Early Detection and Early Intervention for Cerebral Palsy

Presenters:
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Purpose:
The purpose of this course is to examine research data on tools that accurately predict cerebral palsy in infants and emerging evidence for new and novel interventions that effectively treat cerebral palsy (CP).

Course Summary:
Recent research on neuroplasticity supports intensive, repetitive, task-specific intervention for CP that should commence early while the brain is most plastic, yet the average age for the diagnosis is 17 months. Early discrimination between CP and other diagnoses is essential for successful management since evidence-based interventions and prognoses now differ depending on diagnosis. Psychometrically sound early motor assessment tools, brain imaging, and neurological examinations assist in predicting CP. The most accurate predictive tool is the General Movements Assessment. We will discuss the growing systematic review and clinical trial evidence regarding available tools and the potential neuroplastic benefits of early intervention with the goal of earlier diagnosis and targeted intervention.

This course describes evidence-based diagnostic, assessment, prognostic and treatment options for infants with CP and “at risk” of CP. Based on latest evidence, we recommend referral for intervention which occurs immediately when an infant is “at risk” of CP. New data from rigorous international trials investigating the efficacy of novel early intervention treatments will be presented. Interactive video case studies will be used to assist participants to simulate planning treatment activities using these new novel interventions.

Timetable:

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<th>TIME</th>
<th>WHAT</th>
<th>WHO</th>
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<tr>
<td>1.30</td>
<td>CP aetiology and implications for choice of early interventions</td>
<td>Iona Novak</td>
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<td>• Risk factors for CP</td>
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<td>• Profile of cerebral palsy from population registers</td>
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<td>Major high-level findings of the International Guideline on Early Detection</td>
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<td>Evidence-based diagnostic, assessment, and prognostic tools for infants “at risk” of CP</td>
<td>Alicia Spittle</td>
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<td>• Neuroimaging</td>
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<td>• General Movements assessment</td>
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<td>• AIMS and NSMDA</td>
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<td>2.15</td>
<td>Motor learning during infancy</td>
<td>Linda Fetters</td>
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<td>• Foundations for motor learning in intervention</td>
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<td>• Infant motor learning</td>
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<td>Novel ideas for intervention using motor learning</td>
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<td>2.45</td>
<td>New novel evidence-based interventions for infants “at-risk” of CP</td>
<td>Cathy Morgan</td>
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<td>- Targeted motor training eg CIMT</td>
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<td>- Enrichment : GAME including results of a randomised trial</td>
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<td>3.20</td>
<td>Questions</td>
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References: Early detection of children at risk of CP


**References: Motor Learning and Exploration**

**Foundations for Infant Motor Learning**


**Active Exploration with Contingency**


10. Watanabe, H., & Taga, G. General to specific development of movement patterns and memory for contingency between actions and events in young infants. Infant Behavior and Development, 2006;29, 402-422.

Components of Motor Learning: self-initiated, variability, enrichment, intensity, success


References: Early Intervention


