

# VenUS IV: compression hosiery versus compression bandaging in the treatment of venous leg ulcers

<b>Submission date</b> 03/03/2009	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 17/03/2009	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 26/05/2016	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Venous leg ulcers are common chronic wounds that are painful and reduce quality of life. Treatment of these wounds costs the NHS millions of pounds per year. Having a venous leg ulcer is normally a sign of underlying problems in the leg veins. If these veins are damaged or blocked in some way, blood flow is affected which in turn may lead to skin breakdown and impaired healing. Compression bandaging is known to be effective for healing venous leg ulcers, but this technique requires skill, and bandages can be dangerous if they are too tight. The bandages also take time to apply and often require changing by a nurse once or twice a week. Finally, some patients do not like wearing the bandages because they find them unattractive, cumbersome and uncomfortable. An alternative to bandaging is compression hosiery (below knee stockings), which requires less skill to apply than bandages, can be applied by patients and may be more comfortable for them. However whilst stockings are available on the NHS, they are not currently widely used as a treatment for leg ulcers as they are unproven. The aim of this study is to compare compression bandaging with compression hosiery in the treatment of venous leg ulcers.

### Who can participate?

Patients aged 18 or over with at least one venous leg ulcer

### What does the study involve?

Participants are randomly allocated to be treated with either compression hosiery or compression bandaging. Treatment continues for as long as required. We collect data on how quickly ulcers heal when they are treated with either bandages or hosiery, as this is obviously an important outcome for patients. We also collect data to investigate the cost effectiveness of both treatments and adverse events to monitor patient safety.

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

Not provided at time of registration

### Where is the study run from?

University of York (UK)

When is the study starting and how long is it expected to run for?  
May 2009 to April 2012

Who is funding the study?  
NIHR Health Technology Assessment Programme - HTA (UK)

Who is the main contact?  
Dr Jo Dumville  
jd34@york.ac.uk

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Jo Dumville

**Contact details**  
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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
HTA 07/60/26

## Study information

**Scientific Title**  
VenUS IV: a randomised controlled trial of compression hosiery versus compression bandaging in the treatment of venous leg ulcers

**Acronym**  
VenUS IV (Venous leg Ulcer Study IV)

**Study objectives**

Venous leg ulcers are treated with compression to promote healing. An evidence-based compression treatment is 4-layer bandaging however, compression hosiery may offer advantages over this treatment. The trial aims to assess the clinical and cost effectiveness of compression hosiery compared with 4 layer bandaging in terms of ulcer healing and quality of life in venous leg ulcer patients.

More details can be found at: <http://www.nets.nihr.ac.uk/projects/hta/076026>

Protocol can be found at: [http://www.nets.nihr.ac.uk/\\_\\_data/assets/pdf\\_file/0004/51907/PRO-07-60-26.pdf](http://www.nets.nihr.ac.uk/__data/assets/pdf_file/0004/51907/PRO-07-60-26.pdf)

### **Ethics approval required**

Old ethics approval format

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

Not provided at time of registration – submission pending

### **Study design**

Pragmatic two-armed parallel randomised controlled multi-centre trial

### **Primary study design**

Interventional

### **Secondary study design**

Randomised parallel trial

### **Study setting(s)**

GP practice

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

Treatment

### **Participant information sheet**

Not available in web format, please use the contact details below to request a patient information sheet

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

Venous leg ulcers

### **Interventions**

The participants will be randomly allocated to the following two arms (randomisation ratio 1:1):

Intervention group: Compression hosiery

Control group: Four-layer bandaging

Interventions will be received for as long as required i.e. until healing or cessation of trial treatment for another reason. Total duration of follow-up is 12 months.

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome measure**

Time to ulcer healing. Total duration of follow-up: 12 months.

### **Secondary outcome measures**

1. Cost of treatments. Total duration of follow-up: 12 months.
2. Quality of life (QOL), assessed by SF-12® Health Survey, Euroqol EQ-5D, and Venous Insufficiency Epidemiological and Economic Study (VEINES)-QOL questionnaire every 3 months for 12 months
3. Patient concordance with treatment. Any changes to treatment will be recorded by nurses throughout the trial (Total duration of follow-up: 12 months). At 1 month, a postal questionnaire will be sent to participants in the intervention group to collect data on how often they wear the hosiery.
4. Recurrence. Total duration of follow-up: 12 months.

### **Overall study start date**

01/05/2009

### **Completion date**

30/04/2012

## **Eligibility**

### **Key inclusion criteria**

1. Both males and females, aged 18 years or over
2. Patient has at least one venous leg ulcer\*
3. Patient has an ankle brachial pressure index (ABPI) equal to or greater than 0.8 and <1.2 (taken within last 3 months)
4. Patient is able and willing to tolerate high compression

\*For the purpose of this study a leg ulcer will be considered as any break in the skin on the leg (below the knee and above the malleoli) which as either (a) been present for more than six weeks or (b) occurs in a person with a history of venous leg ulceration. A participant will be considered to have a purely venous leg ulcer where clinically no other aetiology is suspected. Clinical history must be considered and the study participant must have an ABPI of equal to or greater than 0.8. The ulcer must also be venous in appearance (i.e. moist, shallow, irregular shape, venous eczema, ankle oedema).

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

Patient

### **Age group**

Adult

### **Lower age limit**

18 Years

### **Sex**

Both

**Target number of participants**

489

**Key exclusion criteria**

1. Leg ulcer of non-venous aetiology (i.e. arterial)
2. Wound exudate levels too high for the use of compression hosiery (nurse judgement)
3. Patient has very bony prominences at risk of pressure damage
4. Patients are unable or do not wish to consent to participation in the trial
5. Patients are currently in another study evaluating treatments for their leg ulcer
6. Known allergy to any trial product
7. Patient has previously been in this trial
8. People with diabetes mellitus whose blood sugar not well controlled (HbA1c greater than 10% taken within the last three months). (Patients with well controlled diabetes HbA1c less than or equal to 10% are eligible for the trial)

**Date of first enrolment**

01/05/2009

**Date of final enrolment**

30/04/2012

**Locations****Countries of recruitment**

England

United Kingdom

**Study participating centre**

University of York

York

United Kingdom

YO10 5DD

**Sponsor information****Organisation**

University of York (UK)

**Sponsor details**

c/o Sue Final

Innovation Centre

York

United Kingdom

YO10 5DD

-  
smf3@york.ac.uk

**Sponsor type**  
University/education

**Website**  
<http://www.york.ac.uk/>

**ROR**  
<https://ror.org/04m01e293>

## **Funder(s)**

**Funder type**  
Government

**Funder Name**  
Health Technology Assessment Programme

**Alternative Name(s)**  
NIHR Health Technology Assessment Programme, HTA

**Funding Body Type**  
Government organisation

**Funding Body Subtype**  
National government

**Location**  
United Kingdom

## **Results and Publications**

**Publication and dissemination plan**  
Not provided at time of registration

**Intention to publish date**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**  
Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	08/03/2014		Yes	No
<a href="#">Results article</a>	results	01/09/2014		Yes	No
<a href="#">Results article</a>	results	11/08/2015		Yes	No