The effect of additional foot support with or without seat surface forward tilting on upper extremity function in children with spastic cerebral palsy*

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To evaluate the effect of additional foot support during sitting and the effect of forward tilting of the seat surface on 1) postural adjustments during reaching and 2) the quality of reaching movement in school age children with CP.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Neurological disorders congenital
Study type	Interventional

Summary

ID

NL-OMON37331

Source
ToetsingOnline

Brief title
Seating and postural control in spastic cerebral palsy.

Condition

- Neurological disorders congenital

Synonym
cerebral palsy, 'spasticity'

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen

Source(s) of monetary or material Support: Naresuan University;Phitsanulok;Thailand

Intervention

Keyword: arm function, cerebral palsy, postural control, seating

Outcome measures

Primary outcome

The primary study parameter is kinematic stability of head in space.

Secondary outcome

Additional endpoints are the capacity to modulate postural EMG amplitude to (kinematically measured) body position, kinematic mobility of the trunk, and velocity and the number of movement units of the reaching movement, and degree of pleasantness of the sitting condition.

Study description

Background summary

Children with cerebral palsy (CP) often are faced with dysfunctional postural control. Most children with CP spend a large part of the day in sitting position. It is however debated which sitting condition (inclination of seat surface, degree of postural support) in children with CP is associated with the best functional performance in terms of good postural stability and in the adequacy of upper extremity (UE) function.

Study objective

To evaluate the effect of additional foot support during sitting and the effect of forward tilting of the seat surface on 1) postural adjustments during reaching and 2) the quality of reaching movement in school age children with CP.

Study design

Intervention study with a repeated-measures design (sitting conditions x foot

support)

Intervention

The children will be assessed in 4 sitting conditions.

Study burden and risks

The study is associated with minimal risks. The risk consist of falling of the assessment table. This risk is minimized by the continuous presence of two researchers in the childs vicinity. The burden of participation consists of time investment of parents and children associated with travelling to the UMCG and the assessment of 1-1* hour. The electrodes and markers used for EMG- and kinematic recording are well tolerated by (young) children. The postural and clinical assessments are carried out in a playful way. When children get tired, the session will be ended. For child and family involved the potential benefit is immediate knowledge on the effect of specific seating conditions on functional activity, knowledge which they may apply in daily life. The major benefit consists of a group benefit: children with CP certainly will profit from increased knowledge on the best seating condition.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)
Children (2-11 years)

Inclusion criteria

- unilateral or bilateral spastic cerebral palsy
- age 6-12 years
- GMFCS level I-III

Exclusion criteria

- severe visual impairment
- inability to reach for an object

Study design

Design

Study type: Interventional

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

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	21-11-2012
Enrollment:	20
Type:	Actual

Ethics review

Approved WMO Date:	23-08-2012
Application type:	First submission
Review commission:	CCMO: Centrale Commissie Mensgebonden Onderzoek (Den Haag)

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	NL39267.000.12