

# The role of skin therapists in the Netherlands — maintaining skin health in lymphoedema

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## Key words

Evidence-based practice, lymphoedema, skin health, skin therapy

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In 1995, a multidisciplinary lymphoedema working group was formed in the Nij Smellinghe Hospital in Drachten, the Netherlands. The motivation behind its launch was a need for improvement in the diagnostics and treatment for lymphoedema. The group included professionals in gynaecology, urology, dermatology, and surgery, as well as physiotherapists, skin therapists, nurse practitioners, compression specialists and dietitians (Damstra, 2007). Its aim was to increase interest in and improve management of lymphoedema throughout the Netherlands.

The continued involvement of multidisciplinary advocates from across the Netherlands has ensured growth in knowledge and awareness of lymphoedema in the country. The National Lymphoedema Network was created in 2000 to provide online information about all aspects of lymphoedema for therapists, clinicians and patients. Meanwhile, a recent collaboration with the UK-based International Lymphoedema

## Abstract

**Background:** Skin therapy is an allied health profession in the Netherlands and is involved in the diagnostics, treatment and management of lymphoedema. A systematic review of five of the skin therapeutic interventions for arm lymphoedema was conducted and these findings were included in a statement document completed in 2011. **Methods:** A systematic literature search was completed examining the evidence of the effectiveness of different interventions for the treatment of women with secondary arm lymphoedema caused by the treatment of breast carcinoma. The five interventions that were investigated were complete decongestive therapy (CDT), intermittent pneumatic compression therapy, multi-layer, short-stretch bandaging, compression garments and manual lymphatic drainage. **Conclusion:** Literature evidence was found for all five interventions with the highest evidence of effectiveness for the benefit of CDT for the treatment of lymphoedema patients.

Framework, has further contributed to their collective knowledge base.

## Skin therapy

One of the professions represented in the multidisciplinary lymphoedema working group is skin therapists. Skin therapy in the Netherlands was established some 35 years ago and has grown exponentially, with over 600 active members in the country. The official body is called the Dutch Association of Skin Therapists or Nederlandse Vereniging van Huidtherapeuten (NVH).

Skin therapists are involved in the diagnosis, treatment and management of lymphoedema and other oedemas. Alongside oedema prevention and management, skin therapists treat, manage and attempt to cure a wide range of skin disorders, such as severe acne, scars, hirsutism, pigmentation disorders, vascular disorders and wounds.

The discipline of skin therapy was developed to function in multidisciplinary

settings, to complement the work of the medical specialist and deliver ongoing patient care while working in private settings, hospitals or healthcare centres.

At present, to become a skin therapist one must undertake a 4-year Bachelor of Health Degree course at the University of Applied Science in Utrecht or The Hague. The holder of this title and the associated qualification is recognised by Dutch law as being an 'allied health professional'.

A skin therapist must be registered and can work in primary and secondary healthcare throughout the Netherlands. Those seeking treatment are referred by general practitioners (33%) dermatologists (24%), plastic surgeons/oncologists (7%), physiotherapists (2%) and a range of other groups (34% [Vught et al, 2005]).

The Dutch Association of Skin Therapists has developed a complete oedema therapy consensus (NVH, 2009) that acts as a guideline for skin therapists. All interventions

**Table 1.** Literature search of five skin therapeutical interventions for the treatment of arm lymphoedema.

Introduction	Complete decongestive therapy (CDT [International Society of Lymphology, 2009])	Intermittent pneumatic compression therapy (IPC)	Multi-layer short stretch bandaging	Compression garments	Manual lymphatic drainage (MLD)
Outcome	<ul style="list-style-type: none"> <li>110 documents were found and based on title and abstract, 35 were selected.</li> <li>14 were eligible and evaluated on quality, of which 6 were accepted.</li> </ul>	<ul style="list-style-type: none"> <li>151 documents were found — 39 were selected on their title and abstract, while 16 full texts were evaluated on quality.</li> <li>8 of those were accepted (3 consensus documents, 3 systematic reviews, 2 RCTs).</li> </ul>	<ul style="list-style-type: none"> <li>140 documents were found relating to multi-layer, short-stretch bandaging. Based on title and abstract, 37 documents were selected.</li> <li>12 documents were selected on their quality by full text reviewing, 8 were accepted.</li> </ul>	<ul style="list-style-type: none"> <li>140 documents were found, of which 35 were selected based on title and abstract.</li> <li>Of these full texts, 14 were selected for quality, of which 6 were accepted.</li> </ul>	<ul style="list-style-type: none"> <li>302 documents were found relating to MLD, of which 27 were selected based on title and abstract. Of these full texts, 13 were categorised based on their qualities, resulting in 7 accepted documents.</li> </ul>
Results	<ul style="list-style-type: none"> <li>One random controlled trial (RCT) showed a statistical significance of the effect of CDT in subjective measurements, such as a reduction in pain and arm discomfort. An objectively measured arm volume reduction was evident in the CDT group.</li> <li>Two systematic reviews were included and volume reduction was statistically significant between groups.</li> <li>Three guidelines were included and the outcome of these show the preference for CDT but also the importance of these treatments being provided by qualified lymphoedema therapists.</li> </ul>	It was found that treatment with IPC gives an acute effect in the reduction of arm volume. However, a continuous reduction over time was not shown and it was found not to be a superior treatment over CDT.	The review shows that the level of evidence is high (level 1) for the use of multi-layer, short-stretch bandaging applied on the lymphoedema-affected arm.	A conclusion from selected consensus documents was that the use of compression garments is advised in the maintenance phase to prevent progression of the lymphoedema. It is not supported by the literature that compression garments alone reduce oedema. However, in conjunction with other reduction treatments, such as CDT and/or IPC, it is likely that compression garments are effective in stabilising the arm volume.	MLD on its own was not found to be statistically significant in reducing arm lymphoedema. However, there is no evidence that MLD negatively influences arm lymphoedema. MLD can be shown to improve emotional functioning, reducing sleep deprivation and ensuring a reduction of discomfort, pain and feelings of heaviness. Despite there being no literature supporting MLD on its own, it is evident that MLD is successful in reducing arm lymphoedema when used in conjunction with interventions, such as CDT.
Recommendation	A combination of interventions, such as provided in CDT, provides a reduction in arm lymphoedema, both subjectively and objectively measured.	IPC devices with multiple compartments are likely to be more effective than single compartment devices.	The use of multi-layer, short-stretch bandaging is recommended as it reduces arm volume within a period of 2 hours to 4 weeks.	To maintain stability of arm volume, the use of garments is recommended after intensive reduction treatment (such as bandaging and CDT).	MLD within another intervention seemed to make a minor difference, but no strong objective evidence level proved MLD reduces volume. Anecdotally, MLD has been found to have a positive effect.

described in the consensus document should be within the skin therapist's competency and expertise. The information provided in the document was aimed at preventing oedema formation, stabilising pre-existing oedema and preventing or delaying the onset of chronic oedema (i.e. lymphoedema, venous oedema, and lipoedema).

### Evidence-based statements

To substantiate the benefits of lymphoedema intervention made by Dutch skin therapists, the Dutch Institute of Allied Health Care (NPi), together with the oedema working group of the NVH, conducted a systematic review of the effectiveness of five selected skin therapeutical interventions for the treatment of secondary arm lymphoedema after breast cancer in 2011 (*Table 1*).

Objectives of the review included:

- Examining the evidence of the

effectiveness of different interventions for the treatment of women with secondary arm lymphoedema caused by the treatment of breast carcinoma, i.e. what is the level of effectiveness of the intervention based on an individual's anatomical functioning and quality of life?

- Determining the indications and contraindications of treatment.
- Determining which complications or negative effects these interventions can have.

A variety of databases were consulted including: the Cochrane Library, Pubmed, EMBASE, CINAHL and PEDro. Consensus documents were included from national and international databases and selected on quality using the AGREE instrument (Appraisal of Guidelines for Research and Evaluation), which is an internationally

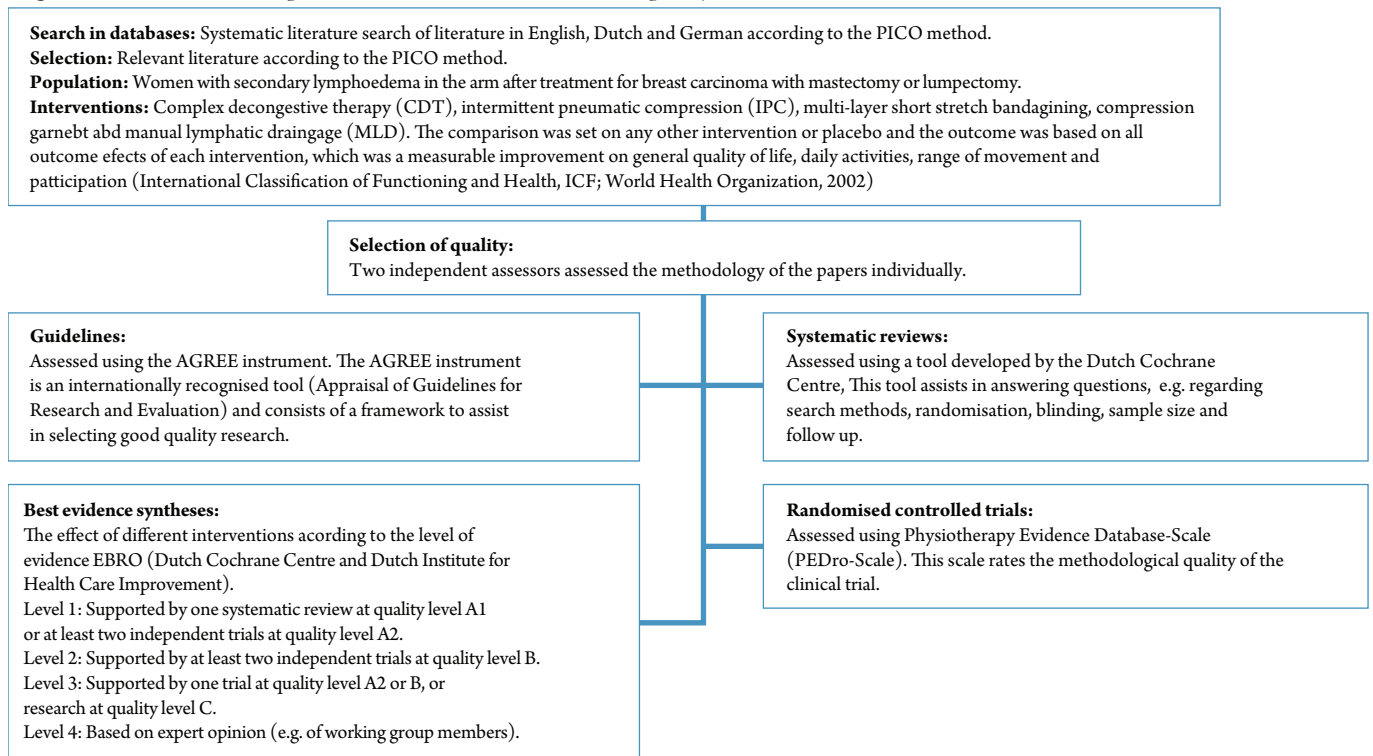
recognised tool and consists of a framework to assist in selecting high-quality research (*Figure 1*).

Most literature focused on five common treatments for lymphoedema (*Table 1*). Therefore, these treatments were selected for the systematic literature review. The findings were enclosed in a statement document including recommendations and this acts as a best evidence-based practice for the treatment of patients with arm lymphoedema. These statements were published in 2011 (see 'Acknowledgments')

### Skin therapy interventions for oedema care — skin integrity

There are other important skin therapy interventions for lymphoedema treatment that have not been reviewed due to lack of high-quality evidence. However, skin therapeutical interventions for the

**Figure 1.** Literature search process and tools used to select the quality of literature.



treatment of lymphoedema incorporates a broad approach of treatments. These include interventions such as patient and general healthcare education. Self-management is also a key intervention, including deep-breathing exercises, mild general exercises and dietary suggestions, skin care and hygiene, scar tissue treatment, lymph taping (also known as kinesio taping) and measurements for other tools, such as breast prostheses and bras, as well as other compression materials measured specifically for the patient's need.

However, an invaluable quality of the skin therapy intervention in oedema care is the the maintenance of good skin integrity. Also educated in complex wound management techniques, the skin therapist will ensure that best practice wound management is applied.

### The positive effect of treatment combination

The effectiveness of combined interventions is supported by the literature (Warren et al, 2007; Oremus et al, 2010; International Society of Lymphology, 2013).

Since the release of the evidence-based statements in 2011, the literature has changed and important scientific research results have emerged regarding the management of lymphoedema.

Surgical treatments, such as liposuction and lymphovenous anastomosis, are improving and long-term results look promising (International Lymphoedema Framework, 2012; International Society of Lymphology, 2013). Also there have been improvements in imaging techniques — such as indocyanine green (a fluorescence contrast agent) — which ensure improved visibility of the lymphatics and enhances our understanding of its superficial architecture, dynamics and response to treatment (Bourgeois, 2011; Suami et al, 2012).

### Conclusion

The continuous revision of lymphoedema consensus and best practice documents is integral in improving treatment outcomes. However, the patient as an individual must not be forgotten and a case-by-case approach is essential.

Skin therapists must continue to have a holistic approach in their care of lymphoedema patients. The achievements of the profession over the past 35 years should be proudly celebrated.

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