

# Exercise training for the treatment of post-thrombotic syndrome: the EXPO pilot trial

<b>Submission date</b> 09/05/2008	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 09/05/2008	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 25/01/2011	<b>Condition category</b> Circulatory System	<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
MCT-82338

# Study information

## Scientific Title

Exercise training for the treatment of post-thrombotic syndrome: a multicentre, two-arm randomised controlled parallel trial

## Acronym

EXPO

## Study objectives

In our proposed pilot trial, we will randomise patients with post-thrombotic syndrome (PTS) to:

1. A six-month exercise training program designed to improve leg strength, leg endurance, leg flexibility and general cardiovascular fitness (Active Training), or
2. An Attention Control group

Our feasibility objectives are to assess levels of patient eligibility, consent, adherence and retention. Our scientific objectives are to obtain estimates of effect size associated with Active Training, by describing within-subject change over six months in quality of life (QOL), severity of PTS, calf strength, calf flexibility and exercise capacity (time-on-treadmill) in the Active Training and Attention Control groups. Our results will inform the design of a large, multicentre trial of exercise training to treat PTS.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Research Ethics Committee of the Sir Mortimer B. Davis Jewish General Hospital (Canada) approved on the 13th October 2006 (ref: 06-080).

## Study design

Multicentre, two-arm randomised parallel trial with outcome assessor and data analyst blinding

## Primary study design

Interventional

## Secondary study design

Randomised controlled trial

## Study setting(s)

Hospital

## Study type(s)

Treatment

## Participant information sheet

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

Post-thrombotic syndrome

## Interventions

**Active Training:**

Six-month exercise training program designed to improve leg strength, leg endurance, leg flexibility and general cardiovascular fitness.

**Attention Control:**

Six-month program consisting of:

1. Standardised one-hour education session on PTS (what PTS is, why patients get it, how to manage it; exercise will be kept 'neutral', i.e., not specifically addressed) given by a trained thrombosis nurse-educator not involved with the assessment of study outcomes, and
2. Monthly phone contacts by the same thrombosis nurse to 'check in' with the patient, ask about their PTS and provide support

**Contact for public queries:**

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**Intervention Type**

Other

**Phase**

Not Specified

**Primary outcome measure**

Feasibility indicators (measured throughout trial):

1. Proportion of patients screened who are eligible to participate in the trial
2. Proportion of eligible patients who consent to participate in the trial
3. Proportion of subjects who are adherent with the intervention
4. Proportion of subjects who complete the trial

**Secondary outcome measures**

1. Venous disease-specific, measured at baseline, 3 months and 6 months
2. Generic QOL, measured at baseline, 3 months and 6 months
3. Severity of PTS (Villalta PTS Scale), measured at baseline, 3 months and 6 months
4. Leg (triceps surae) strength, measured at baseline, 3 months and 6 months
5. Leg flexibility, measured at baseline, 3 months and 6 months
6. Time-on-treadmill, measured at pre-randomisation and 6 months

**Overall study start date**

01/03/2006

**Completion date**

30/09/2008

**Eligibility**

**Key inclusion criteria**

1. Aged 18 - 75 years, either sex
2. Previous unilateral deep vein thrombosis (DVT) diagnosed using standardised ultrasound or venographic criteria
3. PTS in same leg as previous DVT (Villalta PTS Scale score greater than 4)

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

44

**Key exclusion criteria**

1. Acute DVT within previous six months
2. Contra-indications to exercise training, e.g. arthritis of lower extremities, angina, symptomatic chronic obstructive lung disease, congestive heart failure, severe claudication, poor balance
3. Expected lifespan less than six months or general medical condition that would make study unfeasible, e.g. advanced cancer or cardiopulmonary disease
4. Pregnancy or lactation
5. Open venous leg ulcer
6. Not conversant in either English or French
7. Geographic inaccessibility which precludes participation
8. Unwilling or unable to provide signed informed consent
9. Screening (i.e. pre-randomisation) exercise stress test (Bruce Ramp protocol) demonstrating uncontrolled hypertension, ischaemia, or arrhythmia (such patients will be referred for appropriate medical evaluation)

**Date of first enrolment**

01/03/2006

**Date of final enrolment**

30/09/2008

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

Canada

**Study participating centre**

**Sir Mortimer B. Davis Jewish General Hospital**  
Montreal, Quebec  
Canada  
H3T 1E2

## Sponsor information

### Organisation

Sir Mortimer B. Davis Jewish General Hospital (Hôpital Général Juif Sir Mortimer B. Davis)  
(Canada)

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### Sponsor type

Hospital/treatment centre

### Website

<http://www.jgh.ca>

### ROR

<https://ror.org/056jjra10>

## Funder(s)

### Funder type

Research organisation

### Funder Name

Canadian Institutes of Health Research (CIHR) (Canada) - <http://www.cihr-irsc.gc.ca> (ref: MCT-82338)

## 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	11/01/2011		Yes	No