

# The effects of vigorous exercise training on motor function and functional fitness in juvenile arthritis

**Submission date**  
14/03/2007

**Recruitment status**  
No longer recruiting

☐ Prospectively registered

☐ Protocol

**Registration date**  
14/03/2007

**Overall study status**  
Completed

☐ Statistical analysis plan

☒ Results

**Last Edited**  
19/11/2009

**Condition category**  
Musculoskeletal Diseases

☐ Individual participant data

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

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### Contact details

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## Additional identifiers

### ClinicalTrials.gov (NCT)

NCT00213187

### Protocol serial number

MCT-75507

# Study information

## Scientific Title

The effects of vigorous exercise training on motor function and functional fitness in juvenile arthritis: a single blind randomised controlled trial

## Acronym

PEAK

## Study objectives

A rigorous 12-week aerobic exercise training program is more effective in improving metabolic efficiency (in terms of oxygen cost of locomotion) than a gentle Qigong exercise program.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Research Ethics Board of the Hospital for Sick Children (Canada) approved on the 13th August 2002 (initially), 11th August 2006 (second) (ref: 0020020201).

## Study design

Two-arm single centre randomised parallel trial with outcome assessor blinding

## Primary study design

Interventional

## Study type(s)

Treatment

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

Juvenile idiopathic arthritis

## Interventions

Treatment group: a 12-week vigorous aerobic exercise program

Control group: a 12-week Qi gong exercise program

Contact for public queries:

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## Intervention Type

Other

**Phase**

Not Applicable

**Primary outcome(s)**

Improved metabolic walking efficiency (measured by oxygen consumption) at baseline (week zero) and completion of trial (week 12)

**Key secondary outcome(s)**

1. Maximal aerobic capacity at week zero and 12
2. Anaerobic endurance and peak muscle power at week zero and 12
3. Physical function at week zero and 12
4. Quality of life at week zero and 12
5. Safety testing at week zero and 12
6. Arthritis activity (pain) from week zero through to 12
7. Range of motion at week zero and 12
8. Heart rate monitoring from week zero through to 12
9. Ratings of Perceived Exertion (RPE) from week zero through to 12
10. Anthropometry at week zero and 12
11. Comfortable walking speed at week zero and 12
12. Acceptability of exercise training (qualitative questionnaire) upon completion of program at week 12

**Completion date**

01/09/2005

**Eligibility****Key inclusion criteria**

1. Aged eight to 16 years, either sex
2. Diagnosis of juvenile idiopathic arthritis
3. Stable disease - on a stable dose of non-steroidal anti-inflammatory drugs (NSAID), if applicable methotrexate or other second line agents - in the preceding month, and judged by the rheumatologist to be clinically stable over the course of the trial
4. Medications: there are no restrictions on medication use for this study, however, every effort is made to keep medication dose stable over the course of the study

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Child

**Lower age limit**

8 years

**Upper age limit**

16 years

**Sex**

All

**Key exclusion criteria**

1. Co-morbidity with cardiac, pulmonary, or metabolic disease
2. Moderate or severe hip pain while walking (as judged by the patient and scored on a four point scale)
3. Active systemic symptoms (fever or rash)
4. Children who engaged in three or more hours of extracurricular physical activity weekly
5. Children who are unable to cooperate with testing procedures

**Date of first enrolment**

01/03/2003

**Date of final enrolment**

01/09/2005

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

Canada

**Study participating centre**

The Hospital for Sick Children

Ontario

Canada

M5G 1X8

**Sponsor information****Organisation**

The Hospital for Sick Children (Canada)

**ROR**

<https://ror.org/057q4rt57>

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

Research organisation

**Funder Name**

Canadian Institutes of Health Research (CIHR) (Canada) - <http://www.cihr-irsc.gc.ca/> (ref: MCT-75507)

### **Funder Name**

The Arthritis Society (Canada)

## **Results and Publications**

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

#### **IPD sharing plan summary**

Not provided at time of registration

### **Study outputs**

<b>Output type</b>	<b>Details</b>	<b>Date created</b>	<b>Date added</b>	<b>Peer reviewed?</b>	<b>Patient-facing?</b>
<a href="#">Results article</a>	results	15/10/2007		Yes	No