

# Is Nordic Pole Walking (NWP) more effective than normal walking in intermittent claudication patients?

<b>Submission date</b>	<b>Recruitment status</b>	<input type="checkbox"/> Prospectively registered
20/10/2011	No longer recruiting	<input type="checkbox"/> Protocol
<b>Registration date</b>	<b>Overall study status</b>	<input type="checkbox"/> Statistical analysis plan
20/10/2011	Completed	<input checked="" type="checkbox"/> Results
<b>Last Edited</b>	<b>Condition category</b>	<input type="checkbox"/> Individual participant data
19/06/2014	Circulatory System	

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

Prof Jonathan Beard

### Contact details

Northern General Hospital  
Herries Road  
Sheffield  
United Kingdom  
S5 7AU  
+44 (0)114 243 4343  
Jonathan.d.beard@sth.nhs.uk

## Additional identifiers

### Protocol serial number

10781

## Study information

### Scientific Title

# Is Nordic Pole Walking more effective than normal walking in improving walking distance in patients with intermittent claudication? A prospective randomised study

## Acronym

NWP

## Study objectives

Patients with narrowed or blocked arteries in their legs, due to smoking and/or high cholesterol, often suffer from cramping pains in their calf muscles when they walk. This is due to poor blood flow and is called intermittent claudication. Regular exercise can help and supervised classes in a gym provide the most benefit. However, these classes are expensive to run, take time to work and many patients stop coming after a while. Walking with cross country ski (Nordic) poles is a very popular activity in Scandinavia as they improve fitness.

A recent study in Sheffield has found that Nordic Pole Walking immediately helps patients with Intermittent Claudication to walk further with less pain, without any feeling any more tired. This second study will look at whether this immediate benefit is improved by the minimally supervised use of poles over 12 weeks. Patients with intermittent claudication will be recruited from the vascular outpatient clinics after being provided with information about the study and agreeing to participate. Patients will be randomly allocated to a group who use poles or who receive normal advice to exercise regularly. We will use weekly diaries and pedometers to record the amount of exercise taken. Patients will be invited to attend the gym every month to see how much their walking and fitness has improved.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

National Research Ethics Service Committee Yorkshire and the Humber South Yorkshire ref: 11/YH/0100

## Study design

Interventional, randomised controlled trial

## Primary study design

Interventional

## Study type(s)

Treatment

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

Cardiovascular disease

## Interventions

The only intervention we use is a pair of walking poles..randomly allocated to each patient. Each patient is followed for 12 weeks.

Ankle Brachial Pressure Index (ABPI) measured before and after each visit:

1. Heart Rate
2. Post test heart rate taken every 2 mins until back to resting state.

Research nurse gives patient information sheet. They fill in a tear off strip and return to investigators if they are happy with it. Last visit, base line tests again. Patient diary/ pedometer check, weeks 4,8,12. Phone call to arrange visit 0, Investigator phones patient to arrange initial visit for consent and base line data and tests. results notification, Written thanks to patients giving them the results in lay language. Supervision Phonecalls, Weeks 1,2,3,5,6,7,9,10,11.; Visit 0, Base line tests:

Weight, height, resting heart rate, ABPI using Doppler, max walking distance, claudication distance, Borg pain scale, and Borg RPE.

#### **Consent**

Teach NWP technique

Familiarisation with heart rate monitor strap and watch and pedometer.; Walking test with NWP, Same as walking test. Walking tests, Weeks 0,4,8,12. HR, ABPI, CD, MWD, Borg Pain and RPE

#### **Intervention Type**

Other

#### **Phase**

Not Applicable

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

Is the technique of using NPW is more effective in improving walking distance than normal walking?

Measured on each patient at week 0 and 12. At week 4, and 8 we will also be recording the patient's progress using the primary outcome measures, distance walked, level of perceived exertion and level of pain at CD and MWD.

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

Compare compliance, the cardiovascular training effect, ABPI and any weight loss.

Measured on each patient at week 0 and 12. At week 4, and 8 we will also be recording the patient's progress using the primary outcome measures, distance walked, level of perceived exertion and level of pain at CD and MWD.

#### **Completion date**

30/09/2012

## **Eligibility**

#### **Key inclusion criteria**

1. Patients must have stable intermittent claudication due to peripheral arterial disease of more than 6/12 duration of symptoms
2. A resting ABPI of <0.9, which is unsuitable for revascularisation
3. Patient has not had a revascularisation procedure in the last six months
4. Level(s) of disease and unsuitability for revascularisation will have been previously determined by duplex ultrasound and/or magnetic resonance (MR) arteriography.
5. Patients must not have other conditions that could limit their walking distance (e.g.

breathlessness or severe osteoarthritis) or the ability to hold poles

6. Male and female participants

7. Aged between 50 - 100 years

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

Patient

#### **Healthy volunteers allowed**

No

#### **Age group**

Adult

#### **Sex**

All

#### **Key exclusion criteria**

1. Patients with intermittent claudication due to peripheral arterial disease of less than 6/12 duration of symptoms
2. A resting ABPI of >0.9, which is suitable for revascularisation
3. Patient has had a revascularisation procedure in the last six months
4. Level(s) of disease and unsuitability for revascularisation will have been previously determined by duplex ultrasound and/or MR arteriography
5. Patients with other conditions that could limit their walking distance (e.g. breathlessness or severe osteoarthritis) or problems using their hands which might affect the ability to hold poles

#### **Date of first enrolment**

01/10/2011

#### **Date of final enrolment**

30/09/2012

## **Locations**

#### **Countries of recruitment**

United Kingdom

England

#### **Study participating centre**

**Northern General Hospital**

Sheffield

United Kingdom

S5 7AU

## **Sponsor information**

**Organisation**

Sheffield Teaching Hospitals NHS Trust (UK)

**ROR**

<https://ror.org/018hjpz25>

**Funder(s)****Funder type**

Charity

**Funder Name**

British Heart Foundation (UK)

**Alternative Name(s)**

the\_bhf, The British Heart Foundation, BHF

**Funding Body Type**

Private sector organisation

**Funding Body Subtype**

Trusts, charities, foundations (both public and private)

**Location**

United Kingdom

**Funder Name**

Private Physiotherapy Educational Foundation (UK)

**Funder Name**

Sheffield Vascular Research Fund (UK)

**Results and Publications****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="#"><u>Results article</u></a>	results	01/06/2014		Yes	No
<a href="#"><u>Participant information sheet</u></a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes