



LISG

L y m p h e d e m a I n f o r m a t i o n
S u p p o r t G r o u p

Combined Decongestive Therapy (CDT) Treatment for Lymphedema

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Inside this issue:

Staffed by medically educated professional Lymphatic Therapists, a bona fide lymphedema treatment center offers a program that effectively treats the special needs of those afflicted with lymphedema. In the case of breast cancer, particular emphasis is on early treatment post-breast surgery to reduce pain and relieve edema/swelling. Specific treatment includes attention to:

- cervical lymph nodes
- scar or incision
- affected arm and movement therapy of the shoulder joint, post-breast surgery for cancer
- skin area receiving radiation therapy.

The recommended treatment for lymphedema consists of an all-inclusive therapy known as **Combined Decongestive Therapy (CDT)** which includes: manual lymph drainage, gradient bandaging, remedial exercises, circumferential measurements of affected limb, instructions in diet and nutrition, skin care, measure and fitting gradient compression garments, and a home maintenance program designed for the patient's involvement in his/her therapy. The length of the intensive phase of CDT is dependent upon: the severity of the lymphedema case, patient's age, amount of time the patient has or his/her work schedule, if the patient has assistance with care and/or his/her ability to perform self-care and the financial situation or if there is insurance coverage.

The **Goal of CDT** is to decongest congested tissues thereby bringing about reduction of the affected part.

After an initial medical examination and development of an individual treatment plan (therapy protocol), (CDT) Combined Decongestive Therapy commences. Each therapy session decongests the involved quadrant of the body starting with the trunk, advancing to the swollen extremity, always moving fluids from distal (farthest part) to proximal (nearest part).

Explanation of each step of CDT follows:

Coombined
Decongestive
Therapy
(CDT)

1-7

Manual Lymph
Drainage
(MLD)

8-10

3
"Happenings"
A Bona-Fide
Therapist

11

Contact Us

12

*More Information
about Current
Lymphatic Research can
be found at:*

*Lymphatic Education &
Research Network
(LE&RN)*

*Stanford Lymphedema
Clinical Trials -
Leslie Roche—
650-723-1396*

Circumferential measurements of affected limb/limbs -

Measurements around the limb are taken every 4 cm up the limb and recorded in mm, liters and pounds. This serves as a baseline to measure reduction of fluid volume. As each session of intensive CDT progresses, the area is re-measured at the same locations on the limb every 4 cm. When the affected area is the same, or nearly the same volume or circumferential measurements for 3 consecutive days, and there exists no further fibrosis or infection, the area is fit with a gradient compression garment to maintain reduction.

Manual Lymph Drainage (MLD) -

MLD empties and decompression obstructed lymphatic vessels.

Proper Skin Care -

Affected area is cleansed, rinsed thoroughly and lotions applied. Since padding and gradient bandages are applied for an extended amount of time the skin must be moisturized and protected before each re-bandaging. Usually a water base lotion or cream is applied first, followed by a heavier cream or ointment. This serves as a barrier to keep moisture in, and also protects the skin from long term bandage pressure, especially at the creases, joints and folds.

Gradient Compression Bandaging -

Following skin care, the affected area is protected with a loosely woven cotton tubular wrap; soft cotton padding or foam is then applied; followed by pressure bandages that are applied gradiently. Short or low stretch bandages are used to move fluids while the patient is exercising. Unlike Ace bandages which move fluids while a patient is resting, eg., ankle sprain, short stretch bandages move fluids while a patient is moving. Thus, gradient compression bandaging moves fluids out of congested areas into closer lymphatic channels; decongests or breaks-up fibrotic areas bringing about reduction in the size and volume of the affected limb/limbs, and prevents the re-accumulation of fluids.

Gradient Compression Garments -

Specific to the area to be fit, these garments can be either “ready-to-wear” or “custom made”. Gradient compression garments maintain fluid reduction of the affected area once CDT is completed.

Diet and Nutrition -

With weight gain, fat cells become larger and fluid movement through affected tissues is impeded. This can be compared to water flowing over boulders rather than over smooth cement. When weight loss occurs, there is also a corresponding loss of girth and weight in the affected area as well as the unaffected area.

Remedial Exercises -

Specific for each lymphedema condition and affected body part. During intensive CDT, instructions in specific exercises are given following the initial bandaging phase. While gradient compression bandages are in place, exercises are performed to move fluids more effectively.

Instructions in Self-Care -

Education in self-care is given as CDT progresses. This includes every phase of CDT and is patient specific. When intensive therapy is completed, the patient is fit in a gradient compression garment and placed on a home maintenance program designed to prevent recurrence and maintain reduction of swelling.

Gradient Sequential Pumps -

Pumps are used in conjunction with a directional flow garment (DFG) during therapy, under strict supervision by a lymphedema specialist, for a pre-determined amount of time, and only while manual lymph drainage has opened lymphatic pathways.

Maintenance - Continued Prophylactic Methods -

While in most cases lymphedema is not curable, proper treatment and maintenance can reduce the size of the affected body part and restore the patient to a full and productive lifestyle. Though lymphedema patients and their care givers would like the affected part to return to “normal” size, **good maintenance may be soft tissue, no thickening or fibrosis, and absence of infection.** Good maintenance of lymphedema requires regular manual lymph drainage (MLD) treatments and wearing an up-to-date gradient compression garment.

*** PHASES OF COMBINED DECONGESTIVE THERAPY (CDT)**

Phase I – Intensive Phase – goal is to decongest and reduce large fluid volumes and break up fibrosis. Usually fifteen to twenty (15-20) consecutive treatments are scheduled for 3-4 weeks until circumferential measurements of the affected area/limb are the same or nearly the same for 3 consecutive days. The patient is measured for a gradient compression garment and must continue with bandage compression until garment arrives or is fit.

Phase II – Transitional Phase – goal is to “teach the body to continue to move fluids into collateral pathways. This phase may last up to six months. Some patients continue this for an extended period of time to prevent any complications and to increase or maintain reduction. A graduated/gradient compression garment is worn during the day and bandaging over a directional flow garment is done at night.

Phase III – Maintenance Phase – “Living with Lymphedema” – Scheduling manual lymph drainage (MLD) at regular intervals with a qualified lymphedema specialist will monitor the lymphedema condition and educate the patient about new techniques and supplies necessary for management of lymphedema. Patients wear graduated-gradient compression garments daily—garment to be applied upon awakening in the AM and removed before bedtime.

*** Designed at Ginger-K Center**

GOALS OF COMBINED DECONGESTIVE THERAPY (CDT)

Decrease lymph volume – when tissues are decongested through compression, body fluids and wastes move out of the affected area bringing about reduction in lymph volume.

Improve shape of affected area – reduction of lymph volume gives better shape to an affected body part.

Improve condition of the skin – skin of the affected area is unhealthy or dry due to stagnation of wastes in underlying tissues. Reduction in lymph volume also means reduction in body wastes, therefore, healthier skin.

Decrease and/or effectively eliminate fibrosis – gradient compression bandaging with padding softens tissues thus allowing body fluids to move out of affected areas effectively.

Reduce pain – CDT reduces swollen body parts that are uncomfortable and heavy.

Increase mobility and increase range of motion – excess lymph fluids in an affected limb can settle in and around the joints inhibiting movement. Once fluid reduction begins in the tissues through CDT, the joints are also relieved of stagnant fluids.

Increase efficiency of the immune system - the lymphatic system is part of the immune system since its chief purpose is to carry out wastes and fight infection. When body wastes are removed through CDT, the lymphatic system can work more efficiently.

Work Concurrently with Antibiotic Therapy - to reduce infection. Compression begins 48-72 hours after initial dose of antibiotic therapy.

Empower the patient - teaching the principles of a home care regimen specific to each patient is very important to self care, compliance and maintenance.

Enhance quality of life - the health of our body directly affects how we feel physically and emotionally.



Symbol of Lymphedema

EFFECTS OF COMBINED DECONGESTIVE THERAPY (CDT)

Reduces pain
Relaxes smooth muscle
Increases lymph drainage
Reduces swelling and fibrosis
Increases efficiency of immune system
Decongests affected lymphedematous areas
Increases mobility and range of motion
Assists in reducing inflammatory and infectious processes during concurrent antibiotic therapy.

Criteria for Intensive Phase of CDT -

(23 hr. gradient bandaging—designed at Ginger-K Center

1 - If affected limb is 2 -3cm larger circumferentially than the unaffected limb

2 - If fibrosis exists in affected area/limb

Some Bandaging Techniques Used at Ginger-K Center



Palm up, Open hand



Open Hand down



Sole of foot



Top of foot

MANUAL LYMPH DRAINAGE (MLD)

Developed in Austria in the mid-1930's by **Emil and Estrid Vodder**, MLD facilitates removal of wastes, excess water/lymph, toxins, bacteria, large protein molecules and foreign substances from the tissues. **MLD is not a massage**. Manual Lymph Drainage (MLD) is a progressive technique of lymphatic decompression. It is a slow repetitive, rhythmic movement of the hands using very light strokes, (approximately 30 mmHg pressure), stretching skin to bring about a gentle pumping action in the tissues. This pumping action stimulates the weakened lymphatic system by pushing stagnant lymph fluid through vessels, allowing the larger venous system to reabsorb the fluid, thus supporting the development of new collateral channels through which the lymph can begin to flow. Lymph is shunted into accessory pathways bypassing the normal route of flow. Only highly skilled therapists know how this is to be accomplished for each individual case. The end result of MLD is: the removal of excess fluids, soothes nerves, alleviates pain, has a physiological calming effect, and supports immunity.

Manual lymph drainage is performed by certified MLD Therapists who have been specially educated in lymphatic anatomy, physiology, and pathophysiology. While MLD is specific for the treatment of lymphedema, it has also been indicated to treat a number of other conditions, for example: sprains, dislocations, fractures, burns, tendonitis, tennis elbow, migraines, headaches, acne, glaucoma, sinusitis, allergies, pre-and post-cosmetic, oral, and general surgery, carpal tunnel syndrome, as a decongestant, to minimize scar formation (keloids), and acute and chronic edema associated with heart disease and venous insufficiency. MLD can also promote growth and recovery, restore strength, and create a feeling of well being.

Manual lymph drainage is contraindicated when there is:

- active, not yet treated malignancy
- acute inflammation or infection present
- a blood clot or thrombosis
- heart related edema.

MLD is used cautiously with these conditions:

- treated malignancy
- chronic inflammation
- stabilized thrombosis
- low blood pressure
- hyperactive thyroid
- asthma
- tuberculosis
- nevus (moles)
- menstruation
- pregnancy

Criteria Supporting the Action of MLD

1. The treatment room is kept at a comfortable temperature – covering those body parts that are not being treated.
2. The patient is placed in a comfortable position. This can be difficult when the patient has heavy edematous limbs.
3. Light and sounds are kept to a minimum so as not to disturb the patient, counteracting the goal of the treatment.
4. The therapist's hands need to be warm – cold hands cannot promote lymph drainage.
5. MLD must not be painful. Pain increases the sympathetic tonus causing increased edema and spasm in the draining lymph vessels.
6. The force of the hand movements must feel pleasant. The strength of pressure depends on the tissue being treated and the patient's sensitivity.
7. Generally MLD must not cause reddening of the skin – this appears when pressure is too heavy.
8. No lubricants are used except when treatment is performed in areas of the body covered with thick hair.
9. After MLD treatment there is a period of REST, usually 5 – 10 minutes. MLD can then continue to have an effect and blood pressure can return to normal.
10. The treatment of each illness follows the so-called THERAPY STROKES where the sequence of movements is matched to the particular symptoms and often combined with movements of affected joints.

Duration and Effectiveness of MLD

Manual lymph drainage is effective for all kinds of lymphedema including various primary and secondary forms. The sooner the patient receives MLD therapy after the onset of swelling or edema, the quicker the response and the fewer treatments needed.

The effects of MLD are greatest 24 – 36 hours after therapy. This is when fluids move more efficiently and it is therefore, important to apply gradient compression immediately post treatment.

PRECAUTIONS

When the lymphatic system has been impaired, special precautions are necessary to avoid aggravating affected body parts.

For example, under no circumstances should blood samples and blood pressure be taken, or injections received in an edematous limb or affected quadrant. This increases the possibility of infections and puts the patient at considerable health risk. In addition, if a compression pump is used aggressively at the onset of lymphedema without prior opening of the fluid channels with manual lymph drainage, the pump can cause further lymph vessel blockage. Gradient sequential pneumatic pumps are used in conjunction with a patient specific directional flow garment - (DFG), applied under the pump sleeve.

3 Happenings

If you've had these "3 happenings" – surgery, lymph nodes removed + radiation, you have a 55 – 65% chance of getting lymphedema, and it can occur anytime.

In addition:

- *if you've had surgery alone, you have a 10 – 15% chance*
- *if you've had surgery + lymph nodes removed, you have 25 - 30% chance*

A bona fide Lymphedema Therapist must have/be:

Medical professional with solid background in anatomy & physiology of the lymphatic system.

Completion of 140 hours of education in the field of lymphology/lymphedema

Approximately 300 hours of practicum

Five (5) years' experience in the field of lymphedema treatment and care

Pass the LANA test - Internationally Qualified Lymphedema Therapist

(Ginger-K Center meets all these criteria)

We'll tell you how lymphedema can be avoided.

For more information contact:

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