



Cancer Support V.I. Presents

Overview & Discussion of Manual
Lymph Drainage/Complete
Decongestive Therapy (MLD/CDT)

Presented by:

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Lymphedema “Hitting Close to Home”





Family history:

- My mother, at the age of 59, was Dx with breast cancer on 11/07/06
- She underwent a double mastectomy with chemotherapy and radiation in January 2007
- Dx with secondary lymphedema to left arm in December 2007

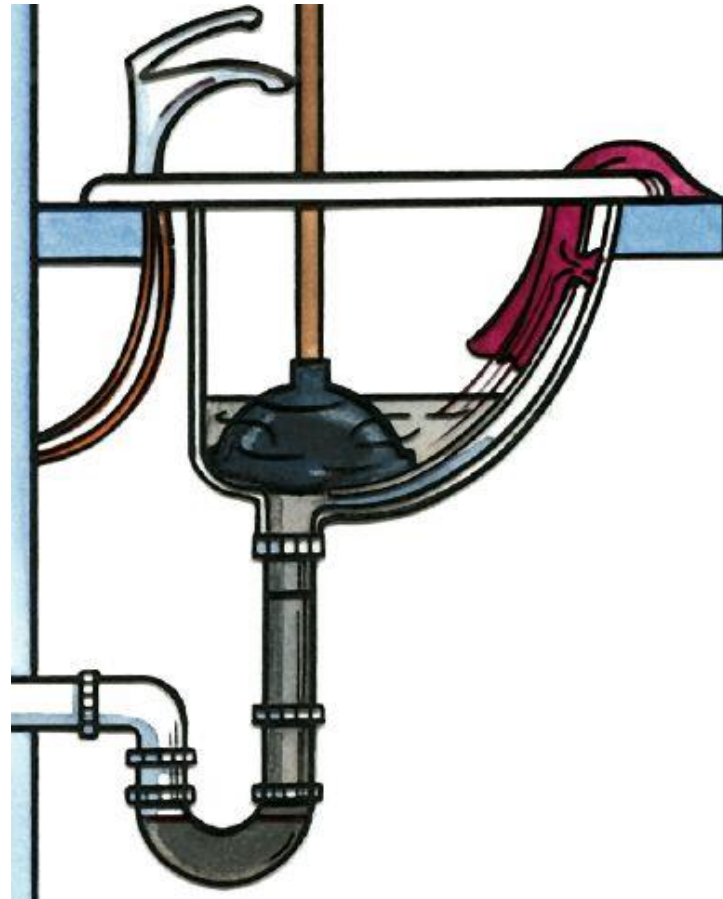



What is “Lymphedema”?

Lymphedema is the swelling of a body part, most often an extremity, caused by the abnormal accumulation of lymph fluid.

Lymphedema = “Clogged Sink”

Example





Two Types:

Primary vs. Secondary
Lymphedema



Primary Lymphedema

- No obvious cause
- Can develop any time in a life span
- More common in females
- Occurs more in the lower extremity



Secondary Lymphedema

- Caused by injury, scarring, or excision of lymph nodes
- Usually caused as a result of radiation and/or surgery
- Most often as a result of breast cancer
- Can also be caused by trauma and/or chronic infection to the lymph system




Secondary Lymphedema

- In the U.S. there are over 2 million cases of Secondary Lymphedema, most as a result of breast cancer treatment
- Secondary Lymphedema is usually Dx in the upper extremity
 - UE = 66%
 - LE = 31%
 - Genitals = 1.5%
 - Head = 1.0 %
 - Breast = 0.5%



Secondary Lymphedema

- Lymphedema can develop 20 years post breast cancer treatment
- 90% will develop within 3 years
- Why?
 - Genetics
 - Environmental Factors
 - Activity
 - Injury/infections



Clinical Classification of Lymphedema

- There are 4 grades when classifying lymphedema
- 0-1 do not require MLD/CDT



Grade Zero

- Skin inspection, palpation, effects of elevation, and limb function are normal



Grade One

- Skin has normal appearance
- Edema pits on pressure
- Edema disappears or decreases markedly
- Limb function normal
- = no therapy



Grade Two

- Yellowish discoloration of skin
- Early skin thickening and pits on pressure
- Edema decreases moderately
- Some decreased limb function
- MDL/CDT required



Grade Three

- Moderate yellowish discoloration of skin
- Skin thickening noted and little pitting edema noted
- Edema decreases minimally
- Marked limb function lost, decrease fine motor skills, and loss of joint flexibility
- MDL/CDT required



Grade Four

- Yellowish appearance and lymph “weeping”
- Skin thickening and no pitted edema
- Edema does not decrease
- Marked functional loss of limb noted
- MLD/CDT required



Manual Lymph Drainage/Complete Decongestive Therapy (MLD/CDT)

The four steps:

1. Hygiene & skin care
 2. Manual Lymph Drainage (MLD)
 3. Application of compression dressing
 4. Remedial exercises
- * *2 & 3 together comprise Complete Decongestive Therapy*



Goal of MLD/CDT

Since there is currently no cure for lymphedema the goal of treatment is to:

- * Return the lymphedemic limb to a stage of latency by utilizing remaining lymph vessels and other lymphatic pathways to bring effected area to normal or near normal size and to maintain it.



Step One: Hygiene & Skin Care

- Meticulous hygiene care with or without antibiotics is essential
- Goal is to limit fungal and/or bacterial growth
- Low ph lanolin-based skin lotions may be used twice a day to decrease chances of infections



Step One: Hygiene & Skin Care

- Keep skin clean
- Inspect skin for cracks, fungal infections or rashes
- Moisturize skin daily
- Keep skin dry
- Avoid chlorinated pools
- Avoid direct sunlight

Step Two: Manual Lymph Drainage (MLD)

MLD



Step Two: Manual Lymph Drainage (MLD)



The techniques used today in MLD were first developed by Emil Vodder, a massage therapist from Denmark in the 1930's.



Goal of MLD

- The goal of MLD is to reroute the lymph flow around “blocked” areas and into more centrally located healthy lymph vessels
- MLD is administered usually 5 times a week for 45-60 minutes per session

MLD

- MLD is a “gentle” manual treatment technique that is based on the 4 basic Vodder strokes
 - Stationary Circle
 - Pump
 - Rotary
 - Scoop
- * *Regular massage should not be confused with techniques of MLD. Massage is generally applied with more pressure than MLD.*



Effects of Manual Lymph Drainage

- Increases lymph production
- Reverses lymph flow
 - The rerouting of lymph fluid in superficial vessels opposite its natural flow patterns
- Increase in venous return
- Soothing
- Analgesic

Contraindications of MLD

- Cardiac edema
- Renal failure
- Acute infections: *May exacerbate symptoms*
- Acute bronchitis
- Acute deep vein thrombosis
- Hypertension: *MLD may be applied if cardiac functions are monitored*

Step Three: Compression Therapy

- Compression





Compression Therapy

- Individuals with lymphedema have damage to their elastic fibers of the skin, and always will
- The effected body part will always be at risk for re-accumulation of lymph fluid
- Therefore, an essential component to lymphedema management is external support



Goal of Compression Therapy

To maintain the decongestive effect achieved during the MLD sessions of preventing re-accumulation of fluid into the tissue.



Effects of Compression Therapy

- Increases the pressure in the tissue itself and the blood/lymph vessels within the tissue
- Improves venous & lymphatic return
- Improves effectiveness of the muscle and joint pumps during activity
- Provides support for those tissues that have lost elasticity
- This is done with compression bandaging and compression garments

Compression Bandaging

Example:

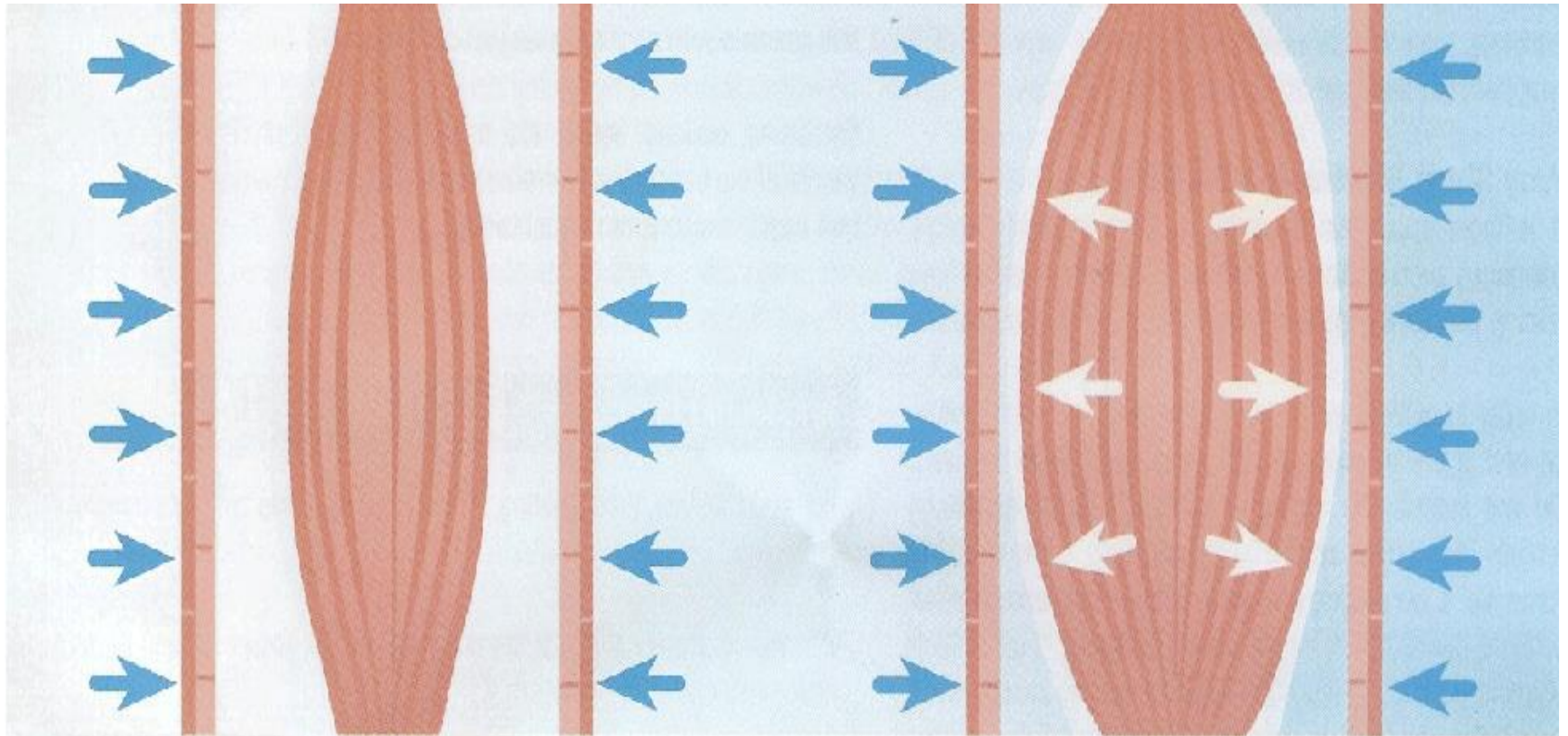




Compression Bandaging

- Two different qualities of pressure can be distinguished in compression bandaging
 - Working pressure
 - Resting pressure

Working & Resting Pressure



Working Pressure

- The resistance the bandage places against the working musculature determines the “working pressure”
- It's temporary
- Active only during muscle expansion
- Its value depends on the extent of the muscle contraction



Working Pressure

- The “active” working pressure results in an increase of tissue pressure (TP)
- The increase TP compresses the venous & lymphatic vessels which decreases the accumulation of fluid
- The lower the elasticity the higher the working pressure



Resting Pressure

- The amount of pressure exerted on tissue at rest or without muscle contraction
- Permanent pressure
- Value depends on the amount of “tension” applied during application
- A bandage with higher extensibility will result in increase pressure at rest

Compression Bandaging

- To insure the most adequate compression of an extremity the compression bandages are:
 - Applied from distal to proximal
 - Applied in layers, increasing tension with each layer
 - Foam padding is used to protect “boney” prominences
 - Up to 11 layers may be applied for an UE

Compression Garments



Compression Garments

- The move from bandages to elastic compression garments is done once the limb is decongested
- The goal is to preserve the treatment success achieved during MLD & compression bandaging
- Compression garments are worn for life
- *They themselves do not reduce swelling*



Compression Garments

- Compression garments are categorized by compression levels
- These compression levels are measured in “Millimeters of Mercury (mmHg)”

Compression Levels

- Compression Level I: 20-30 mmHg
- Compression Level II: 30-40 mmHg
- Compression Level III: 40-50 mmHg
- Compression Level IV: > 60 mmHg

**Values below 20 mmHg are not suitable in the management of Lymphedema*



Compression Garments

- Require a Doctors prescription
- Are covered by some insurances but not Medicare
- Lymphcare is an organization that assists with insurance reimbursement
- They can be reached at www.lymphcare.com



Compression Garments

- The average lymphedema patient will use a compression level II arm sleeve
- A individual that is involved in “high-intensity or high-risk” activities should wear a Level III for those activities
- They should be replaced every 6 months due to loss of elasticity of garment



Compression Garment Problems

- Compliance with wearing schedule
 - Appearance
 - Difficulty with donning
- Companies today offer many different colors and shades
- Specialized equipment or fasteners can be used to assist with donning

Compression Garment Aides

Patented



Compression Garment Fitting Device

One handed, quick fit for arms

In the past, it took an extra pair of hands, up to 15 minutes and much discomfort to get a compression garment on the arm. This device was designed and built by an engineer to eliminate all of those problems. Built in 3 sizes, it will accommodate all compression sleeves. It's unique guide block resizes the rods and pins before each use.

Features/Benefits:

- Allows a person to put a compression sleeve on without help
- Friction between the arm and sleeve is eliminated
- Saves time and frustration
- Proved to work simply and easily



Side view

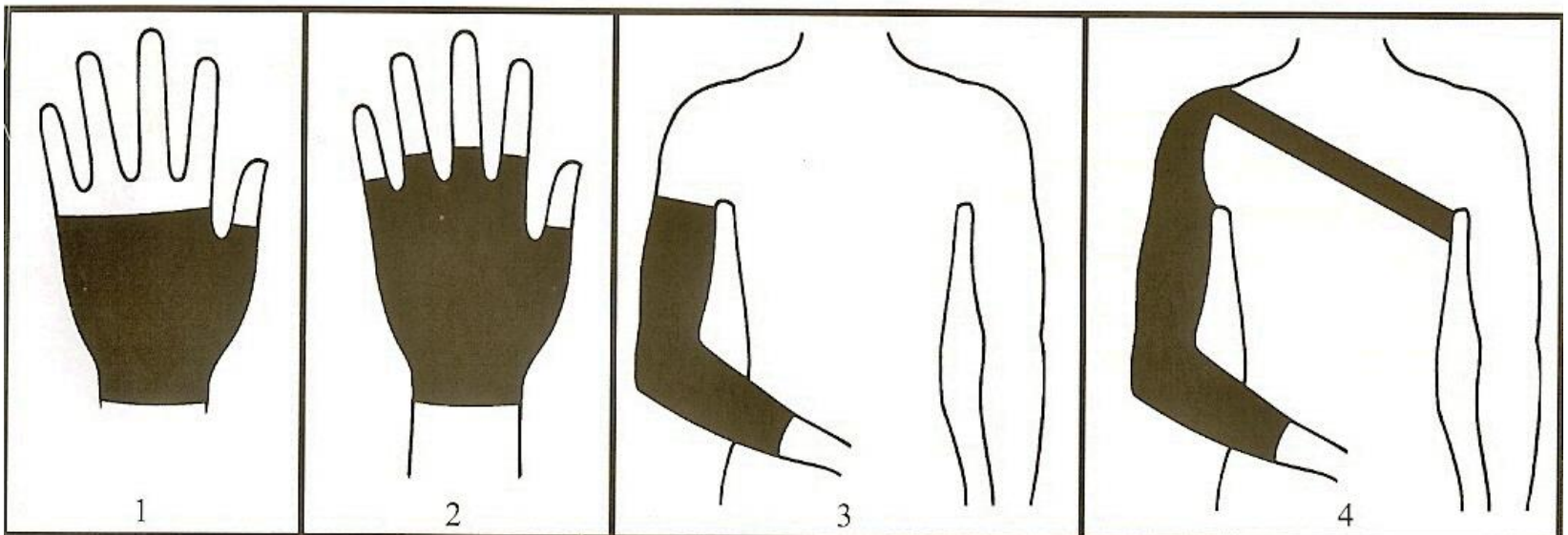
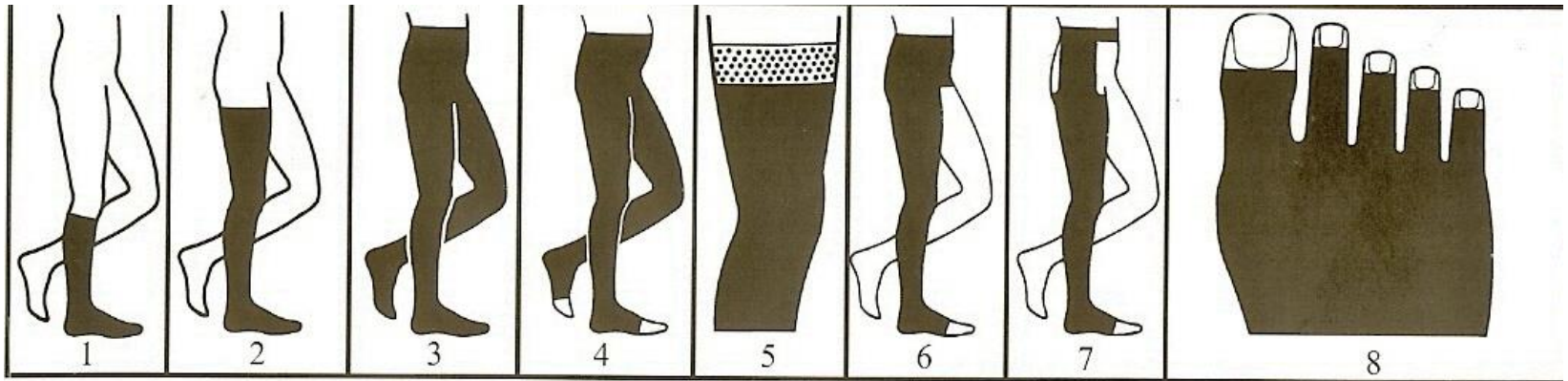
Top view

Prototype Available

Photos Available

absolutelyNEW Tel. 1-800-MARKET2 Fax. 415-442-0670
60 Spear Street, 10th Floor, San Francisco CA 94105 | Ref. # 200512210806-IP

Compression Garment Styles



Step Four: Remedial Exercises

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Exercise: Beneficial or Harmful?

- Prescription and intensity has been a controversial topic in lymphedema management
- How much is too much?
- Lack of scientific evidence in both
- Whatever you and your Doctor decide always wear your compression garment!!



Exercise

- Avoid movements that overstrain
- Should you “over do it”
 - Reduce your activity
 - Elevate your extremity



Beneficial Activities

- Swimming
- Yoga
- Water aerobics
- Walking



Medium Risk Activities

- Jogging/running
- Biking
- Treadmill



High Risk Activities

- Gardening (wear gloves)
- Tennis
- Golfing
- Shoveling snow (not here, YEAH!)
- Heavy lifting (no more than 10-15lbs)

* *Remember to always wear compression garment*

THANK YOU!

