



Pan American Movement Disorders Clinical Neurophysiology Course
Toronto, Canada · May 1-3, 2025

DAY 1

Session 1: Overview of Clinical Neurophysiology in Movement Disorders		
8:20 - 8:30	Welcome from Course Directors	
8:30 - 8:50	Neurophysiology: An Extension of Clinical Assessment to Categorize Movement Disorders <i>Robert Chen</i> – Toronto, Canada	
8:50 - 8:55	Moderated Question and Answer	
8:55 - 9:15	Overview of Basic and Advanced Neurophysiological Techniques <i>Talyta Grippe</i> – Toronto, Canada	
9:15 - 9:20	Moderated Question and Answer	
9:10 – 9:40	First steps to set up a Movement Disorders Neurophysiology lab: Which equipment do I need and How to do initial signal processing? <i>Marcus Callister</i> – Toronto, Canada <i>Felipe Vial</i> – Santiago, Chile	
9:50 - 10:00	Moderated Question and Answer	
10:00 – 10:30	COFFEE BREAK	
Session 2: Jerky Movements		
10:30-10:50	Clinical Neurophysiology to Differentiate Jerky Movements – Basic physiology <i>Robert Chen</i> – Toronto, Canada	
10:50– 10:55	Moderated Question and Answer	
10:55-11:15	Clinical Neurophysiology for Myoclonus: Different subtypes <i>Specific physiology for diagnosis of each subtype</i> <i>Shabbir Merchant</i> – Boston, USA	
11:15 – 11:20	Moderated Question and Answer	
11:20 – 12:00	Myoclonus: Clinical cases (interactive with the participants) <i>Christos Ganos</i> – Toronto, Canada <i>Nicolas Phielipp</i> – Irvine, USA	
12:00 - 12:10	Moderated Question and Answer	
12:10 – 13:00	LUNCH BREAK	
Break out Session: Jerky Movements		
Participants divided into four groups of 10		
	Hands-on Session with Patients/Healthy participant demonstration <i>EMG + EEG – DATA COLLECTION</i> All Faculty	Workshop Back Averaging and ERD <i>(brief lecture with demonstration)</i> <i>Participant works on computer for data analysis</i> COMPUTER WORK – DATA ANALYSIS All Faculty

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13:00 – 13:30	Jerky movements – healthy demonstration Group A and Group B		Group C & Group D
13:30 – 14:00	Jerky movements – patient 1 Group A	Jerky movements – patient 2 Group B	
14:00 – 14:30	Jerky movements – patient 2 – Group A	Jerky movements – patient 1 Group B	
14:30 – 15:00	<i>TEA BREAK</i>		
	Hands-on Session with Patients All Faculty		Workshop Back Averaging and ERD <i>(brief lecture with demonstration)</i> <i>Participant works on computer for data analysis</i> All Faculty
15:00 – 15:30	Jerky movements – healthy demonstration Group C and Group D		Group A & Group B
15:30 – 16:00	Jerky movements – patient 1 Group C	Jerky movements – patient 2 Group D	
16:00 – 16:30	Jerky movements – patient 2 – Group C	Jerky movements – patient 1 Group D	
16:30 – 16:45	Closing Remarks		

**DAY 2**

Session 1: Clinical Neurophysiology of Tremor		
8:30-8:55	Clinical Neurophysiology to Differentiate tremor physiology Basic physiology (peripheral vs. central) <i>Felipe Vial – Santiago, Chile</i>	
8:55 – 9:00	Moderated Question and Answer	
9:00-9:25	Clinical Neurophysiology to Differentiate different types of tremors <i>Specific physiology for diagnosis of each subtype</i> <i>Panagiotis Kassavetis – Washington, USA</i>	
9:25-9:30	Moderated Question and Answer	
9:30– 10:10	Tremor: Different subtypes and Clinical Cases (interactive with the participants) <i>Katherine Longardner – San Diego, USA</i> <i>Marcus Callister – Toronto, Canada</i>	
10:10-10:20	Moderated Question and Answer	
10:20-10:40	COFFEE BREAK	
Session 2: Clinical Neurophysiology of other hyperkinetic disorders		
10:40–11:10	Clinical Neurophysiology of other hyperkinetic movement disorders <i>Karlo Lizarraga – Rochester, USA</i>	
11:10 – 11:15	Moderated Question and Answer	
11:15 – 11:55	Clinical Cases of other hyperkinetic disorders (interactive with the participants) <i>Christos Ganos – Toronto, Canada</i> <i>Talyta Grippe – Toronto, Canada</i>	
11:40-12:00	Moderated Question and Answer	
12:00 – 13:00	LUNCH BREAK	
Break out Session: Tremor		
<i>Participants divided into four groups of 10</i>		
	Hands-on Session with Patients <i>Data collection</i> All Faculty	Workshop: Use of electrophysiology to study tremor (brief lecture with demonstration) <i>Participant works on computer for data analysis</i> All Faculty
13:00 – 13:30	Tremor – healthy demonstration Group A and Group B	Group C & Group D
13:30 – 14:00	Tremor – patient 1 Group A	
14:00 – 14:30	Tremor – patient 2 Group A	
14:30 – 15:00	TEA BREAK	

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	Hands-on Session with Patients All Faculty	Workshop: Use of electrophysiology to study tremor <i>(brief lecture with demonstration)</i> <i>Participant works on computer for data analysis</i> All Faculty s
15:00 – 15:30	Tremor – healthy demonstration Group C and Group D	Group A & Group B
15:30 – 16:00	Tremor – patient 1 Group C	
16:00 – 16:30	Tremor – patient 2 Group C	
16:20– 16:30	Closing Remarks	

**DAY 3**

Session 1: Dystonia treatment	
9:00 – 9:30	Use of EMG and ultrasound for dystonia treatment <i>Shabbir Merchant</i> – Boston, USA <i>Talyta Grippe</i> – Toronto, Canada
9:30 - 9:35	Moderated Question and Answer
9:35 - 10:05	Patient demonstration – use of EMG for limb dystonia (2 cases – interactive with the participants) <i>Robert Chen</i> – Toronto, Canada <i>Marcus Callister</i> – Toronto, Canada
10:05 - 10:15	Moderated Question and Answer
10:15 -10:30	<i>COFFEE BREAK</i>
10:30 – 11:00	Challenges in Managing Dystonia: Case Discussions (2 cases) <i>Panagiotis Kassavetis</i> – Washington, USA <i>Karlo Lizarraga</i> – Rochester, USA
11:00 -11:05	Moderated Question and Answer
11:05 - 11:55	Patient demonstration – use of ultrasound for botulinum toxin injections (hands on with healthy participants) <i>Panagiotis Kassavetis</i> – Washington, USA <i>Shabbir Merchant</i> – Boston, USA <i>Christos Ganos</i> – Toronto, Canada
11:55 - 12:05	Moderated Question and Answer
12:05 – 12:15	Closing Remarks and Evaluation