasing the return flow of lymph or venous blood to the heart is unwanted

Is it covered by my health insurance?

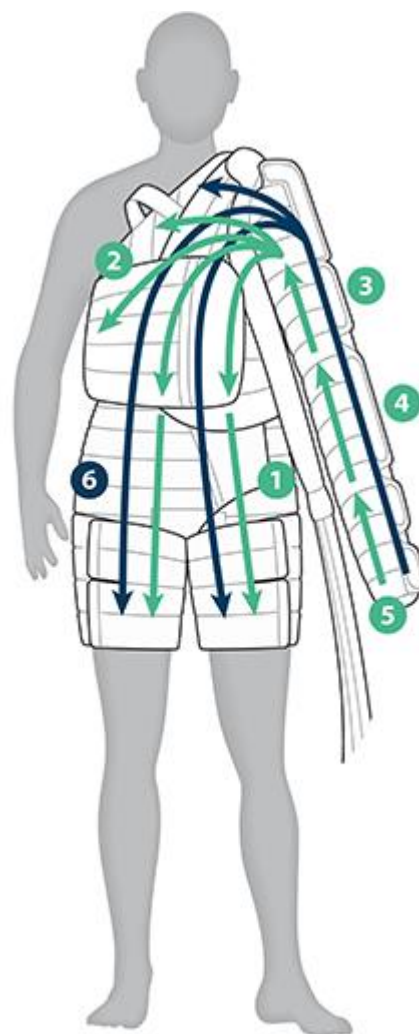
Your health care plan/insurance may have requirements to meet in order to qualify for the Flexitouch system such as having had 4 weeks of conservative treatment (elevation, compression, exercise)

Full arm and core treatment: Program U1

This program moves accumulated excess lymphatic fluid from areas of the trunk, chest, shoulder, arm, and hand. This program takes about 1 hour.

How it works

- **Trunk:** directs fluid from the waist toward the top of the thighs; cycle repeats
- **Chest:** directs fluid from the shoulder toward the waist; cycle repeats
- **Biceps:** directs fluid from the elbow toward the shoulder; cycle repeats
- **Forearm:** directs fluid from the wrist toward the elbow; cycle repeats
- **Hand:** directs fluid from the fingers toward the wrist; cycle repeats
- **Full arm, shoulder, chest and trunk:** directs fluid from the fingers to the top of the thigh in one continuous motion; cycle repeats

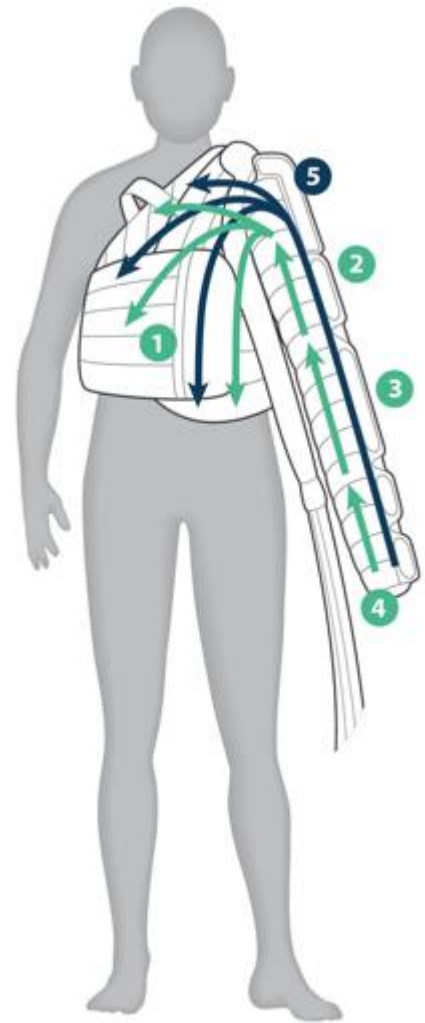


Arm-shoulder treatment: Program U4

This program moves accumulated excess lymphatic fluid from areas of the chest, shoulder, arm, and hand. This program takes about 50 minutes.

How it works

- **Chest:** directs fluid from the shoulder toward the waist; cycle repeats
- **Biceps:** directs fluid from the elbow toward the shoulder; cycle repeats
- **Forearm:** directs fluid from the wrist toward the elbow; cycle repeats
- **Hand:** directs fluid from the fingers toward the wrist; cycle repeats
- **Full arm, shoulder and chest:** directs fluid proximally from the fingers up to the shoulder, then to the top of the waist in one continuous motion; cycle repeats



Other options

Trunk Program U2 12 minutes – for upper trunk

Trunk & Chest U2 30 minutes – core area of chest or trunk

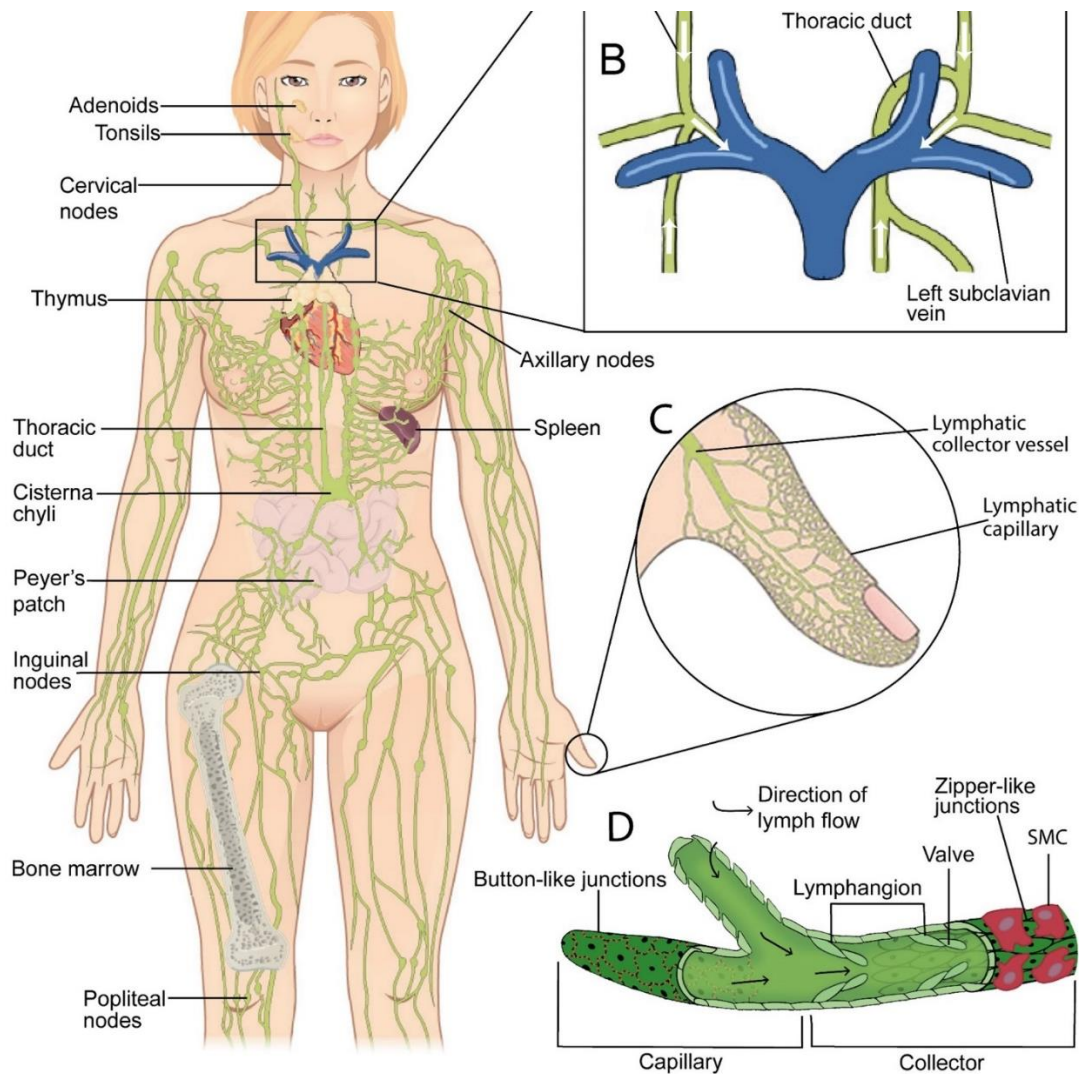
Forearm & hand U5 24 minutes– moves fluid from fingers, hand, and lower arm to the upper arm (biceps)

Hand only U6 12 minutes – moves fluid from fingers and hand to forearm

Full arm U7 – 30 minutes -moves fluid from fingers to upper arm in one continuous motion

When travelling by air with the device, the manufacturer recommends:

- Put controller and power cord in your carry-on bag; pack the garment in your checked luggage.
- Bring your user guide and prescription card to help explain the device to TSA agent.
- Going through security, take the controller out of your carry on, like you do with a laptop as is done with a laptop. Be prepared to turn the device on if the TSA agent asks you to.
- Check the TSA website for more information: www.tsa.gov
- The device will operate from 100 – 240 volts, 50/60 Hz, working nearly anywhere in the world without the need for a transformer or voltage converter. Outside the US, you may need a plug adapter. You can buy one at a retail store; the manufacturer does not supply plug adapters.



The Normal Lymphatic System

- The lymphatic system includes lymph vessels, nodes, ducts, and organs that work together to drain/collect lymph from your tissues and return it to the bloodstream through a large vein near the heart. The lymphatic system is also an important part of the immune system. It produces *lymphocytes*, white blood cells that fight bacteria and viruses.
- Lymph vessels are microscopic channels that contain a colorless fluid called lymph.
- Lymph is made of white blood cells (lymphocytes that attack bacteria and viruses), chyle (protein and fat filled fluid from intestines), and waste products from tissues and cells. Lymph passes through nodes that are located every 1-2 centimeters (cm) in the lymph channels. As the lymph passes through the nodes, they remove harmful bacteria and viruses.
- The head/neck and deep abdomen regions have the most lymph nodes (170-200 in neck and 400-700 in abdomen). Smaller groups of nodes are located in the armpits (axilla) and groin (inguinal folds). Not all people are born with the exact same number of lymph nodes. It is believed that most individuals have 500 – 1500 nodes, some as small as a sesame seed and others as large as an olive.