

# Information

## about Dr. Vodder's Method of Manual Lymph Drainage



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**Dr. Vodder**

Akademie der Wittlinger Gruppe



Center for excellence in lymphedema treatment  
Lymphedema rehabilitation center – Treatment  
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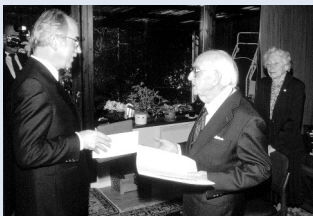
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# 1. History

When **Dr. Emil Vodder** and **his wife Estrid** developed Manual Lymph Drainage (MLD) in 1930s France, they saw, and moreover felt with their hands, instances of congestion in the subcutis and the corresponding lymphatic pathways in patients with chronic catarrhal infections of the upper respiratory tract.

With **pumping, circular flat strokes** they were able to drain such congestion away and thus help patients regain well-being. In anatomical works they found pictures of ink-injected lymphatic vessels (published by Sappey, Paris, 1885), whereupon they began using their pumping decongestive strokes along the lymphatic pathways.

This is how they developed a new technique, which they called **"MANUAL LYMPH DRAINAGE"**.



Dr. Vodder and wife (in the background) at the award ceremony for the Wilhelm Rohrbach Medal by the President of the Physiotherapy Association (VPT), Mr. Bruno Blum, in 1984



Dr. Vodder and wife with the elder Mr. Wittlinger (Dr. Vodder's protégé and designated successor) and his wife

## 2. MLD Strokes – Characteristics

What characterizes this new technique? The Dr. Vodder Method works with **circular movements** or continuous **spiral-type strokes**, **increasing pressure** to 30 torr (or roughly 4 kiloPascals) and then **reducing the stroke pressure to zero**. This constant change in pressure generates the pumping effect. Pressure is increased towards the natural direction of lymph flow. The strokes involve immediate skin contact resulting in the skin being moved over the subcutaneous tissue. This means that the technique is mostly applied to dry skin.

A drop of oil is applied only to hairy areas of the body. Oil is also used on immovable skin areas (such as scars, ulcer margins, firm edemas) or on very dry or coarse skin (e.g. eczema).

The MLD therapist works with **steady** and **rhythmic** strokes. The speed at which strokes follow one another depends on the frequency of pauses between lymph vessel constrictions. These hand movements should **not cause any redness of the skin or pain**.



Stationary circle



Pump technique



Scoop stroke



Rotary technique

Now used for varying pathologies, what is referred to as therapy strokes are all part of the basic Vodder Technique, which is adapted to the condition of the particular tissue and may be combined with exercise.

According to Dr. Vodder each MLD session begins with treating the lymph nodes and vessels down the neck to the point where the two main lymph ducts enter the venous angles on the right and on the left side (connection of the jugular and subclavian veins). Dr. Vodder calls this “clearing the chain lymph nodes down to the terminus”

For MLD to be effective, it is essential to both competently apply the specialized technique and to adjust therapy sessions to the symptoms of the individual patient. Compared with other massages, MLD has unusual session lengths. A typical MLD session requires 30 to 45 minutes, but may be extended to one and a half hours depending on the condition treated.

### 3. How the Technique Works

- a) Manual Lymph Drainage (MLD) stimulates [lymphangiomotor activity](#) within the region under treatment as well as within the adjacent lymphatic pathways, where a special regulating mechanism increases lymphangiomotor frequency.

Studies conducted by Prof. MISLIN have demonstrated this effect.

The MLD therapist begins in the proximal region, i.e. close to the “terminus”, and works section by section from the distal to the proximal region. MLD uses a specific sequence of strokes which is repeated several times depending on the intensity of treatment.

More recent studies have also demonstrated stimulation of lymphangiomotor function in contralateral body regions (e.g. MLD performed on the left leg results in stimulation of lymphangiomotoricity in the right leg).

This kind of “remote stimulation” is used in therapy. Manual Lymph Drainage is indicated for a variety of conditions as it acts upon very different physiological functions of the human body.

- b) The [decongestive benefits](#) of MLD are well known, and are achieved in various ways. On the one hand MLD stimulates the lymphangiomotor system and, in so doing, drains the affected tissue of excess water and protein that would need to be eliminated via the lymphatic system. In extensive lymphostatic edemas – a major indication for Manual Lymph Drainage – the pumping strokes are used to push the protein-rich edema fluid towards regions with intact lymph nodes and drainage. Especially when treating such lymphostatic edemas, it is necessary for the pressure exerted by the MLD therapist to be adjusted precisely to the texture of the tissue. Too much pressure can increase edema size. Lymphatic capillaries have a unique structure that permits them to take up water, large molecular substances (i.e. proteins in particular) as well as large fatty acid molecules, other non-moving body cells or foreign substances.

- c) Manual Lymph Drainage also **acts on the skeletal muscles**. Insufficient oxygen supply to local metabolism results in an increased accumulation of lactic acid. This metabolic disorder leads to a palpable form of muscular hypertonicity. In such cases MLD greatly speeds up the removal of lactic acid, thus resulting in rapid and painless regeneration of muscle fiber.
- d) The **smooth muscles** in the intestinal wall **respond promptly** to MLD. It relieves spasms and improves the tone of hypotonic muscle segments. MLD can activate the mechanisms for autorhythmicity as well. Manual Lymph Drainage has a similar effect on the layers of smooth muscle fibers in the walls of lymphatic vessels. Spastically blocked lymphatic pathways open up, while lymphangiomotor frequency and amplitude increase.
- e) MLD is **deeply relaxing** and **soothing**. Evidence is still insufficient to determine whether this autonomic re-balancing is largely due to the psychological benefits of human touch or whether the effects of MLD to stimulate the release of serotonin and catecholamine play a prominent role. What could be demonstrated in a scientific study is that MLD leads to decreased sympathetic tone. (Prof. DDr. P. Hutzschenreuter)
- f) In many applications the **analgesic effect** of MLD plays a major role. Stimulation of the pressure receptors helps interrupt pain transmission by inhibiting specific spinal cord cells.
- g) Although there is no scientific evidence for the **immunological benefits** of MLD, it is well known from experience that MLD reinforces the body's own mechanisms for resisting illness. This may be due to the fact that proper lymphatic circulation improves delivery of antigens to the lymph nodes, from where the antibodies formed by the lymph node cells are rapidly distributed by the lymphatic and vascular system to areas of the body where they are needed.



## 4. Indications –Healing Effects

Manual Lymph Drainage is indicated for a variety of conditions as it acts upon very different physiological functions of the human body. It represents an alternative or a key supplement to the existing plethora of physical therapies.

- 1) The main application is in the treatment of **extensive lymphedema** of the limbs. These may be **primary** or **secondary lymphedemas**, such as those formed after mastectomy with axillary lymph nodes removed, or after tissue damage caused by radiation therapy to the axillary or inguinal lymph nodes or the iliac or lumbar lymphatic pathways. Although MLD is rarely able to completely eliminate edema in such cases, it greatly improves the patient's general condition by reducing edema size.

This is best achieved through a combination of MLD, compression bandaging and remedial exercises.

If both legs are swollen with extensive edemas, MLD is administered in an in-patient setting twice daily to achieve the best possible result. Tissue affected by edema manifests serious physical symptoms requiring long treatment periods. Lymphangiomotoricity needs to be stimulated in the blocked lymphatic pathways. The protein-rich lymphatic load must be conveyed inch by inch through the entire edematous subcutis of the limb until functional lymphatic vessels are reached at the proximal end. Any fibroses which obstruct this path require separate, time-consuming treatment. Such fibroses are frequently the cause of later complications, such as nerve lesion and paralysis. The MLD treatment program is aided by compression bandaging or compression support, applied after each session.

Doing exercises while bandaged helps patients drain the lymph, as do propping up the swollen limb and receiving respiratory therapy. Taking diuretics only eliminates edema fluid for brief periods.

In fact, the water removed in this way is replaced immediately as the plasma proteins remaining in the tissue draw fluid to the edematous area. Moreover, this tends to encourage the formation of fibrosis, so

that highly fibrotic edemas previously treated with diuretics are very difficult to drain.

- 2) Another major group of indications is that of **traumatic injuries**: hematomas, distortions, muscle fiber tears, and as therapy following dislocations.
  - 2a) In **hematoma** and post-fracture **treatment**, numerous indications exist for the application of Manual Lymph Drainage. With hematomas, MLD should begin as early as possible after bleeding ceases, i.e. before hematomas have formed a barrier of fibrin and leukocytes. Even large hematomas can be drained away in a few, albeit extended, treatment sessions.
  - 2b) MLD's pain relieving effect provides benefits in treating **distortions** and **dislocations**. In such cases hematoma therapy is combined with isometric exercises. Active tension exercises and elastic bandaging supplement the treatment program.
  - 2c) MLD greatly reduces the length of treatment required for **torn muscle fibers**.
- 3) In the case of fractures, a hematoma can be treated before the split cast is applied and of course while it is being worn as well, thus allowing patients to receive a walking cast earlier. MLD treatment of hematomas greatly helps in preventing the development of **complex regional pain syndrome** (Sudeck's disease). When fractures are managed by surgical intervention, MLD may also be applied before and after the operation. Another option is to apply MLD to drain contralateral and proximal regions while the cast is worn. Forearm fractures managed with an orthopedic cast respond well to Manual Lymph Drainage when applied through the bandage.
- 4) Sudeck's disease in all its stages is a major indication for Manual

Lymph Drainage. Alongside removing the edema, MLD plays a significant role through its analgesic effects. This enables patients to do passive and active remedial exercises fairly soon.

- 5) Another major application is in [scar therapy](#). HUTZSCHENREUTER has demonstrated in a study that MLD improves wound healing and leads to good scar formation. Damaged lymph drainage routes can be restored in existing scars. If post-surgical scars interrupt the lymphatic pathways, so that edema forms locally, the latter can be drained away, since MLD reconnects the interrupted drainage routes. MLD also has a healing effect on large scars, such as those caused by burns.

[Hyperkeratotic scars](#) stop itching, reddening is reduced and the scar tissue softens.

Frequently MLD makes surgical corrections of scars superfluous.

Scar therapy requires a great deal of time, however.

A particularly good area of indication for MLD is cosmetic surgery aftercare.

- 6) MLD is also indicated for treatment of many kinds of [rheumatic and rheumatoid diseases](#). In cases involving subacute inflammatory conditions, the usual regime for treating chronic inflammation applies: the MLD therapist begins with short therapy sessions which are gradually extended. If there are no acute reactions, the therapist can proceed with full-length sessions. Conditions that respond well to MLD include rheumatic and rheumatoid arthritis and ankylosing spondylitis (Bekhterev's syndrome). Since MLD alleviates pain and removes edema, it helps improve patients' mobility.
- 7) MLD is ideally suited for treating the various forms of [arthrosis](#). It can be combined with thermotherapy depending on edema size. MLD therapy strokes are supplemented with remedial exercises to relieve symptoms.
- 8) Various [soft-tissue rheumatic disorders](#) (such as tendinitis,

tendinous periostitis, tendovaginitis, bursitis, periarthrits, periarthrosis, carpal tunnel syndrome) respond well to MLD but need comparatively long individual courses of treatment.

- 9) Experience has shown that MLD can also be applied in diseases associated with [local cerebral edema](#). As there are no lymphatic vessels within the skull, the lymphatic load produced there is drained via the Virchow-Robin spaces within the vessel walls and via the arachnoid sheaths along the olfactory and optic nerves to the lymphatic vessels of neck and face. Drainage inside the mouth enables cerebral decongestion. This has a favorable effect on [cerebral concussion, apoplexy, headache and migraines](#). Also conditions associated with local edema in the bulbus, spinal cord or along peripheral nerves show clear improvement under MLD therapy. Other applications for MLD worth mentioning are trigeminal neuralgia, facial palsy, zoster neuralgia and multiple sclerosis. In such cases MLD is integrated with standard therapies. It may also provide some improvement for people with Down syndrome.
- 10) MLD is used to drain away edematous changes in [post-thrombotic syndrome](#) and to heal ulcera cruris of various origins (venous and diabetic).
- 11) There are a number of [other indications](#) based on more recent experience with MLD, such as [mastodynia](#), the condition known as "cellulite", fibromyalgia and scleroderma. Healthy people also find benefits in Dr. Vodder's Manual Lymph Drainage. Women have long appreciated its benefits for swollen legs and its prophylactic use against stretch marks during pregnancy. Post-natal lymphatic massage promotes lactation in nursing mothers.

## 5. Contraindications

Despite the great variety of applications for Manual Lymph Drainage there are a number of clear cases where a contraindication for this therapy exists:

- 1) MLD is not suited for the treatment of acute infections.
- 2) Any thrombosis at risk of causing embolism is an absolute contraindication.
- 3) Precautions are also required when MLD is used to treat certain conditions, such as:
  - a) edema arising in the wake of carcinoma treatment;
  - b) thyroid dysfunction;
  - c) chronic inflammation;
  - d) bronchial asthma;
  - e) hypotension;
  - f) edemas caused by cardiac decompensation: these should not be drained manually, as this may exacerbate cardiac decompensation.

Manual Lymph Drainage is an invaluable therapy that Dr. Vodder has put into our hands. It is now up to us to use it for the benefit of humankind.

## 6. Dr. Vodder / G.Wittlinger Award – EUR 2,500 in Prize Money

An expert association, the Association of Dr. Vodder's Manual Lymph Drainage and Other Lymphatic Therapies, has granted the Dr. Vodder / G. Wittlinger Award for publications in the field of lymphology every two years since 1996. Such papers provide evidence of the effect of Dr. Vodder's MLD in the treatment of leg ulcers, whiplash trauma and post-partum women. The most recent study confirms MLD's vagotonic effect.

The award, entailing EUR 2,500 in prize money, is bestowed in recognition of the best contribution submitted by interested authors, such as physiotherapists, massage therapists, physicians or therapy teams.

Previous winners and their papers are:

- 1996 Mr. Hermann, physiotherapist; photo documentation to demonstrate the effectiveness of Combined Decongestive Therapy in out-patient treatment of leg ulcers
- 1998 Mr. Günther, physiotherapist; treatment of recent whiplash trauma with Dr. Vodder's Manual Lymph Drainage
- 2000 Mr. Bossert, physiotherapist, et al.; Dr. Vodder's MLD as an alternative to prolactin inhibitors for managing milk stasis in post-partum mothers
- 2002 Evidence and evaluation of the vagotonic effect of Dr. Vodder's MLD

You can request these papers (all in German) from the Dr. Vodder Academy.

## 7. Recommended Reading

WITTLINGER H., WITTLINGER D.,  
WITTLINGER A., WITTLINGER M.:

- *Dr. Vodder's Manual Lymph Drainage*  
(A practical guide)  
Thieme Verlag  
ISBN: 978 3131431912

WEISSLEDER H., SCHUCHHARDT C.:

- *Lymphedema*  
(Diagnosis and Therapy)  
Viavital Verlag  
ISBN: 978 3934371385

