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

Submission date	Recruitment status	<ul><li>Prospectively registered</li></ul>
20/06/2006	No longer recruiting	☐ Protocol
Registration date	Overall study status	Statistical analysis plan
04/07/2007	Completed	[X] Results
Last Edited	Condition category	[] Individual participant data
06/01/2021	Nutritional, Metabolic, Endocrine	

# Plain English summary of protocol

Not provided at time of registration

# Contact information

# Type(s)

Scientific

#### Contact name

Prof John Reilly

#### Contact details

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# Additional identifiers

**Protocol serial number** 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

#### Study type(s)

Treatment

### 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(s)

Executive function measured by:

1. Cognitive Assessment System (CAS)

- 2. Attentional Network Task (ANT)
- 3. Cambridge Neuropsychological Test Battery (CANTAB)

## Key secondary outcome(s))

Conners Attention Deficit Hyperactivity Disorder (ADHD) Index.

## Completion date

01/08/2007

# **Eligibility**

## Key inclusion criteria

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

## Participant type(s)

**Patient** 

# Healthy volunteers allowed

No

# Age group

Child

# Lower age limit

6 years

# Upper age limit

8 years

#### Sex

All

#### 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

**United Kingdom** 

Scotland

Study participating centre
Division of Developmental Medicine
Glasgow
United Kingdom
G3 8SJ

# Sponsor information

#### Organisation

Yorkhills Hospitals NHS Trust (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**

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?

Results article results 28/10/2011 Yes

No