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Manual Lymphatic Drainage

Manual lymphatic drainage is almost always investigated as part of a therapy bundle, rarely as a single measure. The most revealing point of this literature: The most frequently cited controlled studies examine the additional benefit alongside compression, while the highest-cited literature in the field describes the condition itself, not the manual technique.

595

STUDIES IN
TOTAL

483

IN HUMANS

131

OF WHICH
CONTROLLED

7

IN ANIMALS

0

IN THE LAB

Figures from the IHR study database · Last updated 2026-10-04

How to Read This Dossier

ESTABLISHED

measured in humans, with a comparison group

PLAUSIBLE

supported by mechanism, animal studies or observation

HYPOTHESIS

a likely connection that still needs to be tested

Manual Lymphatic Drainage at a Glance

ORIGIN:
Manual lymphatic drainage is a manual technique within the treatment complex of decongestive therapy.

EVIDENCE BASE:
595 evaluated papers · 131 controlled human studies · 352 observational studies · 38 review articles · 7 animal studies · 0 cell-culture studies

- STRONGEST EVIDENCE:
- Oncology: The 2020 meta-analysis included 17 randomised studies with 1911 patients; in the pooled analysis of eight studies with 338 patients, manual lymphatic drainage did not significantly reduce lymphoedema (2).
 - Oncology: The 2013 meta-analysis evaluated ten randomised studies with 566 patients and found no significant difference in incidence (risk ratio 0.63) or arm-volume reduction (1).
 - Oncology, prevention: In 120 women after breast-cancer surgery, 18 developed secondary lymphoedema (16 %): 14 in the control group (25 %), four in the intervention group (7 %), P=0.01 (18).
 - Skin: One review screened more than 160 studies and more than 20 review articles; the reviews consistently found that complex physiotherapy effectively reduces limb volume (47).
 - Further investigations: In a pilot study using near-infrared fluorescence imaging, mean apparent lymph velocity in the symptomatic limbs of affected individuals rose by 23 % (41).

- LIMITATIONS:
- The technique is almost never tested in isolation; no effect of the hand technique alone can be inferred from combination studies.
 - Two prevention studies yield differing results: cumulative incidence 16 % versus 24 % and 19 % under manual lymphatic drainage (18, 30).
 - The independent effect of the technique has so far been examined directly in comparatively few controlled studies; this question remains open.

CLASSIFICATION:
Manual lymphatic drainage is almost always tested as part of a treatment bundle; its independent contribution is an open question.

1. What Manual Lymphatic Drainage Is

Manual lymphatic drainage is a **manual technique** within the treatment complex of decongestive therapy. It is described as a sequence of slow, rhythmic, low-pressure hand movements along the lymphatic pathways. In practice, it rarely stands alone: it is combined with **compression**, skin care and movement exercises, and this combination is also tested in the controlled studies. The investigated fields of application range from **oncology** through skin and the musculoskeletal system to fatigue and cognition. A separate area concerns **safety and contraindications**, including an international consensus paper on risks and contraindications of medical compression therapy. The technique is most frequently studied in lymphoedema of the arms after breast-cancer surgery.

The decisive point for the evaluation of all papers: **manual lymphatic drainage is almost never tested in isolation**. In most controlled studies it is added to compression, an exercise programme or standard therapy; several titles address precisely this adjunct question. Consequently, no effect of the hand technique alone can be inferred from such combination studies. In addition, the papers measure very different endpoints: the **incidence** of lymphoedema, shoulder function, **quality of life**, pain or the extent of swelling. These levels are not interchangeable. A swelling value is a **marker**, not a disease course. Anyone comparing studies must therefore first check whether the comparison group received another treatment, a sham treatment or no treatment.

2. What the Studies Show in Detail

The key human studies and the most important reviews — by field of application, with population, duration, preparation, measure and result as reported in the original papers. Numbers appear only where the work states them.

Distribution of **controlled human studies** by field of application — the numbers are not additive, as one paper may be assigned to several fields:

FIELD OF APPLICATION	CONTROLLED STUDIES
Oncology	90
Skin	31
Musculoskeletal system	30
Safety and tolerability	18
Cognition and psyche	6
Fatigue and stress	6
Immune system	5

FIELD OF APPLICATION	CONTROLLED STUDIES
Bones and joints	5

Oncology

Two randomised studies address prevention after breast-cancer surgery with axillary lymph-node dissection. In the 2010 study, 120 women in Alcalá de Henares received either manual lymphatic drainage, scar massage and progressive shoulder exercises plus education or education alone. Of 116 women with one-year follow-up, 18 developed secondary lymphoedema (16 %): 14 in the control group (25 %), four in the intervention group (7 %); the difference was significant ($P=0.01$), the risk ratio was 0.28 (95 % CI 0.10 to 0.79), and in the survival analysis lymphoedema occurred four times earlier in the control group¹⁸. The second study included 160 women in Leuven and compared guidelines, exercise therapy and manual lymphatic drainage ($n=79$) with the same programme without manual lymphatic drainage ($n=81$) for six months; after twelve months the cumulative incidence was 24 % versus 19 % (odds ratio 1.3)³⁰. The two prevention studies yield differing results.

Three review articles summarise the randomised studies. The 2013 meta-analysis evaluated ten RCTs with 566 patients: two prevention studies found no significant difference in incidence (risk ratio 0.63; 95 % CI 0.14 to 2.82), and seven studies on arm-volume reduction likewise found none (weighted mean difference 75.12; 95 % CI -9.34 to 159.58)¹. The 2020 meta-analysis included 17 RCTs with 1911 patients; in the pooled analysis of eight RCTs with 338 patients, manual lymphatic drainage did not significantly reduce lymphoedema (standardised mean difference -0.09; 95 % CI -0.85 to 0.67), and the subgroup analyses by region, year of publication, sample size, type of surgery, statistical method, mean age and intervention duration largely agreed with the main result². The 2021 review covered 17 studies with 867 women and two men and reports contradictory findings: partly positive effects on volume, quality of life and symptoms, partly no additional benefit within complex decongestive therapy¹¹. **Proven:** Taken together, several meta-analyses show that manual lymphatic drainage as an adjunct to complex decongestive therapy does not demonstrate consistent additional benefit.

For treatment, a randomised study at six centres examined 103 women with at least 10% arm volume difference, of whom 95 were evaluable. The control group wore compression stockings, the experimental group received daily Manual Lymphatic Drainage and bandaging, followed by compression stockings. The proportion with at least 50% volume loss did not differ, nor did quality of life (SF-36) and arm function¹⁹. Another randomised study in 41 patients with axillary web syndrome compared exercise therapy (three times weekly, four weeks; $n=20$) with exercise therapy plus Manual Lymphatic Drainage (five times weekly, four weeks; $n=21$); pain and arm volume were significantly lower in the combination group, and lymphedema occurred only in the exercise therapy group ($n=6$)²⁷. A randomised crossover study in ten patients with unilateral breast cancer-related arm lymphedema compared in maintenance therapy a device that mechanically mimics Manual Lymphatic Drainage with massage, each for one hour daily over 14 days, with a one-week washout phase³⁴.

Two pilot studies compare robot-assisted and manual supermicrosurgical lymphaticovenous anastomoses in breast cancer-related lymphedema. In the first, the outcome improved after three months in both groups, and operating time in the robot-assisted group fell from 33 to 16 minutes²⁶. The one-year evaluation included 20 women (eight robot-assisted, twelve manual): quality of life improved significantly in both groups ($p=0.045$ and $p=0.001$ respectively), arm circumference did not decrease ($p=0.094$ and $p=0.240$), and daily use of compression stockings fell by 61.9%³³. A randomised study of immediate lymphatic reconstruction after axillary lymph node dissection enrolled 72 patients each; in the preliminary evaluation the cumulative incidence was 9.5% versus 32%²⁰. These studies examine surgical procedures, not Manual Lymphatic Drainage.

Skin

The 2015 Cochrane review asks about the efficacy and safety of Manual Lymphatic Drainage in breast cancer-related lymphedema. It describes complex decongestive therapy as a four-part conservative treatment consisting of Manual Lymphatic Drainage, compression therapy (bandages, sleeves or other compression garments), skin care and lymph-reducing exercises; phase 1 serves decongestion, phase 2 maintenance. Included were randomised and quasi-randomised studies in women with breast cancer-related lymphedema; primary endpoints were volumetric changes and adverse events, secondary endpoints function, subjective sensations, quality of life and care costs²⁵.

Significant differences in favour of the virtual-reality group appeared in pain intensity, DASH and shoulder mobility ($p<0.001$), in bodily pain ($p=0.002$), general health ($p<0.001$) and vitality ($p=0.006$); differences also existed in shoulder flexion strength ($p=0.002$)²⁹. Because Manual Lymphatic Drainage was included in both arms, this study does not test its own effect.

A controlled study in 31 patients with upper-arm lymphedema after mastectomy compared complex decongestive physiotherapy ($n=15$) with the same therapy plus intermittent pneumatic compression ($n=16$); both groups were treated five times weekly over three weeks. A randomised study in 58 women with lymphedema after mastectomy compared standard treatment (skin care, exercise, compression measures, one month of bandaging, thereafter compression stockings; $n=29$) with standard treatment plus Manual Lymphatic Drainage ($n=29$), daily over four weeks, with follow-up after one, three and six months³⁵. A randomised pilot study in 41 patients compared decongestive therapy with short-stretch bandaging ($n=21$) with a variant in which kinesio tape replaced the bandage ($n=20$); each session comprised skin care, 30 minutes Manual Lymphatic Drainage, one hour pneumatic compression and 20 minutes exercise. No significant difference was found between the groups in any endpoint ($P>0.05$)⁴¹.

The 2010 review evaluated ten randomised, one pseudo-randomised and four non-randomised studies on combined physiotherapy, intermittent pneumatic compression and arm elevation and considers combined physiotherapy effective, as well as arm bandaging³². The 2015 review screened more than 160 studies and more than 20 reviews; the reviews consistently concluded that complex physiotherapy effectively reduces limb volume and reported volume reductions also after compression stockings, pumps and Manual Lymphatic Drainage, with the greatest improvements when used in combination⁴⁴. The review on yellow-nail syndrome lists short-stretch bandages, elastic compression stockings, skin care, exercises and Manual Lymphatic Drainage if required for the accompanying lymphedema⁴².

Further Investigations

An exploratory pilot study used near-infrared fluorescence imaging to examine whether the effect of Manual Lymphatic Drainage can be measured. Ten persons with grade I or II lymphedema and twelve healthy controls received intradermal indocyanine green; images were taken before and after Manual Lymphatic Drainage. Mean apparent lymph velocity rose in the symptomatic (+23%) and asymptomatic (+25%) limbs of the affected persons as well as in

the control limbs of healthy subjects (+28%); mean lymph propulsion period shortened in the symptomatic (-9%) and asymptomatic (-20%) limbs of the affected persons ⁴⁰. The study shows a measurable physiological response to the treatment.

The 2018 review distinguishes lipedema from lymphedema. Lipedema is a rare, painful adipose-tissue disorder that predominantly affects women and is frequently misdiagnosed as lymphedema or obesity; it can progress into the venous and lymphatic systems. For treatment the work names weight reduction, oedema control, complex decongestive physiotherapy, liposuction and laser-assisted lipolysis, describing tumescent liposuction as the preferred surgical option with long-lasting results ²⁸. Manual Lymphatic Drainage is not examined here as an independent intervention.

The 2018 anatomical review summarises the structure of the lymphatic system and the lymphatic pathways in the upper and lower extremities and introduces the concept of the “lymphosome”, according to which the lymphatic vessels of a region connect to the same subgroup of regional lymph nodes. It also describes the anatomical changes of the lymphatic vessels after lymph-node dissection in the context of secondary lymphedema ³⁹. This work supplies the anatomical basis but does not examine Manual Lymphatic Drainage.

Inflammatory Processes

The 2018 review classifies lymphedema as a fundamentally immunological process that culminates in inflammation, fibroadipose deposition, impaired lymphangiogenesis and impaired lymph pump; up to one in six persons after treatment of a solid tumour is affected ³⁶. The 2017 review describes lymphedema as a progressive inflammatory process with discomfort, recurrent infections and occasionally secondary malignancy; the histological hallmark is infiltration of inflammatory cells, which appears to play a key role in animal experiments and tissue samples ³⁷.

The 2020 review works out the unresolved questions of pathophysiology: after impaired lymphatic drainage, proteins and lipids accumulate in the interstitial tissue, the tissue changes progressively with adipose-tissue deposition and fibrosis, accompanied by inflammation; the temporal sequence and interplay of these processes remain unclear ³⁸. The 2020 molecular review estimates five million people in the United States with secondary lymphedema and describes inflammation, fibrosis, adipogenesis and recurrent infections as a cycle that further impairs lymphatic function ⁴³.

The 2019 review on lymphatic function in autoimmune diseases addresses rheumatoid arthritis, scleroderma, lupus and dermatomyositis and considers the possibility that manual techniques such as massage and acupuncture could improve lymphatic function in autoimmune diseases ⁴⁵. **Hypothesis:** This consideration is an open question; an examination of Manual Lymphatic Drainage in autoimmune diseases still stands out.

Gut and Microbiome

No study examining Manual Lymphatic Drainage exists for this field. Whether and how the procedure acts on the gut or microbiome is an open question; it could be clarified only by studies that test Manual Lymphatic Drainage itself.

Overall Picture

Across the fields a clear picture emerges: Manual Lymphatic Drainage has been broadly studied as a component of complex decongestive therapy, and the greatest volume reductions are reported when several procedures are combined ⁴⁴. As the sole addition to complex therapy it shows no consistent additional benefit in several meta-analyses ^{1 2 11}. For prevention after breast-cancer surgery the randomised studies yield differing results ^{18 30}. Physiologically a response to the treatment can be measured: lymph velocity rises and propulsion period shortens ⁴⁰.

At the outset research stands where Manual Lymphatic Drainage extends beyond breast cancer-related lymphedema. For lipedema, autoimmune diseases and gut or microbiome an examination of the procedure itself still stands out ^{28 45}. The surgical neighbouring procedures of lymph surgery are tested in their own randomised studies ^{20 26 33}, not Manual Lymphatic Drainage. The pathophysiology of lymphedema is well described in reviews ^{36 38 43}, yet the transition from these mechanisms to concrete effects of Manual Lymphatic Drainage has not yet been examined.

Methodology of the evidence base

The supporting studies include randomised controlled trials and meta-analyses, alongside systematic reviews and a larger group of observational studies. Typical treatment durations range from four weeks ^{27 35} through six weeks ¹⁹ to six months ³⁰, with follow-up up to twelve months ^{18 30}. Frequent endpoints are arm volume or circumference, incidence of lymphedema, quality of life, pain and arm function. Uniform volume measures and comparable interventions have not yet been consistently implemented, which is why several reviews refrained from pooled evaluation ^{31 32} and call for larger, uniformly reported randomised studies ^{11 44}.

The additional benefit over compression is the actual point of contention

Several of the most-cited controlled studies are designed so that both groups receive

COMPRESSION

or standard therapy and only one group additionally receives Manual Lymphatic Drainage. This design is clinically sensible because compression is regarded as the mainstay measure. It has, however, a consequence: the measured difference reflects only the **additional contribution**, not the effect of the manual technique. If no difference emerges in such an arrangement, it does not mean that the technique achieves nothing — it means that its contribution alongside compression was not demonstrable in this arrangement. Conversely, a found difference permits no statement about standalone application.

Secondly, different clinical pictures are grouped under one keyword. One review explicitly states that

LIPDEMA

is not lymphedema. Both can look similar but are different clinical pictures. Studies on lymphedema after breast-cancer operations therefore contribute nothing to lipedema — and vice versa. Thirdly, part of the studies measure **prevention**, that is the frequency of newly occurring lymphedema, another measures treatment of an existing oedema. Prevention and treatment are different questions; findings from one cannot be transferred to the other.

3. How Reliable the Research Is

The research is clearly concentrated on one core area: **oncological questions**, predominantly lymphoedemas after breast cancer treatment, form the largest group of controlled studies in humans. This is followed by **skin** and **musculoskeletal system**, then safety, cognition and exhaustion as well as further areas. The field is thus built around a clinical core question, not arbitrarily broad. The citation structure is striking: at the top are works on **pathophysiology**, on the anatomy of the lymphatic system and on diseases of the lymphatic vessels, not on the manual technique. The most cited controlled works partly examine early physiotherapy for prevention, partly lymphatic drainage as an adjunct to compression. Some of the well-regarded studies also concern **surgical** procedures such as immediate lymphatic reconstruction and robot-assisted microsurgery; they belong to the broader field, not to the manual technique.

Methodologically the field rests on two pillars. On one side are randomised, partly single-blind controlled studies and several **systematic reviews with meta-analysis** that directly address the contribution of the manual technique to lymphoedema treatment after breast cancer. On the other side, **observational** studies predominate; these describe associations and do not provide evidence of causation. Blinding of the treated person is hardly possible with a manual technique; the studies therefore use blinded outcome assessment and standardised measurements. Follow-up periods and comparison conditions differ markedly between the studies. The independent effect of the technique has so far been examined directly in comparatively few controlled studies; this question remains open.

4. What Is Frequently Claimed — and What the Data Support

STATEMENT	STUDY SITUATION
Manual lymphatic drainage reduces an existing lymphoedema as a standalone measure.	The controlled studies predominantly test it in addition to compression or standard therapy. This literature says little about sole application; the independent
Manual lymphatic drainage has been investigated for the prevention of lymphoedema after breast cancer surgery.	Some of the studies examine precisely this prevention, mostly within the framework of an early physiotherapy programme. Prevention and treatment are sep
What helps in lymphoedema also helps in lipoedema.	A review paper explicitly distinguishes the two conditions. Lipoedema is not lymphoedema; the lymphoedema studies make no statement on this.
The technique is arbitrarily interchangeable with other physical procedures.	It was tested, among other things, against sequential pneumatic compression and against compression pumps. Such comparisons concern the respective ai

5. The Most Reliable Works

Ordered by strength of evidence, not by familiarity: systematic reviews and studies with many participants first. The complete evaluation comprises considerably more works; the most robust ones are presented here.

Controlled Studies in Humans

- ¹ Effects of manual lymphatic drainage on breast cancer-related lymphedema: a systematic review and meta-analysis of randomized controlled trials (2013) — Systematic review, 566 participants
- ² Manual lymphatic drainage for lymphedema in patients after breast cancer surgery: A systematic review and meta-analysis of randomized controlled ... (2020) — Systematic review, 1.911 participants
- ³ Manual Lymphatic Drainage for Breast Cancer-related Lymphedema: A Systematic Review and Meta-analysis of Randomized Controlled Trials (2022) — Systematic review, 1.564 participants

- ⁴ Prevention of Breast Cancer-Related Lymphedema: An Up-to-Date Systematic Review of Different Surgical Approaches (2024) — Systematic review, 569 participants
- ⁵ Lymphedema Care after Breast Cancer Surgery: Insights from a New Meta-Analysis (2026) — Systematic review, 1,183 participants
- ⁶ Effect of Manual Lymphatic Drainage on Breast Cancer-Related Postmastectomy Lymphedema: A Meta-analysis of Randomized Controlled Trials (2023) — Systematic review, 457 participants
- ⁷ Effects of manual lymphatic drainage on total knee replacement: a systematic review and meta-analysis of randomized controlled trials (2024) — Systematic review, 285 participants
- ⁸ Sympathetic Nerve Block in Lymphedema Treatment: A Systematic Review (2019) — Systematic review, 187 participants
- ⁹ Microsurgical treatment of lower extremity lymphedema: An umbrella systematic review supporting the American Venous Forum and the American Vein and ... (2026) — Systematic review, 100 participants
- ¹⁰ Effectiveness of Manual Lymphatic Drainage After Total Knee Arthroplasty: A Systematic Review (2026) — Systematic review, 463 participants
- ¹¹ Manual lymphatic drainage treatment for lymphedema: a systematic review of the literature (2021) — Systematic review
- ¹² Lymphoedema therapy in breast cancer patients: a systematic review on effectiveness and a survey of current practices and costs in Finland (2009) — Systematic review
- ¹³ Manual lymphatic drainage and quality of life in patients with lymphoedema and mixed oedema: a systematic review of randomised controlled trials (2018) — Systematic review
- ¹⁴ Objectifying Clinical Outcomes After Lymphaticovenous Anastomosis and Vascularized Lymph Node Transfer in the Treatment of Extremity Lymphedema: A ... (2025) — Review Article
- ¹⁵ Which physical therapy intervention is most effective in reducing secondary lymphoedema associated with breast cancer? Protocol for a systematic ... (2022) — Review Article
- ¹⁶ Comparison of Intermittent Pneumatic Compression Pump as Adjunct to Decongestive Lymphatic Therapy against Decongestive Therapy Alone for Upper Limb ... (2024) — Review Article
- ¹⁷ Liposuction as a Treatment for Lipedema: A Scoping Review (2024) — Review Article
- ¹⁸ Effectiveness of early physiotherapy to prevent lymphoedema after surgery for breast cancer: randomised, single blinded, clinical trial (2010) — 120 participants
- ¹⁹ Randomized trial of decongestive lymphatic therapy for the treatment of lymphedema in women with breast cancer (2013) — 103 participants
- ²⁰ Efficacy of Immediate Lymphatic Reconstruction to Decrease Incidence of Breast Cancer-related Lymphedema: Preliminary Results of Randomized ... (2023) — 174 participants
- ²¹ Benzo-pyrones for reducing and controlling lymphoedema of the limbs (2004) — 127 participants
- ²² Protocol of a randomised controlled trial regarding the effectiveness of fluoroscopy-guided manual lymph drainage for the treatment of breast ... (2018) — 201 participants
- ²³ Manual lymphatic drainage with or without fluoroscopy guidance did not substantially improve the effect of decongestive lymphatic therapy in people ... (2022) — 194 participants
- ²⁴ Manual lymphatic drainage for breast cancer-related lymphoedema (2017) — 234 participants

6. Summary

PROVEN In the summary of several meta-analyses, manual lymphatic drainage as an adjunct to complex decongestive therapy shows no consistent additional benefit. The 2013 meta-analysis evaluated ten randomised studies with 566 patients and found no significant difference either in incidence (risk ratio 0.63; 95% CI 0.14 to 2.82) or in arm volume reduction (weighted mean difference 75.12) (1). The 2020 meta-analysis included 17 randomised studies with 1911 patients; in the pooled analysis of eight studies with 338 patients, there was no significant reduction in lymphoedema (standardised mean difference -0.09) (2).

PLAUSIBLE The pilot study with near-infrared fluorescence imaging shows a measurable physiological response to the treatment: The mean apparent lymph velocity increased by 23% in the symptomatic and 25% in the asymptomatic limbs of the affected individuals as well as by 28% in the control limbs of healthy subjects; the lymph propulsion period shortened by 9% and 20% respectively (41). **Hypothesis:** Such a response could explain why swelling values decrease under treatment; a clinical benefit does not necessarily follow from this. **Hypothesis:** The consideration in the 2019 review that manual procedures such as massage and acupuncture could improve lymph function in autoimmune diseases is also an open question (48).

HYPOTHESIS A study that aimed to clarify the independent contribution of the manual technique would have to test manual lymphatic drainage in isolation or against a sham treatment, with blinded outcome assessment and standardised measurements as already used in the present studies. The comparison group would have to be clearly named: other treatment, sham treatment or no treatment. Endpoints would have to be kept separate — incidence, arm volume, shoulder function, pain and quality of life are not interchangeable, and a swelling value is a marker, not a disease course. It is also open whether and how the procedure affects the intestine or microbiome; for this area there is no study that has investigated manual lymphatic drainage.

7. What Remains Open

- **Additional contribution:** What proportion does the manual technique have when compression, skin care and exercise are kept constant in both groups? This question would be decided by a study with a sham-treated control group.

- **Lipoedema:** Does the course under manual lymphatic drainage in lipoedema differ from that in lymphoedema? A separate controlled series is pending for this.
- **Endpoints:** Which endpoint reflects the benefit — swelling, shoulder function, quality of life or pain? A study that defines all four in advance would establish the comparability of the studies.

Frequently Asked Questions

Why is manual lymphatic drainage so rarely tested alone?

In the controlled studies the comparison group usually receives compression, a standard therapy or an exercise programme; the manual technique is added on top. This corresponds to clinical practice, in which the measures are combined. To answer what the manual technique achieves on its own, a different design is required, for example with a sham-treated control group.

What does the absence of a group difference in such a study mean?

It means, first of all, that the additional contribution of manual lymphatic drainage alongside the comparator treatment was not measurable in this arrangement. This is not a statement about whether the technique changes anything when used by itself. The size of the groups studied, the duration of follow-up and the chosen endpoints are also decisive.

Can the results be transferred to other forms of oedema?

Only to a limited extent. The largest part of the controlled work concerns lymphoedema after breast-cancer surgery. One review explicitly separates lipoedema from lymphoedema. Anyone who transfers findings to other forms of oedema or other body regions leaves the area that the studies actually examined.

Sources

- 1 Effects of manual lymphatic drainage on breast cancer-related lymphedema: a systematic review and meta-analysis of randomized controlled trials
Huang TW, Tseng SH, Lin CC, Bai CH, Chen CS, Hung CS et al. · 2013
- 2 Manual lymphatic drainage for lymphedema in patients after breast cancer surgery: A systematic review and meta-analysis of randomized controlled trials
Liang M, Chen Q, Peng K, Deng L, He L, Hou Y et al. · 2020
- 3 Manual Lymphatic Drainage for Breast Cancer-related Lymphedema: A Systematic Review and Meta-analysis of Randomized Controlled Trials
Lin Y, Yang Y, Zhang X, Li W, Li H, Mu D · 2022
- 4 Prevention of Breast Cancer-Related Lymphedema: An Up-to-Date Systematic Review of Different Surgical Approaches
Pagliara D, Grieco F, Rampazzo S, Pili N, Serra PL, Cuomo R et al. · 2024
- 5 Lymphedema Care after Breast Cancer Surgery: Insights from a New Meta-Analysis
Yan Z, Jiejie F, Wenhua S, Yilin K · 2026
- 6 Effect of Manual Lymphatic Drainage on Breast Cancer-Related Postmastectomy Lymphedema: A Meta-analysis of Randomized Controlled Trials
Qiao J, Yang LN, Kong YH, Huang X, Li Y, Bai DQ · 2023
- 7 Effects of manual lymphatic drainage on total knee replacement: a systematic review and meta-analysis of randomized controlled trials
Lu H, Shao Q, Li W, Li F, Xiong W, Li K et al. · 2024
- 8 Sympathetic Nerve Block in Lymphedema Treatment: A Systematic Review
Forte AJ, Boczar D, Huayllani MT, Lu X, McLaughlin SA · 2019
- 9 Microsurgical treatment of lower extremity lymphedema: An umbrella systematic review supporting the American Venous Forum and the American Vein and Lymphatic Society clinical practice guidelines on management of lymphedema
Gloviczki P, Gloviczki ML, Mohos B, Oropallo A · 2026
- 10 Effectiveness of Manual Lymphatic Drainage After Total Knee Arthroplasty: A Systematic Review
Davide P, Christian C, Niccolo' L, Giulia M · 2026
- 11 Manual lymphatic drainage treatment for lymphedema: a systematic review of the literature
Thompson B, Gaitatzis K, Janse de Jonge X, Blackwell R, Koelmeyer LA · 2021
- 12 Lymphoedema therapy in breast cancer patients: a systematic review on effectiveness and a survey of current practices and costs in Finland
Kärki A, Anttila H, Tasmuth T, Rautakorpi UM · 2009
- 13 Manual lymphatic drainage and quality of life in patients with lymphoedema and mixed oedema: a systematic review of randomised controlled trials
Müller M, Klingberg K, Wertli MM, Carreira H · 2018
- 14 Objectifying Clinical Outcomes After Lymphaticovenous Anastomosis and Vascularized Lymph Node Transfer in the Treatment of Extremity Lymphedema: A Systematic Review and Meta-Analysis
Hahn BA, Kleeven A, Richir MC, Witkamp AJ, Kuijpers AMJ, de Jong T et al. · 2025
- 15 Which physical therapy intervention is most effective in reducing secondary lymphoedema associated with breast cancer? Protocol for a systematic review and network meta-analysis
Aguilera-Eguia RA, Seron P, Gutiérrez-Arias R, Zaror C · 2022
- 16 Comparison of Intermittent Pneumatic Compression Pump as Adjunct to Decongestive Lymphatic Therapy against Decongestive Therapy Alone for Upper Limb Lymphedema after Breast Cancer Surgery: A Systematic Review and Meta-Analysis
Yao M, Peng P, Ding X, Sun Q, Chen L · 2024
- 17 Liposuction as a Treatment for Lipedema: A Scoping Review
Bejar-Chapa M, Rossi N, King N, Hussey MR, Winograd JM, Guastaldi FPS · 2024
- 18 Effectiveness of early physiotherapy to prevent lymphoedema after surgery for breast cancer: randomised, single blinded, clinical trial
Torres Lacomba M, Yuste Sánchez MJ, Zapico Goñi A, Prieto Merino D, Mayoral del Moral O, Cerezo Téllez E et al. · 2010
- 19 Randomized trial of decongestive lymphatic therapy for the treatment of lymphedema in women with breast cancer
Dayes IS, Whelan TJ, Julian JA, Parpia S, Pritchard KI, D'Souza DP et al. · 2013
- 20 Efficacy of Immediate Lymphatic Reconstruction to Decrease Incidence of Breast Cancer-related Lymphedema: Preliminary Results of Randomized Controlled Trial
Coriddi M, Dayan J, Bloomfield E, McGrath L, Diwan R, Monge J et al. · 2023
- 21 Benzo-pyrones for reducing and controlling lymphoedema of the limbs
Badger C, Preston N, Seers K, Mortimer P · 2004
- 22 Protocol of a randomised controlled trial regarding the effectiveness of fluoroscopy-guided manual lymph drainage for the treatment of breast cancer-related lymphoedema (EForT-BCRL trial)
De Vrieze T, Vos L, Gebruers N, Tjalma WAA, Thomis S, Neven P et al. · 2018
- 23 Manual lymphatic drainage with or without fluoroscopy guidance did not substantially improve the effect of decongestive lymphatic therapy in people with breast cancer-related lymphoedema (EForT-BCRL trial): a multicentre randomised trial
De Vrieze T, Gebruers N, Nevelsteen I, Fieuws S, Thomis S, De Groef A et al. · 2022
- 24 Manual lymphatic drainage for breast cancer-related lymphoedema
Shao Y, Zhong DS · 2017
- 25 Manual lymphatic drainage for lymphedema following breast cancer treatment
Ezzo J, Manheimer E, McNeely ML, Howell DM, Weiss R, Johansson KI et al. · 2015
- 26 First-in-human robotic supermicrosurgery using a dedicated microsurgical robot for treating breast cancer-related lymphedema: a randomized pilot trial
van Mulken TJM, Schols RM, Scharnga AMJ, Winkens B, Cau R, Schoenmakers FBF et al. · 2020
- 27 Effects of a physical therapy program combined with manual lymphatic drainage on shoulder function, quality of life, lymphedema incidence, and pain in breast cancer patients with axillary web syndrome following axillary dissection
Cho Y, Do J, Jung S, Kwon O, Jeon JY · 2016
- 28 Lipoedema is not lymphoedema: A review of current literature
Shavit E, Wollina U, Alavi A · 2018
- 29 Effect of exercise mode on physical function and quality of life in breast cancer-related lymphedema: a randomized trial
Basha MA, Aboelnour NH, Alsharidah AS, Kamel FH · 2022
- 30 Effect of manual lymph drainage in addition to guidelines and exercise therapy on arm lymphoedema related to breast cancer: randomised controlled trial
Devoogdt N, Christiaens MR, Geraerts I, Truijten S, Smeets A, Leunen K et al. · 2011
- 31 Physical therapies for reducing and controlling lymphoedema of the limbs
Badger C, Preston N, Seers K, Mortimer P · 2004
- 32 Different physical treatment modalities for lymphoedema developing after axillary lymph node dissection for breast cancer: a review
Devoogdt N, Van Kampen M, Geraerts I, Coremans T, Christiaens MR · 2010
- 33 One-Year Outcomes of the First Human Trial on Robot-Assisted Lymphaticovenous Anastomosis for Breast Cancer-Related Lymphedema
van Mulken TJM, Wolfs JAGN, Qiu SS, Scharnga AMJ, Schols RM, Spiekerman van Weezenburg MA et al. · 2022
- 34 A pilot, prospective evaluation of a novel alternative for maintenance therapy of breast cancer-associated lymphedema [ISRCTN76522412]
Wilburn O, Wilburn P, Rockson SG · 2006
- 35 Manual lymphatic drainage therapy in patients with breast cancer related lymphoedema
Martin ML, Hernández MA, Avendaño C, Rodríguez F, Martínez H · 2011
- 36 Lymphedema: Pathogenesis and Novel Therapies
Dayan JH, Ly CL, Kataru RP, Mehrara BJ · 2018
- 37 Inflammatory Manifestations of Lymphedema
Ly CL, Kataru RP, Mehrara BJ · 2017
- 38 The Unresolved Pathophysiology of Lymphedema
Azhar SH, Lim HY, Tan BK, Angeli V · 2020
- 39 Anatomy of the Lymphatic System and the Lymphosome Concept with Reference to Lymphedema
Suami H, Scaglioni MF · 2018
- 40 Assessment of lymphatic contractile function after manual lymphatic drainage using near-infrared fluorescence imaging
Tan IC, Maus EA, Rasmussen JC, Marshall MV, Adams KE, Fife CE et al. · 2011
- 41 Could Kinesio tape replace the bandage in decongestive lymphatic therapy for breast-cancer-related lymphedema? A pilot study
Tsai HJ, Hung HC, Yang JL, Huang CS, Tsauo JY · 2009
- 42 Yellow nail syndrome: a review
Vignes S, Baran R · 2017
- 43 Histopathologic Features of Lymphedema: A Molecular Review
Li CY, Kataru RP, Mehrara BJ · 2020
- 44 Review of the evidence of lymphedema treatment effect
Finnane A, Janda M, Hayes SC · 2015
- 45 Lymphatic Function in Autoimmune Diseases
Schwartz N, Chalasani MLS, Li TM, Feng Z, Shipman WD, Lu TT · 2019

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