



# Lymphedema: Treatment

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# INTRODUCTION


When lymphedema diagnosis is established, then attention is directed to the **reduction** of limb swelling and **prevention** of secondary infections, which should be the main goal of lymphedema management ▶

# PREVENTIVE MEDICINE

## Patients at Risk ►

In undeveloped countries, *Wuchereria bancrofti* is the most common cause of lymphedema and filariasis ►

The mass administration of diethylcarbamazine plus ivermectin significantly decreased lymphatic filariasis ►



In developed countries, there are two groups of patients who are at high risk of developing lymphedema ►

The first group contains patients who undergo radiation of a lymph node and/ or surgical lymphadenectomy as part of their cancer treatment. ►

The second high-risk group is patients with recurrent cellulitis; a damaged lymphatic system undermines the system's functional capacity, and eventually, causes lymphedema ►

# Edema Preventive Measures

- Maintaining daily skin hygiene ▶
- Avoid trauma ▶
- Elevating the affected limb ▶
- Exercise helps to decrease lymphedema ▶

# MECHANICAL REDUCTION OF LIMB SWELLING

Complex Decongestive Therapy ►

It is the combination of four components and two ►  
phases. The components are: (1) manual lymphatic  
drainage; (2) compression bandaging; (3) compression  
garments; and (4) compression devices.



The two phases are: ►

1. Initial or reductive phase (phase I); the aim to ►  
reduce the size of the affected area and to  
emphasize proper skin care.
2. Maintenance phase (phase II), which begins ►  
immediately after phase I; the main aim is to  
maintain the gains made during phase I, and  
requires life-long self-maintenance

# *Manual Lymphatic Drainage*

Before MLD is started, it is beneficial to divide the trunk into **six** areas, which correlate to the drainage territories of the **cervical**, **axillary**, and **inguinal** lymph node beds. ►

Treatment is first initiated by massaging an intact section adjacent to the section that includes the affected limb or body part to prepare the area to receive congested lymph. This maneuver has been shown to redirect lymph fluid toward functioning lymphatic territories. ►

# *Compression Bandaging*

- ▶ Elastic wrapping is the principal compression technique used in phase I CDT
- ▶ The goal is to create an internal **pump-like** action
- ▶ Two different types of pressures are produced by the bandaging: (1) the low resting pressure (20 to 30 mm Hg), which is the result of short-stretch bandages on the patient during resting; and (2) the high working pressure, which is the result of short stretch bandages on the patient during muscle **contraction**

# *Compression Garments*

Compression garments are normally used during all phases of lymphedema treatment, including prophylaxis in at-risk patients. ►

Normally, compression garments deliver about 20 to 50 mm Hg of pressure ►





Figure 169.9 Compression Garments Length. A, Knee-high; B, thigh-high; and C, full-length.

# *Exercise*

It can be concluded that with more exercise there is more pulmonary work, which enhances lymph flow and decreases the lymphedema. ►

Exercise will help weight reduction, which, in turn, will augment the clearance of lymph and decrease the swelling. ►

# *Skin Care and Nail Care*

Skin and nail hygiene is recommended to decrease the amount of cutaneous fungal and bacterial on the skin ►

# SURGERY

Autologous Lymphatic ►  
Grafting

Lymphovenous ►  
Anastomosis

*Liposuction* ►