

# MASTERY OF MANUAL SKILLS

## RECENT INSIGHTS INTO TYPICAL AND ATYPICAL DEVELOPMENT OF MANUAL ABILITY

**GRONINGEN, 19-21 APRIL 2012**

### **THURSDAY APRIL 19TH**

08.15 - 09.00      Registration and coffee

09.00 - 09.20      Welcome by Mr. Max van den Berg, Commissioner of the Queen in the Province of Groningen, and by Prof. Dr. F. Kuipers, Dean of the University Medical Center Groningen

#### **Neural mechanisms involved in reaching, grasping and manipulation**

*Chair: John Martin*

09.20 - 10.00      John Rothwell (London, UK):  
Cortical circuitries involved in reaching, grasping and manipulation.

10.00 - 10.40      Melvyn A. Goodale (London, ON, Canada):  
Perception – action: making sense of upper limb activities.

10.40 - 11.10      Coffee / tea

#### **Typical and atypical development of reaching and grasping**

*Chair: Andrea Guzzetta*

11.10 – 11.50      Mijna Hadders-Algra (Groningen, the Netherlands)  
Development of reaching and associated postural control: typical and atypical development

11.50 - 12.30      Arend Bos (Groningen, the Netherlands)  
Development of manual abilities in preterm infants.

12.30 - 13.10      Two-minute presentations of posters *Chair: Karel Maathuis*

13.10 – 14.00      Lunch

14.00 - 15.00      Poster session with tea

## **Typical and atypical development of visuomotor integration**

*Chair: Arie Bos*

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| 15.00 – 15.40 | Janet Atkinson (London, UK)<br>Dorsal stream and dorsal stream vulnerability in the developing child  |
| 15.40 - 16.20 | Oliver Braddick (Oxford, UK)<br>Visual control of action in typical and atypical infant and child<br>Development  |
| 16.20 - 17.00 | Koen Van Braeckel (Groningen, the Netherlands)<br>Visual and proprioceptive control of action in typically developing and preterm born<br>children at early school age  |
| 18.00 – 20.00 | Reception & Musical Intermezzo at the main building of the University<br>("Academiegebouw"),<br>The reception is offered by the University of Groningen, the Municipality of Groningen<br>and the Province of Groningen |

## **FRIDAY APRIL 20TH**

### **Pathophysiology of impaired hand function in children with cerebral palsy**

*Chair: John Rothwell*

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| 09.00 – 09.40 | John Martin (New York, NY, USA)<br>Pathophysiological mechanisms of impaired limb use after unilateral lesion of the<br>developing brain |
| 09.40 – 10.20 | Andrew Gordon (New York, NY, USA)<br>Pathophysiology of impaired hand function in children with cerebral palsy.                          |
| 10.20 – 11.00 | Bert Steenbergen (Nijmegen, the Netherlands)<br>Impaired motor planning and motor imagery in children with cerebral palsy                |
| 11.00 - 11.30 | Coffee / tea   |

## **Visuomotor integration in children with cerebral palsy**

*Chair: Janet Atkinson*

- 11.30 – 12.10      Andrea Guzzetta (Pisa, Italy)  
Plasticity of the visual system after early brain damage
- 12.10 – 12.50      Geert Savelsbergh (Amsterdam, the Netherlands)  
Effect of vision on upper limb activity in children with unilateral spastic cerebral palsy
- 12.50 - 13.30      Two-minute presentations of posters      *Chair: Mijna Hadders-Algra*
- 13.30 – 14.20      Lunch and Poster session

## **Intervention to improve manual abilities in children with cerebral palsy**

*Chair: Andrew Gordon*

- 14.20 - 15.00      Eva Brogren Carlberg (Stockholm, Sweden)  
Goal setting as a means to improve skills
- 15.00 – 15.20      Pauline Aarts (Nijmegen, the Netherlands)  
Pros and cons of constraint-induced movement therapy in children with cerebral palsy
- 15.20 – 15.40      Lucianne Speth (Valkenburg, the Netherlands)  
Pros and cons of treatment with botulinum A toxin on upper limb activity in children with cerebral palsy
- 15.40 – 16.10      coffee / tea
- 16.10 – 16.30      Mick Kreulen (Amsterdam, the Netherlands)  
Functional effects of surgery of the spastic hand in children with cerebral palsy
- Chair: Bert Steenbergen*
- 16.30 – 17.10      Doreen Bartlett (London, ON, Canada)  
Intervention in children with cerebral palsy: lessons from the Move & Play study
- 18.00                  Departure for dinner at the Piloersemaaborg te Den Ham

## **SATURDAY APRIL 21ST**

### **Manual skills in children with Developmental Coordination Disorder (DCD)**

*Chair: Mijna Hadders-Algra*

- 09.00 – 09.40      Bouwien Smits-Engelsman (Leuven, Belgium)  
Pathophysiology of impaired hand function in children with DCD
- 09.40 – 10.00      Lieke Peters (Groningen, the Netherlands)  
Neurological correlates of DCD
- 10.00 – 10.20      Jessika van Hoorn (Groningen, the Netherlands)  
Neurological correlates of dysgraphia and impaired visuomotor integration
- 10.20 - 10.50      Coffee / tea

*Chair: Geert Savelsbergh*

- 10.50 – 11.30      Peter Wilson (Melbourne, Australia)  
Effect of sensory impairments on manual abilities in children with DCD
- 11.30 – 12.10      John Cairney (Hamilton, ON, Canada)  
DCD: long-term consequences for participation
- 12.10 – 13.15      Forum Discussion:  
How can we improve manual skills in children with developmental motor disorders?
- 13.15                Take away lunch