



MAYO CLINIC

*Mayo Clinic
Electromyography (EMG),
Electroencephalography (EEG),
and Neurophysiology in
Clinical Practice*

*March 8-14, 2009
Amelia Island Plantation
Amelia Island, Florida*

Reasons to attend:

- In-depth update of clinical applications for electromyography (EMG) and electroencephalography (EEG)
- Review of clinical applications of evoked potentials, autonomic testing, intraoperative monitoring, and evaluation of sleep disorders
- Innovative teaching approaches, including interactive NCS / EMG demonstration sessions and EEG reading sessions
- Interactive, multimedia approach to learning EMG waveform recognition
- Expert faculty from the Mayo Clinic College of Medicine

For more information
Call: 800-462-9633 or 904-953-7114
or visit us at: www.mayo.edu/cme/
E-mail: cme-jax@mayo.edu

Course Description

This course is designed as a review of basic concepts of nerve conduction studies, needle EMG, EEG, evoked potentials, intraoperative monitoring, and autonomic and sleep studies. Techniques, interpretation, and the electrodiagnostic approaches to clinical disorders will be emphasized. The focus is on clinical correlation of various neurophysiologic tests used for the evaluation of patients with peripheral nerve and neuromuscular disorders, epilepsy, and sleep disorders. The program format includes lectures, practical demonstrations, videos, group discussions and workshops, for optimal learning. Participants will have the opportunity to observe EMG techniques on normal subjects in the laboratory, and directly interact with the faculty during these workshops. A syllabus will be provided to participants. Presentations will be made by members of the staff of Mayo Clinic and faculty of the Mayo Clinic College of Medicine from the Departments of Neurology in Jacksonville, Florida, Rochester, Minnesota, and Scottsdale, Arizona.

Course Learning Objectives

Upon completion of this program, participants should be able to:

- Develop a logical approach to the use of standard clinical electrophysiological techniques in the evaluation of common and uncommon neuromuscular disorders encountered in clinical practice.
- Explain the basic concepts of clinical neurophysiology.
- Interpret the findings and clinical significance of abnormalities on nerve conduction studies.
- Interpret the clinical significance of EMG waveforms on needle examination.
- Identify technical pitfalls associated with EEG and the normal and variant patterns of pediatric and adult patients.
- Interpret the findings and clinical significance of abnormalities on EEG studies.
- Integrate the various clinical neurophysiology studies in the evaluation of patients with disorders of the central nervous system.

Intended Audience

This course is intended for neurologists and physiatrists interested in the basics of clinical EMG, EEG, and neurophysiology. Attendance at this Mayo course does not indicate or guarantee competence or proficiency in the performance of any procedures that may be discussed or taught in this course.

Credit

College of Medicine, Mayo Clinic is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

College of Medicine, Mayo Clinic designates this educational activity for a maximum of 51.5 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Other Health Care Professionals

A certificate of attendance will be provided to other health care professionals for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

Educational Grants

This course is supported, in part, by educational grants from multiple industry sponsors in accordance with ACCME Standards. At the time of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the time of the meeting.

Registration

To register online, visit <http://www.mayo.edu/cme/>, or you can complete the attached registration form and return by mail or fax. The registration fee includes tuition, comprehensive course syllabus, continental breakfasts, break refreshments, and lunch. Although it is not Mayo School of CME policy to limit the number of registrants for a course, conference room facilities may necessitate closing of enrollment; therefore, early registration is advised. A letter of confirmation will be sent upon receipt of payment and completed registration form. Please present the confirmation letter when checking in at the meeting registration desk.

Cancellation Policy

If you cancel your participation in this course, your registration fee, less a \$75 administrative fee, will be refunded when written notification is received by Mayo School of CME on or before February 22, 2009 via fax#: (904) 953-2954. No refunds will be made after February 22, 2009. Mayo School of CME reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo School of CME must cancel or postpone this course, Mayo School of CME will refund the registration fee, but is not responsible for any related costs, charges, or expenses to participants, including fees assessed by airline/travel/lodging agencies.

Location

Located on the beach at Amelia Island, Florida, just 35 minutes from Jacksonville International Airport, this AAA-Four Diamond resort features over 700 guest accommodations settled in 1,250 acres of pristine coastal wilderness. The conference center with its bright, airy rooms offers perfect space to facilitate learning and socializing. You can play golf on 36 holes designed by Pete Dye and Tom Fazio, which cover acres of oceanfront and tidal marshes. Tennis at Amelia offers 23 Har-Tru courts laid out in a club like setting. Sportfishing, swimming, seven miles of nature trails for walking and jogging, and horseback riding in the surf are just some of the activities available for guests. "Kids Camp Amelia" boasts enthusiastic counselors for all-day activities, tennis or golf clinics, arts and crafts, water activities or just for a parent's night out for dinner. All recreational activities can be scheduled directly through Amelia Island Plantation by calling (888) 261-6161 or (904) 261-6161.

Lodging Accommodations

A block of rooms has been reserved at the Amelia Island Plantation, the beautiful oceanfront hotel, at a special rate of \$217 plus tax per night until February 14, 2009, or until the room block is filled. Reservations made after this date will be confirmed on a space/rate available basis. In addition, Amelia Island Plantation charges a resort service fee of \$10.00 per person, per day, which includes all staff gratuities, high-speed internet access, housekeeping gratuities, unlimited on property shuttle transportation, self parking, unlimited use of health and fitness center, 1 hour of tennis court usage, 1 bucket of range balls, meeting concierge staff, in-room coffee service and 24/7 public safety staff. Children under 15 will stay complimentary with no resort fee. Check-in time is after 4:00 p.m. and check-out time is before 11:00 a.m. You may call the hotel direct at (904) 261-6161 or toll free at (888) 261-6161 for reservations. Please identify yourself as a course participant at the Mayo Clinic EMG/EEG conference.

Mayo Clinic**Electromyography (EMG), Electroencephalography (EEG),
and Neurophysiology in Clinical Practice****March 8 – 14, 2009***Mail form and payment to:*

Mayo School of Continuing Medical Education
 4500 San Pablo Road, Davis 172W
 Jacksonville, FL 32224
 ATTN: Registrar EMG/EEG
 Web: www.mayo.edu/cme

Telephone: 800-462-9633
 Office: 904-953-7114
 Fax: 904-953-2954
 Email: cme-jax@mayo.edu

Please print or type all information. You may reproduce this form for multiple registrations or register online.

First Name

M.I.

Last Name

 Degree MD PhD DO PA NP Other _____

Mailing Address

City

State

Zip

Telephone

FAX

 AMA AOA AAFP RN

Institution

Medical Specialty

Email


 Check here if you have any special accommodations or dietary needs.
 Please indicate your needs here:
Registration and Payment (U.S. funds only)

Three options are offered for registration:

Option 1: Electromyography in Clinical Practice

Sunday, March 8 through Thursday, March 12, 2009

 \$825**Option 2: Electroencephalography**

Friday, March 13 – through Saturday, March 14, 2009

 \$500**Option 3: Electromyography (EMG), Electroencephalography (EEG),
and Neurophysiology in Clinical Practice**

Sunday, March 8 through Saturday, March 14, 2009

 \$975**Total Payment Enclosed:** \$ _____**Payment Method:** Check Enclosed (make checks payable to *Mayo Clinic*)
 Credit Card: Visa MasterCard Discover

Card Number:

Expires (Mo/Yr):

 /

Signature

Date

Mayo Clinic Faculty

Course Directors

Devon I. Rubin, M.D.

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Brian A. Crum, M.D.

Jasper R. Daube, M.D.

P. James B. Dyck, M.D.

C. Michel Harper, M.D.

Ruple S. Laughlin, M.D.

Katherine C. Nickels, M.D.

Michael H. Silber, M.B. Ch.B.

Elson L. So, M.D.

Eric J. Sorenson, M.D.

Jeffrey A. Strommen, M.D.

James C. Watson, M.D.

Barbara F. Westmoreland, M.D.

Gregory A. Worrell, M.D., Ph.D.

Faculty Disclosure

As a provider accredited by ACCME, College of Medicine, Mayo Clinic (Mayo School of CME) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course director(s), planning committee, faculty, and all others who are in a position to control the content of this educational activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of this information will be published in course materials so those participants in the activity may formulate their own judgments regarding the presentation.



Sunday, March 8, 2009

(EMG)

- 7:00 a.m. Registration & Continental Breakfast
7:50 Welcome and Introduction
Devon I. Rubin, M.D.
- 8:00 Physiology and Electrophysiologic Correlates of Nerve Pathology
P. James B. Dyck, M.D.
- 8:45 Physiology and Electrophysiologic Correlates of Muscle Pathology
Elliot L. Dimberg, M.D.
- 9:30 Break
- 10:00 Nerve Conduction Studies: Basics
Brian A. Crum, M.D.
- 10:45 Uncommon Motor NCS, including F waves and H reflexes
Ruple S. Laughlin, M.D.
- 11:30 Uncommon Sensory NCS – Technique and Utility
Brian A. Crum, MD.
- 12:30 Lunch
- 1:30 Neuromuscular Junction Physiology and Repetitive Stimulation Technique
Brent P. Goodman, M.D.
- 2:30 Nerve Conduction Studies: Pitfalls and Technical Problems
Devon I. Rubin, M.D.
- 3:30 Adjourn

Monday, March 9, 2009

(EMG)

- 7:00 a.m. Continental Breakfast
- 7:30 Quiz
- 8:00 - 9:15 Workshops I – Nerve Conduction Studies
NCS for Novices
Common Upper Extremity
Uncommon Upper Extremity I
Lower Extremity NCS
- 9:30 - 10:45 Workshops II – Nerve Conduction Studies
Common Upper Extremity
Uncommon Upper Extremity II
Proximal (shoulder girdle) NCS
Repetitive Stimulation
- 11:00 – 12:15 Workshops III – Nerve Conduction Studies
Upper Extremity
Lower Extremity
Repetitive Stimulation
Cranial Reflexes
- 12:30 – 1:30 Lunch
- 1:30 Needle Examination Technique
Devon I. Rubin, M.D.
- 2:15 Examination of Unusual Muscles
Eric J. Sorenson, M.D.

- 3:15 Break
3:30 Single Fiber EMG
Brian A. Crum, M.D.
4:30 EMG Signal Analysis: Introduction
Jasper R. Daube, M.D. and Devon I. Rubin, M.D.
5:30 Dinner
6:30 – 10:00 EMG Signal Analysis: Video Interactive Session
Jasper R. Daube, M.D. and Devon I. Rubin, M.D.

Tuesday, March 10, 2009

(EMG Approaches to Common Disorders)

- 7:00 a.m. Continental Breakfast
7:30 Quiz
8:00 Approach to Carpal Tunnel Syndrome and Other
Median Neuropathies
James C. Watson, M.D.
8:45 Approach to Ulnar Neuropathy
Benn E. Smith, M.D.
9:30 Break
9:45 Other Mononeuropathies of the Upper Limb
Jeffrey A. Strommen, M.D.
10:45 Mononeuropathies of the Lower Limb
Kevin B. Boylan, M.D.
11:45 Evaluation of Radiculopathies
Jeffrey A. Strommen, M.D.
12:30 Lunch
1:30 Workshops I – Needle EMG
Needle EMG for Novices
Common Upper Extremity
Common Lower Extremity
Uncommon Upper Extremity
2:30 Workshops II– Needle EMG
Common Upper Extremity
Common Lower Extremity
Uncommon Upper Extremity
Uncommon Lower Extremity
3:30 Workshops III– Needle EMG
Upper Extremity
Lower Extremity
Quantitative EMG
Single Fiber EMG
4:30 Adjourn

Wednesday, March 11, 2009

(EMG approaches to Uncommon Disorders)

- 7:00 a.m. Continental Breakfast
7:30 Quiz
8:00 Cranial Neuropathies
Kathleen D. Kennelly, M.D., Ph.D.
8:45 Brachial Plexopathy
Devon I. Rubin, M.D.

9:30	Break
9:45	Evaluation of Peripheral Neuropathies <i>Ruple S. Laughlin, M.D.</i>
10:45	Neuromuscular Junction Disorders <i>C. Michel Harper, M.D.</i>
12:00	Lunch
1:00	Motor Neuron Diseases <i>Eric J. Sorenson, M.D.</i>
2:00	Muscle Diseases <i>Elliot L. Dimberg, M.D.</i>
3:00	Break
3:15	Crafting an Appropriate EMG Report <i>Benn E. Smith, M.D.</i>
4:00	Case Discussions
	Faculty
5:00	Adjourn

Thursday, March 12, 2009

(Evoked Potentials, Sleep, Autonomic, and Intraoperative Monitoring)

7:30 a.m.	Continental Breakfast
8:00	IOM – Cranial/Spinal/Peripheral <i>C. Michel Harper, M.D.</i>
9:00	Somatosensory Evoked Potentials <i>James C. Watson, M.D.</i>
10:00	Visual Evoked Potentials <i>Jonathan L. Carter, M.D.</i>
11:00	Brainstem Auditory Evoked Potentials <i>Jonathan L. Carter, M.D.</i>
12:00	Lunch
1:00	Evaluation of Sleep Disorders <i>Michael H. Silber, M.D.</i>
2:00	Electrophysiologic Evaluation of Autonomic Disorders <i>William P. Cheshire, M.D.</i>
3:00	Adjourn

Friday, March 13, 2009

(EEG)

7:30 a.m.	Continental Breakfast
8:00	Physiologic Basis of EEG and Electrical Fields <i>Gregory A. Worrell, M.D., Ph.D.</i>
8:30	Normal Adult EEG and Benign Variants <i>Jeffrey W. Britton, M.D.</i>
9:20	Normal Infant and Children's EEGs <i>Barbara F. Westmoreland, M.D.</i>
10:10	Break
10:35	Abnormal EEGs in Children <i>Katherine C. Nickels, M.D.</i>
11:20	Artifacts in the EEG <i>Jeffrey W. Britton, M.D.</i>



- 12:10 Lunch
1:10 EEG in Partial and Generalized Seizures
Jerry J. Shih, M.D.
1:55 EEG in Status Epilepticus
Joseph F. Drazkowski, M.D.
2:35 EEG Reading Session – You Make the Call
Faculty
3:15 Adjourn

Saturday, March 14, 2009

EEG Monitoring and Video EEG

- 7:30 a.m. Continental Breakfast
8:00 Prolonged EEG and Ambulatory EEG
Gregory D. Cascino, M.D.
8:30 Video EEG for Spells and Seizures in Adults
Joseph F. Drazkowski, M.D.
9:30 Video-EEG for Spells and Seizures in Children
Raj Sheth, M.D.
10:30 Break
10:55 Intraoperative EEG Monitoring/Intracranial, Carotid, Amytal
Jerry J. Shih, M.D. and Richard S. Zimmerman, M.D.
12:00 Lunch
1:00 EEG in the ICU: Coma, Infections, and Encephalopathies
Elson L. So, M.D.
1:50 Electrical Stimulation and Seizure Control
Gregory A. Worrell, M.D., Ph.D.
2:30 Video-EEG Reading Session – You Make the Call
Faculty
3:15 Adjourn



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