

# Chronic effect of exercise on attention and working memory in children

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| <b>Submission date</b><br>20/06/2006   | <b>Recruitment status</b><br>No longer recruiting              | <input type="checkbox"/> Prospectively registered    |
|  |  | <input type="checkbox"/> Protocol                    |
| <b>Registration date</b><br>04/07/2007 | <b>Overall study status</b><br>Completed                       | <input type="checkbox"/> Statistical analysis plan   |
|  |  | <input checked="" type="checkbox"/> Results          |
| <b>Last Edited</b><br>06/01/2021       | <b>Condition category</b><br>Nutritional, Metabolic, Endocrine | <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**

N/A

## Study information

### Scientific Title

Chronic effect of exercise on attention and working memory in children

### Acronym

LEAPFROG - CHRONIC

### Study objectives

There is increasing concern that modern children lead very sedentary lives. An inactive lifestyle increases risks of obesity and metabolic disease, but may also have adverse effects on cognitive function. Two recent systematic reviews/meta-analyses have concluded that there is a need for a Randomised Controlled Trial (RCT) to test the hypothesis that exercise can affect cognition in children, and to determine dose-response relationships. The aim of this study is:

1. To test the hypothesis that chronic aerobic exercise has effects on attention and working memory in children
2. To pilot for a larger scale future RCT

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Received from Yorkhill Hospitals Glasgow LREC (ref.: 05/s0708/89).

### Study design

Randomised controlled trial

### 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

Obesity

### Interventions

Intervention group:

Aerobic exercise sessions for approximately 90 minutes per week delivered as physical education.

Control group:

Flexibility strength skill development for approximately 90 minutes per week, delivered as physical education.

**Intervention Type**

Other

**Phase**

Not Specified

**Primary outcome measure**

Executive function measured by:

1. Cognitive Assessment System (CAS)
2. Attentional Network Task (ANT)
3. Cambridge Neuropsychological Test Battery (CANTAB)

**Secondary outcome measures**

Conners Attention Deficit Hyperactivity Disorder (ADHD) Index.

**Overall study start date**

01/06/2006

**Completion date**

01/08/2007

**Eligibility**

**Key inclusion criteria**

Healthy children age 6 - 8 years attending mainstream primary schools.

**Participant type(s)**

Patient

**Age group**

Child

**Lower age limit**

6 Years

**Upper age limit**

8 Years

**Sex**

Both

**Target number of participants**

60 to 80 (30 to 40 in each group)

**Total final enrolment**

64

**Key exclusion criteria**

Diagnosis of any disorder of attention or memory.

**Date of first enrolment**

01/06/2006

**Date of final enrolment**

01/08/2007

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

Scotland

United Kingdom

**Study participating centre**

**Division of Developmental Medicine**

Glasgow

United Kingdom

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**Sponsor information****Organisation**

Yorkhills Hospitals NHS Trust (UK)

**Sponsor details**

Dr Alison Wood

R & D Office, Harley Street

Royal Hospital for Sick Children

Yorkhill Hospitals

Dalnair Street

Glasgow

Scotland

United Kingdom

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**Sponsor type**

Hospital/treatment centre

**Website**

<http://www.nhsggc.org.uk/>

# Funder(s)

## Funder type

Government

## Funder Name

Scottish Executive Health Department (UK)

## Funder Name

Chief Scientist's Office (UK)

## Funder Name

Yorkhill Children's Foundation Studentship (UK)

# 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 | 28/10/2011   |            | Yes            | No              |