

REVIEW ARTICLE

Physiotherapeutic methods for managing postmastectomy breast cancer-related lymphedema: a scoping review

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Keywords:

physical therapists; physical therapy modalities; breast neoplasms; mastectomy; lymphedema (source: MeSH-NLM).

ABSTRACT

Mastectomy is the leading cause of lymphedema among breast cancer survivors, resulting in limitations in activities of daily living and a diminished quality of life. Although various physiotherapeutic methods are available for its treatment, the literature does not clearly identify which are most commonly used or how they are applied. Therefore, this review aimed to compile up-to-date evidence on the physiotherapeutic methods currently employed for the management of postmastectomy lymphedema. A scoping review was conducted following the Joanna Briggs Institute (JBI) methodology, which is based on the framework developed by Arksey and O'Malley. Searches were performed in the following databases: BVS Regional Portal, PubMed, Web of Science, and Scopus, using MeSH terms combined with Boolean operators. A search thesaurus was developed in English, and the search focused on studies published between 2018 and 2024. A total of 759 studies were identified; 14 were reviewed in full text, and 8 were included in the final qualitative analysis. The studies were conducted in Turkey, Egypt, and the United States. Among them, 75 % employed complex decongestive therapy (CDT) as the primary physiotherapeutic method for lymphedema management. In conclusion, the findings underscore the role of physiotherapists in treating postmastectomy lymphedema, with CDT emerging as the most commonly used physiotherapeutic approach—often combined with tools such as kinesiotaping, virtual reality, low- and high-compression bandaging, and negative pressure therapy.

Métodos fisioterapéuticos para el manejo del linfedema por cáncer de mama postmastectomía: revisión de alcance

Palabras clave:

fisioterapeutas; modalidades de fisioterapia; neoplasias de la mama; mastectomía; linfedema (fuente: DeCs-BIREME).


RESUMEN

La mastectomía es la principal causa del linfedema en sobrevivientes de cáncer de mama, el cual genera limitaciones en las actividades de la vida diaria y afecta la calidad de vida de quienes lo padecen. Existen diversos métodos fisioterapéuticos para su tratamiento, pero no se reporta en la bibliografía cuál es el más utilizado y de qué manera se usan dichos métodos; por lo cual, el objetivo de esta revisión fue reunir evidencia actualizada sobre los métodos fisioterapéuticos utilizados en la actualidad para el manejo del linfedema postmastectomía. Se realizó una revisión de alcance siguiendo la metodología del Instituto Joanna Briggs (JBI), que a su vez se basa en el trabajo previo de Arksey y O'Malley. Se llevó a cabo una búsqueda en las bases de datos: Portal Regional de la BVS, PubMed, Web of Science y Scopus, utilizando términos MESH con operadores booleanos, estableciendo un tesoro de búsqueda en idioma inglés, la cual estuvo centrada en estudios publicados entre 2018 y 2024. Fueron identificados 759 estudios, 14 de estos fueron leídos a texto completo y 8 fueron incluidos en el análisis cualitativo final. Los estudios fueron publicados en Turquía, Egipto y Estados Unidos, y el 75 % de estos utilizaron la terapia descongestiva compleja (TDC) como método fisioterapéutico para el manejo del linfedema. En conclusión, las investigaciones destacan el papel del fisioterapeuta en el tratamiento del linfedema posmastectomía, con la TDC como el método fisioterapéutico más común en combinación con herramientas como el kinesiotape, la realidad virtual, el vendaje de baja y alta compresión, así como la terapia de presión negativa.

Cite as: Payán-Salcedo HA, Malpud Malpud NN, Piamba Lozano JK, Marín Lorez M, Arias-Coronel F. Physiotherapeutic methods for managing postmastectomy breast cancer-related lymphedema: a scoping review. Rev Peru Cienc Salud. 2025;7(3):249-57. doi: <https://doi.org/10.37711/rpcs.2025.7.3.6>

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INTRODUCTION

Breast cancer is considered the type of cancer with the highest incidence among the female population, with lung cancer being the second most frequent in both sexes. In 2020, 685,000 deaths and more than 2.3 million new cases of breast cancer were reported, and it is projected that by 2040 this figure will rise to 3 million new cases and 1 million deaths due to this disease ⁽¹⁾. The figures show that, per 100,000 inhabitants worldwide, 55.9 cases were diagnosed in transition countries and 29.7 in developed countries, with a mortality rate of 6.9% ⁽²⁾. In Latin America, more than 490,000 new cases of this type of cancer and more than 106,000 deaths are recorded each year; additionally, a 39% increase in the number of diagnosed women is expected by 2040 ⁽³⁾. In Colombia, between 2021 and 2022, 14,543 new cases were reported, with an incidence rate of 48.3 per 100,000 women and an estimated mortality rate of 13.1 per 100,000 women, positioning breast cancer as the second most frequently diagnosed cancer in 2021, with 511 cases, and one of the deadliest among women ^(4,5).

The surgical management for breast cancer is mastectomy, a procedure in which the tumor and the surrounding affected area are removed. This procedure is usually accompanied by pharmacological therapy, such as chemotherapy, radiotherapy, or hormone therapy, administered before or after surgery depending on the type, stage, and size of the tumor ⁽⁶⁾. The percentage of women undergoing this type of procedure during stage 3 of the disease ranges from 35 % to 68 %, with the most commonly used technique being modified radical mastectomy ⁽⁶⁾. Mastectomy generally has a high success rate in early stages and is combined with adjuvant therapy, decreasing or completely eradicating the tumor and reducing the probability of recurrence; however, because it is an invasive procedure that in most cases involves intervention in lymph nodes, it generates pain, discomfort, reduced quality of life, and fluid accumulation in the lymphatic system, also known as lymphedema ⁽⁵⁾.

The lymphatic system contains immune system cells and is responsible for transporting lymph through ducts and vessels that run along the body surface. When obstruction or reduced lymph flow occurs—such as in axillary lymph node removal, commonly used in breast cancer—the lymphatic fluid cannot

be transported adequately, resulting in excessive accumulation in adipose tissue that becomes chronic, thus producing edema of the affected body segment ⁽⁷⁾.

The literature reports that women who undergo mastectomy have a higher risk of developing lymphedema; however, this procedure, whether partial or total, is one of the most frequently used when the tumor has compromised a considerable area or when adjuvant treatments were insufficient and complete removal is required ⁽⁸⁾.

Breast cancer-related lymphedema commonly occurs in the arm on the side where the treatment was received. It is noteworthy that most interventions directly or indirectly affect the lymph nodes, thereby increasing the risk of developing lymphedema during treatment or in the years following it ⁽⁸⁾. Physiotherapeutic intervention using different modalities has proven to be significantly effective in early stages for the management and reduction of lymphedema. This is associated with increased joint range of motion, decreased arm diameter and pain, and overall improvement in the quality of life of patients who have undergone mastectomy and other interventions. Physiotherapeutic intervention includes treatment options such as kinesiotaping, physical exercise protocols, myofascial release, and acupuncture, among others ⁽⁹⁻¹²⁾. However, the scientific literature does not clearly or unanimously describe which method is most frequently used or reported.

Therefore, the aim of this scoping review was to gather and interpret up-to-date evidence on the physiotherapeutic methods currently used for the management of postmastectomy lymphedema.

METHODS

This scoping review was conducted following the methodology of the Joanna Briggs Institute (JBI), originally developed by Arksey and O'Malley ⁽¹³⁾, and aligned with the guidelines of the PRISMA-ScR checklist for reporting scoping reviews ⁽¹⁴⁾. To map the existing literature, the method suggests establishing clear inclusion and exclusion criteria, defining and providing detailed characteristics of participants, identifying a concept that directs the scope and breadth of the review, and specifying a context that delineates the factors involved in the research.

Eligibility criteria

Following the methodology described above, the eligibility criteria were determined based on the participants, concept, and context of the research. 1) Participants: Studies were included when their population consisted of women over 18 years of age who had been diagnosed with breast cancer. 2) Concept: Studies were included if they related the origin of lymphedema to breast cancer postmastectomy or other medical-surgical interventions used as treatment. 3) Context: Studies were included if they demonstrated and explained physiotherapeutic methods used for the management of lymphedema associated with mastectomy or other medical-surgical interventions. As exclusion criteria, studies in which lymphedema was caused by another pathology or diagnosis were excluded, as well as studies in which the professional responsible for managing lymphedema was someone other than a physiotherapist, and studies that did not describe in their methodology the modality used and how it was applied for lymphedema management.

Information sources

This scoping review included study designs ranging from experimental and quasi-experimental studies—including randomized controlled trials, non-randomized controlled trials, and descriptive or analytical observational studies—to case reports, in both English and Spanish. Literature reviews and gray literature documents were excluded.

Search strategy

For this review, a search was conducted in the following databases: BVS Regional Portal, PubMed, Web of Science (Clarivate Analytics), and Scopus (Elsevier), using MeSH terms with Boolean operators and establishing a search thesaurus, following a question structure based on population, concept, and context (PCC). The aim was to identify articles describing physiotherapeutic management of postmastectomy lymphedema in breast cancer. The last search in each database was performed on June 15, 2024.

Based on the population, concept, and context, and using MeSH terms, the search strategy was established in English (see Table 1). Results were filtered for studies published within the last six years (2018–2024) to collect information on the methods currently used by physiotherapists.

Selection process

After the search, all identified citations were exported to the reference management software Mendeley, version 2.98.0 (2023), where duplicates and studies written in languages other than English or Spanish were removed. Subsequently, the authors independently reviewed titles and abstracts, and the selection was examined according to the inclusion criteria of the review. Two independent reviewers (NNMM and JKPL) thoroughly evaluated the full text of the relevant studies, and the reasons for exclusion of those that did not meet the eligibility criteria were documented. Any disagreement that arose during this phase was resolved through discussion or by involving a third reviewer (MML). The final search results and the inclusion/exclusion process of the studies were described using a flowchart based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) ⁽¹⁴⁾ (see Figure 1). In addition, the reference lists of all evidence sources were thoroughly examined to identify additional studies through manual searching.

Data collection and synthesis process

A spreadsheet was created in Microsoft Excel 2021, where the data from the included studies were compiled. The three reviewers manually extracted data from each database, aiming to be meticulous throughout the process, which ensured consistency and accuracy of the information and avoided loss of relevant data. Extracted data included specific details about the participants, the concept, the context, study methods, and key results relevant to the development of the review.

Table 1. MeSH terms defined according to the PCC strategy

Population	Concept	Context
Women, adult	Breast cancer lymphedema, mastectomy	Physical Therapy Modalities

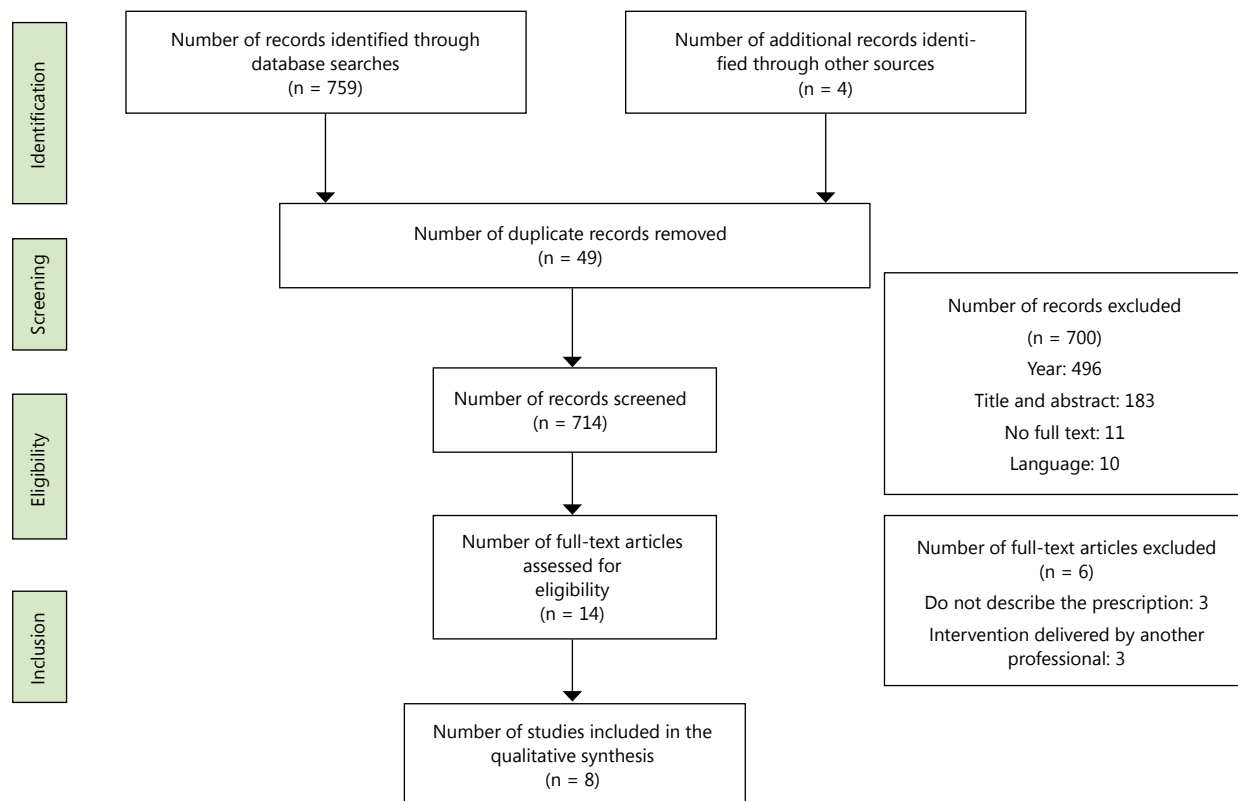


Figure 1. Flow diagram for study selection (PRISMA methodology)

RESULTS

Following the initial bibliographic search, 759 studies were retrieved, and 4 additional studies were identified through reference lists, for a total of 763 records. Subsequently, 49 duplicates were removed, and 700 studies were excluded based on title and abstract, year of publication, language, and lack of access to full text. Finally, 14 studies underwent full-text review, and 6 were excluded for not meeting the inclusion criteria. In total, 8 studies were included in this review (see Figure 1).

Among the selected studies, 37.5 % were randomized clinical trials, 25 % were controlled pilot randomized trials, 25 % were experimental studies, and 12.5 % were quasi-randomized clinical trials. A total of 62.5 % of the studies were published by authors from Turkey, 25 % from Egypt, and 12.5 % from the United States (see Table 2).

The studies included were published over a 6-year period, between 2018 and 2023. All studies (100 %) reported lymphedema as a consequence of mastectomy, despite the use of other adjunctive

interventions such as radiotherapy, chemotherapy, lymph node dissection, breast-conserving surgery, among others. The total sample reported across the articles was 299 adult women treated for breast cancer, with ages ranging from 48 to 68 years.

The most frequently used physiotherapeutic method for lymphedema treatment was complex decongestive therapy (CDT), reported in 88 % of the studies, with treatment durations ranging from 3 to 12 weeks, and 8 to 36 sessions. Among the studies that used CDT, 71 % combined it with other techniques such as negative pressure therapy (NPT), kinesiotaping, virtual reality (VR), proprioceptive neuromuscular facilitation (PNF), and high/low-pressure bandaging. Although results were heterogeneous, CDT demonstrated the greatest effect on mobility, pain reduction, and decreased sensation of heaviness. Meanwhile, virtual reality and NPT were effective in reducing the degree of lymphedema and improving upper-limb function. High-pressure bandaging significantly reduced the volume of the entire upper limb compared with low-pressure bandaging. Likewise, traditional physiotherapy using cryotherapy showed reductions in arm thickness and circumference.

Table 2. Characteristics of the included studies

Authors / Journal / Year	Country	Study type	Main objective	Sample (n) / Mean age (SD)	Physiotherapeutic methods used		Treatment time		Treatment used for cancer management	Intervention outcome
					IG	CG	IG	CG		
Lampinen et al. ⁽¹⁵⁾ /Arch Phys Med Rehabil/ 2021	USA	Randomized controlled pilot trial	To evaluate the effectiveness of negative-pressure massage compared with manual lymphatic drainage in women with chronic breast-cancer–related lymphedema	28 women IG: 64.24 ± 13.69 CG: 60.34 ± 10.65	CDT combined with NPT	CDT	NPT: 80–250 mmHg, 12 sessions of 60 minutes + compression bandaging 2–3 times/week	MLD: 12 sessions of 60 minutes + compression bandaging 2–3 times/week	- Mastectomy - Radiotherapy - Chemotherapy - BCS	NPT showed greater effectiveness than MLD regarding limb volume and the lymphedema index. Functional changes (DASH) were not significant in either group.
Gülbin Ergin et al. ⁽¹⁶⁾ /Lymphatic Research and Biology/2019	Turkey	Randomized controlled pilot trial	To investigate the effect of KT on anastomotic regions combined with CDT in patients with breast-cancer–related lymphedema	36 women IG: 58.44 ± 10.12 CG: 53.42 ± 7.69	CDT combined with KT	CDT	KT: 20 sessions, 45–60 minutes, 5×/week; KT left for ≤3 days before reapplication	CDT: 20 sessions, 45–60 minutes, 5×/week	- TM & RM - LN dissection - Lumpectomy - Radiotherapy - Chemotherapy	Limb volume decreased in both groups, with no significant differences. KT did not prove effective.
Atef et al. ⁽¹⁷⁾ /Jour of the Egypt Nat Cancer Inst/2020	Egypt	Quasi-randomized clinical trial	To compare the therapeutic efficacy of VR and PNF for lymphedema treatment and functional improvement in postmastectomy patients	30 women IG: 54.07 ± 8.28 CG: 53.07 ± 7.24	- VR - CDT	- PNF (D2 flexion diagonal) - CDT	VR: twice/week, 30-min VR + 30-min MLD + 20-min PN + home exercise program for 4 weeks	PNF: twice/week, 30-min PNF + 30-min MLD + 20-min PN + home exercises for 4 weeks	- MRM with axillary lymph-node dissection	VR group showed better reduction in lymphedema grade and upper-limb function compared with PNF.
Unubol et al. ⁽¹⁸⁾ /Journal Lymphology/ 2019	Turkey	Randomized clinical trial	To evaluate the effectiveness of KT on arm circumference, shoulder ROM, pain, and heaviness compared with CDT in acute breast-cancer lymphedema	39 women IG: 50.56 ± 6.45 CG: 54.82 ± 7.49	CDT + KT	CDT	KT applied every 3–4 days + exercises twice daily; weekly compression bandage for 4 weeks	CDT: exercises twice daily; compression bandaging 23 h/day + education + preventive measures	- MRM - LN dissection - BCS - Radiotherapy	Both groups showed reduced arm circumference, pain and heaviness, and increased shoulder ROM.
Askary et al. ⁽¹⁹⁾ /Journal Lymphology/ 2022	Egypt	Randomized clinical trial	To determine the effect of adding a novel cryotherapy modality to treatment of postmastectomy secondary lymphedema	40 women IG: 48.75 ± 5.73 CG: 50.2 ± 5.29	Traditional physiotherapy (MLD, PN, bandaging, breathing exercises, circulatory exercises, shoulder mobilization, ROM) Pulsed local cryotherapy	Traditional physiotherapy (MLD, PN, bandaging, breathing exercises, circulatory exercises, shoulder mobilization, ROM)	Cryotherapy applied distal→proximal for 5 minutes; traditional PT: MLD 15 min + PN 15 min, 3×/week for 12 weeks	Traditional PT: MLD 15 min + PN 15 min, 3×/week for 12 weeks	Mastectomy	Cryotherapy + traditional PT showed greater reduction in arm thickness and circumference.
Kostanoglu et al. ⁽²⁰⁾ /Niger J Clin Pract/ 2021	Turkey	Experimental study	To evaluate the effects of CDT on upper-limb function, ADLs, and quality of life in breast-cancer–related lymphedema patients	68 women 68.79 ± 5.39	CDT	Not applicable	CDT: compression bandaging 12 h/day + MLD 30 min twice/week + exercises twice/day for 6 weeks	Not applicable	- MRM - LN dissection - BCS - Lymph-node biopsy	CDT improved joint mobility, participation in vital and social activities in patients with grade 1 edema.
Yildiz et al. ⁽²¹⁾ /Support Care Cancer/ 2023	Turkey	Randomized clinical trial	To evaluate the effect of compressive bandaging at different pressures on skin and subcutaneous thickness in breast-cancer–related lymphedema	21 women IG: 61.18 ± 8.87 CG: 66.3 ± 12.16	CDT + low-pressure bandaging	CDT + high-pressure bandaging	Low-pressure bandage (20–30 mmHg) for 23 h/day + 30-min MLD + exercises, 2–3×/week for 4 weeks	High-pressure bandage (45–55 mmHg) for 23 h/day + 30-min MLD + exercises, 2–3×/week for 4 weeks	- MRM - Lumpectomy - Radiotherapy - Chemotherapy	High-pressure bandaging was more effective in reducing subcutaneous tissue thickness of the hand and arm.
Ozcan et al. ⁽²²⁾ /Niger J Clin Pract/2018	Turkey	Experimental study	To evaluate the effects of CDT on upper-limb function, pain intensity, and quality of life	37 women 53.5 ± 11.1	CDT	Not applicable	MLD 5×/week, 45–60 min; compression bandage 14–21 h/day for 3 weeks	Not applicable	- TM - MRM - BCS - Chemotherapy - Radiotherapy	Significant reduction in pain, heaviness, and improved shoulder mobility in affected upper limbs with CDT.

* IG: intervention group; CG: control group; CDT: complex decongestive therapy; MLD: manual lymphatic drainage; NPT: negative pressure therapy; PN: pneumatic compression; KT: kinesiotape; VR: virtual reality; PNF: proprioceptive neuromuscular facilitation; DASH: Disabilities of the Arm, Shoulder and Hand scale; ROM: range of motion; TM: total mastectomy; RM: radical mastectomy; MRM: modified radical mastectomy; BCS: breast-conserving surgery; LN: lymph-node dissection.

DISCUSSION

The aim of this scoping review was to gather and interpret recent evidence on the physiotherapeutic methods currently used for the management of postmastectomy lymphedema. Our results show that 88 % of the included studies used CDT as the main method in breast cancer survivors. This method consists of two phases: Phase 1 (intensive phase), which focuses on mobilizing accumulated lymph to reduce lymphedema volume through skin care, therapeutic exercises, manual lymphatic drainage (MLD), and compression bandaging, and phase 2 (maintenance phase), which focuses on preserving and maximizing the results obtained in Phase 1 through skin care, education, exercises, self-administered lymphatic drainage, and compression garments⁽²³⁾. CDT was established as a therapeutic approach in the 1970s; however, it was not until the 1990s that it began to be incorporated as a fundamental strategy in lymphedema management training programs⁽²³⁾.

Today, CDT is considered the gold standard for lymphedema treatment and is endorsed by the International Society of Lymphology⁽²⁴⁻²⁶⁾. This technique has proven effective in Phase 1 of lymphedema. Notably, according to Michopoulos et al.⁽²⁷⁾, proper application of CDT in this first phase ensures a significant reduction in lymphedema ($p < 0.001$), which facilitates success in Phase 2. In line with this, Borman et al.⁽²⁸⁾ demonstrated that CDT significantly reduced limb volume, improving both functionality and quality of life, emphasizing that treatment success is influenced by the stage and severity of lymphedema, with greater effectiveness in early stages.

The International Society of Lymphology establishes parameters for stratifying lymphedema severity and recommends physiotherapy-based adjunct approaches such as CDT⁽²⁶⁾. In our review, 57 % of the studies followed these guidelines to classify lymphedema and apply CDT; however, our findings reveal divergences in how CDT was applied, including the number of recommended sessions, duration of compression bandaging (ranging from 12, 21, to 23 hours), use of compression garments (15 to 20 minutes), duration of manual lymphatic drainage (15, 30, or 60 minutes), and weekly frequency (3, 5, or 7 days per week). Therefore, we concur with the literature suggesting that although CDT is the most widely used and effective method, there is a need to develop protocols that standardize the intervention and facilitate implementation⁽²⁹⁾.

Our review also highlighted studies combining CDT with other methods, such as virtual reality. This combination was effective in reducing lymphedema severity and improving upper-limb function. These findings align with those reported by Aguirre-Carvajal et al.⁽³⁰⁾ and Zasadzka et al.⁽³¹⁾, who also demonstrated that physiotherapy based on virtual reality in postmastectomy patients facilitated reintegration into daily activities, improved physical function, emotional well-being, and quality of life, and enhanced treatment adherence. On the other hand, the application of PNF did not show significant improvements in lymphedema reduction, even when combined with CDT. These results are consistent with Rodrigues-Oliveira et al.⁽³²⁾, who demonstrated that PNF did not generate significant changes in arm circumference ($p = 0.391$), scapular or grip strength ($p = 0.391$), or goniometry ($p = 0.5$) in breast cancer survivors.

However, CDT, like other techniques, presents certain limitations. One of them is that many patients are unable to fully adhere to the treatment. For example, compression garments have been reported as the most uncomfortable component, leading patients to remove them before the recommended time or even abandon their use as therapy progresses, thereby affecting expected treatment outcomes⁽³³⁾. For this reason, alternatives have been explored, such as the use of kinesiotape as a compressive tool, which has proven to be a safe method that allows women to continue their daily activities without discomfort, thus contributing to greater functionality of the affected upper limb⁽³⁴⁾. Although kinesiotape has been shown to increase lymphatic flow during passive exercises and improve treatment tolerance, Marotta et al.⁽³⁵⁾ reported in their study that no significant reduction in arm volume was observed, an outcome that aligns with our results.

In addition to CDT, negative pressure therapy (NPT) demonstrated greater effectiveness compared with manual lymphatic drainage (MLD) in reducing limb volume and lymphedema index. These results are supported by the study of Ersoy et al.⁽³⁶⁾, who compared MLD and NPT in patients with lower-limb lymphedema, concluding that both treatments reduced volume, pain, and discomfort; however, NPT showed superior effectiveness.

Alongside the previously described methods, our review mentions cryotherapy as an adjunctive method for lymphedema treatment. Cryotherapy has been widely used due to its beneficial effects

on reducing inflammation, relieving pain, and accelerating tissue recovery, among other effects. Based on this, it has become a useful modality for lymphedema management; in our results, this was described by Askary et al. ⁽¹⁹⁾, who demonstrated greater effectiveness in reducing the thickness and circumference of the affected arm when combining cryotherapy with traditional physiotherapy. This finding is consistent with Olmos, who indicated that increased temperature in the edematous arm is a frequently overlooked symptom that may “alter the course of edema and increase the risk of complications” ⁽³⁷⁾. In this sense, cryotherapy—whether through cold packs or cryomassage—produces an initial vasoconstrictive effect followed by reactive vasodilation, which positively impacts the lymphatic system, reducing lymphedema and the sensation of heaviness, while improving overall well-being and functionality ⁽³⁷⁾. It is noteworthy that the effects of cryotherapy last 15 to 20 minutes, and therefore a minimum of 30 sessions is recommended to achieve a lasting effect.

The results obtained represent an important disciplinary contribution for physiotherapists, as they not only confirm that CDT is the most widely used method for postmastectomy lymphedema treatment, but also describe significant clinical improvements such as decreased limb volume, reduced pain and heaviness, increased joint range of motion, improved upper-limb functionality, and greater participation in social activities. These findings are consistent with Kavak SK et al. ⁽³⁸⁾, who reported improvements in functional capacity, quality of life, and reduced frailty risk after 15 CDT sessions in postmastectomy women. Therefore, it is essential that physiotherapy professionals who treat this population understand this technique and incorporate it into their clinical approach, especially when considering the holistic model of intervention, which not only focuses on dysfunctions and impairments but also seeks to promote patients’ reintegration into society.

Among the main strengths of this review are the independent evaluation carried out by three reviewers, which reduced the risk of bias, as well as the exhaustive and structured search across multiple databases, ensuring broader coverage and analysis. Moreover, the homogeneity of the results and the high proportion (75 %) of randomized or quasi-randomized controlled trials with similar sample sizes (21-40 patients) reinforced the scientific robustness of this study, providing high-quality evidence supporting the therapeutic effectiveness of various interventions

for lymphedema treatment. This provides consistency to our findings, making them replicable and highly valuable in the ongoing construction of solid scientific knowledge.

Some limitations must also be acknowledged, including the small sample sizes in the included studies and the presence of additional adjuvant therapies for breast cancer treatment, such as chemotherapy or radiotherapy, which made it difficult to attribute lymphedema exclusively to mastectomy. Therefore, our results and conclusions should be interpreted with caution.

Conclusions

The reviewed studies highlight the key role of physiotherapists in the treatment of postmastectomy lymphedema through various therapeutic methods. CDT stands out as the most widely used intervention, both alone and in combination with other techniques. Likewise, NPT and cryotherapy have demonstrated effectiveness in improving this condition. Nonetheless, most of the analyzed studies were conducted in a specific geographical region, underscoring the need for research in other populations with different sociodemographic characteristics, in order to determine whether these variables influence the effectiveness of interventions and contribute to a more comprehensive and effective approach to lymphedema management.



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Authorship contribution

NNMM: conceptualization, methodology, data curation, and writing—original draft.

JKPL: conceptualization, methodology, data curation, and writing—original draft.

MML: conceptualization, methodology, data curation, and writing—original draft.

FA-C: investigation, writing - final review of the article, funding acquisition, and supervision.

HAP-S: conceptualization, methodology, investigation, supervision, project administration, material resources, software, and writing - final review of the article.

Funding sources

The research was self-funded.

Conflict of interest statement

The authors declare no conflicts of interest.