

# A pilot study to observe the use of a portable Pneumatic compression pump as part of self-management in swollen legs

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<b>Registration date</b> 06/06/2025	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 06/06/2025	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

The study aims to evaluate the use of the Haddenham Lymphflow Go device for managing lymphoedema or chronic venous insufficiency. This device helps reduce swelling in the limbs. It has been tested on healthy adults and is now being tested on people with these conditions to see if it is safe and effective.

### Who can participate?

People can participate if they have a confirmed diagnosis of primary or secondary lymphoedema, oedema following trauma and/or sports injuries, post immobilization oedema, venous insufficiency, treatment and assistance in healing stasis dermatitis, venous stasis ulcers or arterial and diabetic ulcers, or phlebolymphoedema. They must also have the capacity to provide informed consent and follow instructions for using the device as stated in the instructions for use (IFU). Additionally, participants need to have good mobility, allowing them to lift their legs when sitting and safely position themselves on a treatment couch. Lastly, their BMI should be less than 32 kg/m<sup>2</sup>.

### What does the study involve?

Participants will attend an initial clinic appointment where they will read the Participant Information Sheet, sign a consent form, have their legs measured and photographed, complete a quality of life questionnaire, and use the device for one treatment cycle. They will then take the device home and use it daily for two weeks. After two weeks, they will return for a final appointment to repeat the measurements and return the device.

### What are the possible benefits and risks of participating?

Potential benefits include improvement or maintenance of the condition. Risks include discomfort or pain from using the device, or device failure. Proper training and instructions will be provided to minimize these risks. If discomfort occurs, participants should stop using the device and contact the study team.

Where is the study run from?  
The Lighter Touch, a private clinic in Malvern (UK)

When is the study starting and how long is it expected to run for?  
November 2024 to September 2025

Who is funding the study?  
Haddenham Healthcare Ltd. (UK)

Who is the main contact?  
Natalie Phillips, MSc Lymphoedema RN, natalie@hadhealth.com

## Contact information

**Type(s)**  
Public, Scientific, Principal investigator

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## Additional identifiers

**Clinical Trials Information System (CTIS)**  
Nil known

**Integrated Research Application System (IRAS)**  
355616

**ClinicalTrials.gov (NCT)**  
Nil known

**Protocol serial number**  
Nil known

## Study information

**Scientific Title**

A pilot evaluation on the safety and efficacy of the Haddenham Lymphflow Go pneumatic compression device in patients with lymphoedema and chronic venous insufficiency as part of self management.

### **Study objectives**

This small pilot study aims to demonstrate safety and efficacy of the Lymphflow Go in a small cohort of patients, with and emphasis placed on the portability and usability of the device and whether the device is a useful adjunct to self-care which in turn will reduce the burden of self-management on the patient as visits to the clinical settings can be reduced, furthermore research has shown a reduction in infections associated with lymphoedema, which in turn reduces the burden on the health service.

### **Ethics approval required**

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### **Ethics approval(s)**

approved 14/05/2025, North of Scotland Research Ethics Committee 1 (Summerfield House, 2 Eday Road, Aberdeen, AB15 6RE, United Kingdom; +44 1224558458; gram.nosres@nhs.scot), ref: 25/NS/0042

### **Study design**

Research approach will utilise a mixed methods approach to collect data on both the effect of the intervention and the ease of use for the participant

### **Primary study design**

Observational

### **Study type(s)**

Safety, Efficacy

### **Health condition(s) or problem(s) studied**

Lymphoedema and chronic venous insufficiency

### **Interventions**

Day 1- Initial Appointment

During the initial appointment (Day 1) participant will be asked to expose their legs for a series of measurements/procedures.

These measurements/procedures will consist of the following:

1. Limb volume measurements using a tape measure, to take circumference measurements of your legs at 4cm intervals, these will be documented on a spreadsheet which has formulas to calculate the overall limb volume measurements.
2. We will use a handheld device called a Lymph Scanner, which is a small probe placed onto the skin at several points to document overall tissue fluid content.
3. Photographs of the participants legs will be taken by digital camera and saved on an encrypted laptop. These will be of the limbs only, photographs of the face or any identifiers will not be obtained.
4. Participants will be asked to complete a quality of life questionnaire called LymQol.

Participants will be asked to confirm they are not pregnant, either by confirming medical history or by performing a pregnancy test. They will then be asked to read the instructions for use, apply the correctly sized device and complete one treatment cycle. The participant will then be asked to take the device home with them.

#### **Day 2 to Day 13- Home based Treatment**

Use the device at home, every day for a period of 2 weeks.

They should continue with their normal self-management routine during this 2-week period. At the end of the home-based treatment period, they will return to the site.

#### **Day 14- Final Appointment**

The participant will return to the site for a final appointment (Day 14). During the visit, they will use the device for the final time and return the device to the investigators where measurements that were taken at the initial visit will be repeated.

### **Intervention Type**

Device

### **Phase**

Phase II

### **Drug/device/biological/vaccine name(s)**

Haddenham Lymphflow Go pneumatic compression device

### **Primary outcome(s)**

1. Limb Volume measurements taken using a tape measure and inputted into LIMBSTAT at baseline and day 14
2. Percentage water content taken using the Delfin® Lymph Scanner® at set points throughout the limb taken at baseline and day 14

### **Key secondary outcome(s)**

1. Quality of life questionnaire using LYMQOL taken at baseline and day 14
2. Feedback questionnaire to be completed at the end of the study on day 14

### **Completion date**

16/09/2025

## **Eligibility**

### **Key inclusion criteria**

1. Confirmed diagnosis of Primary/Secondary Lymphoedema, Oedema following trauma and/or sports injuries, Post Immobilization Oedema, Venous Insufficiency, Treatment and Assistance in Healing Stasis Dermatitis, Venous, Stasis Ulcers or Arterial and Diabetic Ulcers, Phlebolymphoedema.
2. Have capacity to provide informed consent and follow instructions for using the device as stated in the instructions for use (IFU).
3. Have good mobility which allows to lift legs when sitting and safely position on a treatment couch.
4. BMI less than 32 kg/m<sup>2</sup>.

### **Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Lower age limit**

18 years

**Upper age limit**

90 years

**Sex**

All

**Key exclusion criteria**

1. Aged under 18 years old.
2. Do not have capacity to provide informed consent or follow the instructions in the IFU.
3. Have limited mobility which means participants are unable to lift their legs or safely position themselves on a treatment couch.
4. BMI over 32 kg/m<sup>2</sup>.
5. History or active cardiovascular diseases: Heart Failure, Acute Venous Disease, Severe Peripheral Artery Disease
6. Active Skin or Limb Infection/Inflammatory Disease
7. Any circumstance where increased lymphatic or venous return is undesirable.
8. Pregnancy

**Date of first enrolment**

02/06/2025

**Date of final enrolment**

02/09/2025

## **Locations**

**Countries of recruitment**

United Kingdom

England

**Study participating centre**

**The Lighter Touch**

64 Worcester Road

Great Malvern

United Kingdom

WR14 4AB

# Sponsor information

## Organisation

Louis Wakelin Haddenham Healthcare Ltd

## Funder(s)

### Funder type

Industry

### Funder Name

Haddenham Healthcare Ltd

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study will be published as a supplement to the results publication

### IPD sharing plan summary

Published as a supplement to the results publication

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes