ISRCTN70853932 https://doi.org/10.1186/ISRCTN70853932

Chronic effect of exercise on attention and working memory in children

Submission date	Recruitment status
20/06/2006	No longer recruiting
Registration date	**Overall study status**
04/07/2007	Completed
Last Edited	**Condition category**
06/01/2021	Nutritional, Metabolic, Endocrine

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] 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
G3 8SJ

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
G3 8SJ

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?
Results article	results	28/10/2011		Yes	No