Pilot study for differences in obstacle avoidance between children with DCD and controls.

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The objective of this study is to acquire more insight into the capacity to carry out complex walking tasks in order to learn to understand what the underlying mechanisms of stumbling and falling in these children are.

Ethical review	Approved WMO
Status	Pending
Health condition type	Movement disorders (incl parkinsonism)
Study type	Observational non invasive

Summary

ID

NL-OMON31058

Source
ToetsingOnline

Brief title
Obstacle avoidance executed by children with and without DCD

Condition

- Movement disorders (incl parkinsonism)

Synonym
clumsiness, dyspraxia

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Sint Radboud
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: children, Developmental Coordination Disorder, obstacle avoidance

Outcome measures

Primary outcome

- succesrate for avoiding the obstacle

Secondary outcome

- the position of the foot with respect to the obstacle

- velocity of the swingleg during the avoidance step

- reaction time and response amplitude, defined from the EMG signal

- chosen stratey for obstacle avoidance

Study description

Background summary

Many terms have been used for children with motor development disorders, for instance *wooden children* and *children with sensomotoric problems'. Following the international developments, in Holland too it is decided to use the term *Developmental Coordination Disorder* (DCD). Children with DCD are clumsy and it takes them more effort to learn skills that other children acquire nearly effortless. The prevalence of DCD lies between 5 and 10 percent.
Parents of children with DCD indicate stumbling and falling of their children as most common problems. This indicates that execution of complex walking tasks is problematic for these children.

Study objective

The objective of this study is to acquire more insight into the capacity to carry out complex walking tasks in order to learn to understand what the underlying mechanisms of stumbling and falling in these children are.

Study design

Pilot study as an incentive for an experimental study with complete randomised within-subjects design, with age and group (control / DCD) as between-subjects

factors.

Study burden and risks

Subjects with DCD will be asked to do a test, in order to confirm the diagnosis DCD.
All subjects will be asked to execute different walking-tasks on a splitbelt (treadmill). EMG will be measured non-invasively. The experimental procedures will take 3 hours maximally.

Risks of participation in this study are minimal to non-existing. The safety of the children is guaranteed by a parachute-harness attached to the ceiling: in this way, falling is made impossible and injuries resulting from falling are prevented.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Children (2-11 years)

Inclusion criteria

For children with DCD:
- classification DCD, as specified by the criteria of the DSM-IV
- age 6-10 years;For children without DCD
- age 6-10 years

Exclusion criteria

- neurologic or orthopedic disorders
- bad control of the dutch language
- auditive problems
- vision problems

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-03-2007
Enrollment:	15
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL16919.091.07