

What is Lymphoedema?

Lymphoedema is a serious condition, indicating that the lymph system is unable to handle the lymph load. Treatment should begin as soon as lymphoedema is diagnosed.

Lymphoedema can cause decreased mobility, discomfort and repeated episodes of infection, cellulitis and lymphangitis. Inability to partake in many previous activities that make up a person's lifestyle can lead to general depression and feelings of inadequacy. The goal of treatment is to reduce the swelling, facilitate the flow of lymph fluid to the venous circulation of the affected area, and help the patient regain ability to participate in many of their daily activities.

Frequent fungal infections can increase the load on the lymph system. Severe cases of lymphoedema are associated with thickening of the skin, hardening of the limb (fibrosis), leakage the lymph through the skin and massive swelling (elephantiasis).

How does Lymphoedema Occur?

A stagnation of protein develops in the tissue. This raises the colloid osmotic pressure and a protein rich edema arises. There are more protein rich fluids in the tissue than can be transported and the proteins attract water by osmosis. The affected area becomes swollen, enlarged and uncomfortable. This swelling decreases oxygenation of the tissues, interferes with their normal functioning and makes them heal more slowly than normal. The excess protein also serves as a stimulus for chronic infection and can result in formation of excess fibrous tissue. Lymphoedema is chronic and progressive if left untreated. It can however, be brought under control with appropriate treatment and care.

There are two types of lymphoedema, primary (congenital) or secondary (removal of lymph nodes during cancer operations.)

The most effective approach used by therapists in many European countries is a method called

COMBINED OR COMPLEX

DECONGESTIVE THERAPY; a four step process, carried out over a 4 week period. The individual elements are Manual Lymph Drainage, compression therapy, remedial exercises, breathing techniques and excellent skin hygiene. The patient visits the clinic once or twice a day, 5 times a week or in accordance with the physician's recommendations.

Dr. Vodder's

Combined Decongestive Therapy

1. **Massage Therapy** – *patients receive Dr. Vodder's Manual Lymph Drainage (MLD) once or twice a day to remove excess fluid and protein. The MLD is performed to open lymphatics in the unaffected regions so these can help to drain the affected area. MLD stimulates lymphangions to increase their activity, which results in a decompression and emptying of obstructed lymphatic channels.*
2. **Compression Therapy** – *Bandaging of the affected limb follows each MLD session. This is a precise and accurate procedure using specific bandages and interfacing materials.*
3. **Remedial Exercises and Breathing** – *further promote venous and lymphatic flow by activating the muscle and joint pumps.*
4. **Skin Care and Hygiene** – *Excellent skin cleansing with antibacterial washes and neutral balances pH lotions will help to minimize bacterial and fungal growth and decrease the possibility of repeated attacks of cellulitis and/or lymphangitis.*

Lymph Vessel System

Unlike the blood, which circulates, lymph flows in one direction only. The lymph systems main function is to carry away fluid and metabolic waste from the tissues.

Lymph is a clear colorless fluid, which originates in the tissue spaces. Excess fluid and proteins from the tissue channels are collected by the initial lymphatic vessels, which are in the dermis of the skin.

The lymph is transported from the initial lymph vessels by precollector and collector vessels. These are made of segments called angions and the larger collector angions have a layer of smooth muscle, which pump the lymph forward. Lymph, passes from one region of the body to the next, via regional lymph nodes. Tissue fluids, microorganisms and cellular debris, are filtered in the regional nodes before these fluids are returning to the bloodstream at the venous arch prior to entering the heart.

It is crucial for the lymphatic system to function efficiently. When the lymphatic pathways become congested or blocked, or nodes are damaged by irradiation or entirely removed, we see a build up of fluid and protein in the tissues due to the compromised state of the lymphatics. This condition is known as a protein rich edema (lymphoedema).

Primary Lymphoedema

Primary lymphoedema has no known cause. Milroy's disease is a familial (genetically caused) lymphoedema present at birth. Meige's disease is similar but appears around the time of puberty.

LYMPHOEDEMA PRAECOX is the most common form of primary lymphoedema.

Beginning in adolescence and predominantly affecting females. Seventy-five percent of primary lymphoedema is praecox.

LYMPHOEDEMA TARDA is identical to praecox but occurs after age 35. Both praecox and tarda generally involve the legs only.

The pathological mechanisms, which cause primary lymphoedema, are either an absence of lymphatics (aplasia), inadequate lymphatic drainage, too few lymph nodes or an over dilation of lymphatics.

Secondary Lymphoedema

Secondary lymphoedema is an acquired condition resulting from loss or obstruction of previously normal lymphatic channels. The most common cause of secondary lymphoedema is due to removal of the lymph nodes, as part of surgery for malignancies. Radiation, surgery, injury, or blockage with parasites can interrupt the lymph pathways.

Trauma or radiation can tear a major lymph trunk or cause the production of excess fibrous tissue, which can constrict the lymph vessel.

Lymphoedema may also occur as a result of chronic venous diseases, which always involve the large lymphatic vessels that run beside the veins.

Lipedema

Lipedema is a condition of an excessive amount of fat deposited in the leg and buttocks combined with changes in the lymph vessels. In the early stages, the foot remains normal and fat deposition occurs from the ankle to the buttocks. The lymphatics are either abnormal, or become affected as the condition progresses. Venous insufficiency and lymphoedema may start to appear as well.

Home Care

After the clinic treatment has been completed the patient is responsible for continuing exercises and breathing techniques. A correctly fitted compression sleeve or stocking must be worn on a daily basis. Self-bandaging is done every night before bed. It is advisable to have a check up one month after the treatment has ended, as well as 6 months later to assess progress. Garments should be replaced every 3-6 months as they lose their elasticity over time.

Treatment Problems

Lymphoedema patients are constantly frustrated, as they clearly face a major problem yet cannot find answers to reduce a swollen limb. The most frequently given advice is to elevate the limb, wear a compression garment or stocking, avoid salt and take diuretics. Sequential pumps are sometimes recommended and while they may give some relief, the benefits are short lived. Surgery has never solved the problem of lymphoedema, even though dozens of different operations have been recommended and thousands of patients have been operated on. Dr. Vodder's Combined Decongestive Therapy offers a successful, non-invasive, and long lasting solution to the millions of lymphoedema sufferers throughout the world.

Where Do I Go?

Registered massage therapist **B. Lynn Gray** has been practicing since 1985. Lynn is a founding member of both the Canadian Massage Therapists' Alliance and the Massage Therapists' Association of Nova Scotia. She is the owner of **The Atlantic Massage Therapy Clinic Inc.**, located in Bedford, Nova Scotia. In 1998 Lynn completed her advanced levels of Dr. Vodders Manual Lymph Drainage in Walschee, Austria.

Factors that Contribute To Lymphoedema

- Combined surgery and radiation therapy
- Combined surgery and post operative infection
- Obesity
- Infections (insect bites, athletes foot, paronychia).
- Sedentary lifestyle
- Constrictive clothing or jewelry
- Heavy breast prosthesis
- Trauma to remaining lymphatics (sunburn, surgery).
- Recurrent tumor

General Precautions

- Excellent nutrition – avoid salt and fatty foods
- Eat lots of fresh fruits and vegetables
- Limit protein intake
- Avoid alcohol, caffeine and nicotine as much as possible
- Maintain optimum weight
- Meticulous cleanliness – use pH balanced cleansers
- Meticulous skin and nail care. Use pH lotions and creams to protect the skin
- Avoid alcohol, caffeine and nicotine
- Sleep with limb elevated
- Exercise – walking, swimming and exercises taught by your MLD therapist
- Seek treatment for even the slightest lymphoedema
- Treat infections quickly – carry prescribed antibiotics at all times

Impact of Lymphoedema On The Patient

- Swollen body part or limb
- Condition generally worsens over time
- Heaviness and limitation of motion
- Repeated episodes of infection
- Skin thickening, lymph leakage through skin
- Cosmetic problem; difficulty finding clothes or shoes
- Multiple hospitalizations
- Altered lifestyle – no sun or heat, limited activities
- Constant medical care and expense
- General depression and worsening of the patient's outlook on life and health can occur

Contributing Factors

- Avoid whenever possible:
- Hot baths, hot tubs and hot showers
- Turkish baths, saunas
- Burns (cooking, smoking, sunburn).
- Travel in extreme hot or cold climates
- Infections
- Insect Bites
- Manicures and pedicures
- Vaccination, venipunctures or acupuncture in affected limb
- Pet Scratches
- Skin punctures and cuts
- Venography or lymphography on the affected limb
- Gardening while not wear gloves
- Avoid Blunt Trauma:
- Lifting heavy objects
- Tennis or golf
- Blood pressure cuffs on affected limb
- Tight clothing, especially bra straps
- Heavy breast prosthesis
- Rings, watches, bracelets which could be constrictive

Lymphoedema

INFORMATION

FOR

PHYSICIANS & PATIENTS

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