

## *Applied Neurosciences for Paediatric Neurophysiotherapists*

Course Instructor: Margaret Mayston, PhD, FCSP

Dates: April 18<sup>th</sup> & 19<sup>th</sup> 2008

Approved continuing education hours: To be advised

Level: Advanced

---

### Course Description:

The purpose of the course is to review basic functioning of the nervous system in the control of movement in daily life, to discuss how motor control is disordered following a brain injury in early development (focus on cerebral palsy) and to explore how this knowledge might be used to plan and explain therapy intervention in this client group.

### Upon completing this course, you will be able to:

- Outline the neurological basis for the sensorimotor impairments encountered in children with cerebral palsy
- Describe and discuss the diversity of management options available from the therapy toolbox for the child with cerebral palsy and cite evidence for some of these options.

### Course Instructor:

Margaret Mayston trained as a physiotherapist in Melbourne, Australia and completed an MSc in Applied Physiology (King's College London) and a PhD in neurophysiology (Department of Physiology, University College London). This was followed by a three year Wellcome Trust funded post-doctoral fellowship. Currently Senior Lecturer (0.8) in the Department of Physiology at UCL co-ordinating an MSc in Neurophysiotherapy for adult and paediatric physiotherapists, carrying out research and maintains a clinical role by working as therapy adviser at the Bobath Centre London (currently 0.1 appointment). In addition to this Dr Mayston is a Senior Bobath tutor (paediatrics). Her research interests include the use of neurophysiological techniques and motion analysis to understand the control of movement in healthy children and adults; changes in the control of movement in pathologies such as cerebral palsy and stroke; and possible effects of some therapeutic interventions.

### Precourse Readings

Hadders-Algra M (2000): The Neuronal Group Selection theory: a framework to explain variation in normal motor development. *Developmental Medicine and Child Neurology*, 42: 566-572.

Scrutton D, Damiano DJ, Mayston MJ (editors; 2004) Management of the Motor Disorders of cerebral palsy, 2<sup>nd</sup> Edition. Mac Keith Press, London, Ch 6,10 & 11

Shumway-Cook A, Woollacott M (2001) Motor Control- theories and application. Ch 1& 3

### Course Schedule:

<b>Day 1 April 18<sup>th</sup> 2008 (9:00 to 5:00)</b>	
9-10.30	Models of motor control
10.45-12.15	Muscles and motor control
1.30-3.00	The cortex and motor control
3.15-4.00	Clinical demonstration (client or video)
4.00-5.00	Discussion
<b>Day 2 April 19<sup>th</sup> 2008 (9:00 to 5:00)</b>	
9.00-10.30	The therapy toolbox for the child with cerebral palsy
10.45-12.15	Exploring the toolbox further.....
1.30-2.15	Clinical demonstration (live or video)
2.15-3.00	Discussion of client from previous session
3.15-5.00	Discussion

### **Special Notes to Participants**

Please come prepared and properly dressed for a practical session

#### **Availability:**

This course is available to licensed physical therapists only.

Enrollment is limited to **24** participants.

**Registration Fees: USD 500 (course only)**

**USD 250 (conference delegates)**

**Course Locations: Rehabilitation Section / AIWasl Hospital**