

Lymphedema Affecting the Breast and Trunk

Lymphedema affecting the chest, breast and posterior thorax, also known as trunkal lymphedema, is a common problem following breast cancer surgery, but is often difficult to diagnose, especially if the patient does not also present with lymphedema of the arm, or it may be dismissed as a side-effect of breast cancer surgery, which will resolve by itself over time.

While trunkal lymphedema is often not reported, poorly documented and available studies are not easy to compare, the literature suggests an incidence of up to 70% of lymphedema affecting the trunk and/or breast following breast cancer treatment.



Given the fact that the breast, anterior and posterior thorax and the upper extremity share the axillary nodes as regional lymph nodes, it is predictable that disruption of lymphatic drainage pathways by partial or complete removal of axillary lymph nodes, with or without radiation therapy can cause the onset of swelling in the chest wall and breast on the same side. The swelling can either be subtle or quite obvious in presentation and may be present with or without swelling in the arm.

The disruption of the natural lymphatic drainage pattern is further complicated by scars on the upper trunk wall following lumpectomy, mastectomy, and reconstructive breast surgery, biopsies or drain sites. Fibrotic tissues in the chest wall or armpit following radiation treatments may further inhibit sufficient lymphatic drainage.

Certain breast reconstructive procedures, such as the [TRAM-flap](#) reconstruction also disrupt lymphatic drainage in the abdominal area, which may cause the onset of additional swelling in the lower trunkal (abdominal) area.

Like lymphedema in the extremities, swelling affecting the breast, chest and posterior thorax is typically asymmetrical in appearance if compared with the other side. However, there are often

other symptoms present prior to the onset of visible swelling, which may include altered sensation (numbness, tingling, diffuse fullness and pressure, heat), pain and decreased shoulder mobility. Once lymphedema is visibly present, the swelling may include the entire thorax wall, or may be localized to the armpit, the scapula, the area over the clavicle or around mastectomy/lumpectomy scar lines, around the reconstructed breast or implants, or it may be limited to the breast tissue only.



The breast in patients who underwent lumpectomy or reconstructive surgery may be larger and heavier, or the shape and height of the breast tissue may change due to fibrotic tissue, resulting in added psychological distress due to problems involving clothing, bra fit and body image issues.

Post-operative swelling following breast cancer surgery is to be expected and generally lasts up to about three months; it appears almost immediately following surgery and places additional stress on the lymphatic system by contributing to the lymphatic workload. The difference between “normal” post-operative edema and lymphedema is its perseverance following the completion of treatment, and the presence of changes in tissue texture, such as lymphostatic fibrosis.



Skin fold caliper

While several methods are available to assess trunkal and breast edema (skin fold calipers, bioimpedance), subjective examination of the anterior and posterior aspect of the thorax and

breast focused on the observation of signs of swelling (asymmetry, bra strap and seam indentations, orange peel phenomenon, changes in skin color), palpation of the tissue texture and comparison of skin folds between the affected and non-affected side, remain the most practical means for assessment of lymphedema affecting the trunk. Serial photographs depicting the anterior and posterior view are helpful tools in assessing changes before and after treatment.

Most of the symptoms associated with trunkal lymphedema can be treated successfully with Complete Decongestive Therapy (CDT), to include Manual Lymph Drainage (MLD), especially if combined with self-MLD, skin care, exercises and compression therapy. Fortunately, trunkal swelling responds well to treatment, often with markable improvement within 10 treatments. Treatment may be necessary only during the initial period following breast cancer treatment to facilitate edema removal and wound healing, or it may be applied at a later point; trunkal lymphedema with or without the involvement of the arm may appear at any time following surgery for breast cancer.

[Manual Lymph Drainage](#): In case of localized trunkal lymphedema without involvement of the arm, MLD techniques concentrate on the neck, the anterior and posterior aspects of the upper trunk, as well as the inguinal lymph nodes, followed by techniques focused to redirect lymphatic fluid from congested areas into areas with sufficient lymphatic drainage. If necessary, additional techniques aimed to soften fibrotic tissues may also be applied.

For patients who underwent TRAM-flap procedures, careful attention should be given to address scar tissue that could lead to trapping of lymphatic fluid.

During the initial stages of the treatment, patients should be instructed in self-MLD and encouraged to perform self treatment for at least 20-30 minutes daily.

[Skin Care](#): Patients who have lymphedema are susceptible to infections of the skin; areas between skin folds or the underside of the breast are particularly prone to skin damage and infections. Edematous areas should be kept clean and dry and suitable ointments or lotions formulated for sensitive skin, radiation dermatitis and lymphedema should be applied.

[Exercises](#): Trunkal lymphedema is often associated with restrictions in thorax and shoulder movements, which should be evaluated by a Physical or Occupational Therapist. Specific exercises addressing these issues and to increase range of motion and function with daily activities should be performed.

Depending on the location and quality of scars, mobilization of adhered scar tissue by a qualified therapist may be necessary to improve range of motion. [Breathing](#) and aerobic exercises further facilitate decongestion by improving drainage in superficial and deep lymphatic pathways.

[Compression Therapy](#): Oftentimes compression of the affected area may be challenging due to tenderness of the tissue, or irritated skin secondary to



Compression bra

radiation therapy. However, in order to address fluid accumulation and to avoid worsening of the swelling, the application of compression bandages and/or compression bras or vests is very important. Compression bandages are applied circumferentially around the chest with special care not to impair blood supply to grafts and/or healing scars.

Due to the lack of muscle pump activity in the trunkal area, the use of wide-width (15-20cm) medium and long-stretch bandages is preferable over the normally used short-stretch bandages for lymphedema affecting the extremities.



Custom cut or commercially manufactured foam pads or foam chips may be inserted underneath the bandages or compression bra/vest to increase localized pressure in areas of excess fluid pooling, or to soften localized fibrotic tissue. Flat foam pieces can be used to shape and stabilize the compression bandages and to distribute the pressure evenly over a greater surface area.

The patient should be fitted with a specially designed lymphedema bra or compression vest following decongestion of the trunk to assist with maintaining the positive results of CDT. Compression bras and vests have minimal seams and wide straps, are available as off-the-shelf or custom-made garments and ensure that the trunk and breast tissues are properly supported. Compression bras and vests should fit comfortably, provide sufficient support around the trunk and not squeeze breast tissue; pockets to accommodate a prosthesis can be sewn into these garments.

Patients using regular bras or sports bras should make sure to avoid narrow bra straps and obtain bra strap pads or wideners, if necessary, to avoid restriction of lymphatic pathways on the shoulder.



Additional Resources:

http://www.stepup-speakout.org/breast_chest_trunckal_lymphedema.htm

http://www.lymphoedema-uk.com/journal/0101_breasttrunk.pdf