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

Featuring an ABPN Approved Self-Assessment Activity

New Location
Westin Kierland Resort & Spa
Scottsdale, Arizona
Sunday–Saturday
January 29-February 4, 2012

Mayo School of Continuous Professional Development
College of Medicine
www.mayo.edu
COURSE HIGHLIGHTS
Topics include the fundamental basis for CNP tests including physiology, pathophysiology, clinical correlation and appropriate use of these techniques. Specific procedures include EEG, EMG/nerve conduction studies, evoked potentials, movement disorders studies, autonomic studies, polysomnography, and intraoperative monitoring. Clinical correlation with sleep and neurologic based diseases will be stressed. Newer techniques will be added to this year’s course such as vestibular testing. Also take away pearls on coding, billing and proposed quality metrics for managing the person with epilepsy.

COURSE LEARNING OBJECTIVES
Upon completion of this course, participants should be able to:

- Evaluate reading skills of the routine EEG recognizing potentially confounding normal variants, artifacts and normal waveforms versus epileptiform activity.
- Identify which tests are pertinent to specific clinical problems in EMG.
- Develop an approach to the use of the EMU (epilepsy monitoring unit).
- Identify common treatments using botulinumtoxin in neurophysiology.

INTENDED AUDIENCE
The audience for this course will be practitioners interested in the clinical practice of neurophysiology including both basic and advanced theory and practice. Practitioners looking for a comprehensive review of the CNP or wishing to advance their knowledge base in these areas are encouraged to attend.

DISCLAIMER
Attendance at this Mayo course does not indicate nor guarantee competence or proficiency in the performance of any procedures which 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 live activity for a maximum of 60 AMA PRA Category 1 Credits™ and self assessment 8 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Board of Psychiatry and Neurology has reviewed the “Mayo Clinic Electromyography (EMG), Electroencephalography (EEG), and Neurophysiology in Clinical Practice” program, January 29 – February 4, 2012, ( awarding 60 AMA PRA Category 1 credits™, and self assessment 8 AMA PRA category 1 credits™) and has approved this program as part of a comprehensive self assessment program, which is mandated by the ABMS as a necessary component of maintenance of certification.

A record of attendance will be provided to all registrants for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

MEETING LOCATION & ACCOMMODATIONS
Westin Kierland Resort & Spa
6902 East Greenway Parkway
Scottsdale, Arizona 85254
(800) 354-5892 • www.kierlandresort.com

You are urged to make reservations early. A limited block of guest rooms have been reserved for attendees with a special course rate of $259 single or double occupancy per night at Westin Kierland Resort & Spa includes unlimited internet access in guest rooms. Group rates will be honored 3 days prior and 3 days following the course dates, based upon space availability. To make your reservation, call (800) 354-5892.

To receive the special rate, you must make reservations before the room block is filled by the expiration date of January 6, 2012. Reservations will be taken following this date based upon resort room availability, at the contracted meeting rate. Attendees are responsible for their own reservations. The standard hotel reservation cancellation policy will apply to individual reservations unless otherwise specified.
AMERICANS WITH DISABILITIES ACT
College of Medicine, Mayo Clinic fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify us at least two weeks prior to the activity. E-mail address: mca.cme@mayo.edu

GRANTS & EXHIBITS
This course is supported in part by educational grants, in accordance with ACCME standards. As of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the meeting. Exhibits will be available for viewing at all scheduled breaks.

RECREATION/LEISURE ACTIVITIES
Visit www.visitphoenix.com or www.scottsdalecvb.com for additional recreation and leisure activities.

TRANSPORTATION
Ground Transportation: Hertz is offering a reduced daily rate for participants attending the course. Call (800) 654-2240 and refer to CV Number #03NR0007 when making reservations.

Supershuttle vans offer airport transportation to and from the hotel. To make reservations, call (800) 258-3826 or (602) 244-9000.

Program (EMG / EEG)

Sunday, January 29, 2012 (EMG)

7:00 a.m.  Registration & Continental Breakfast
7:50    Welcome and Introduction
        Benn E. Smith, M.D.

CLINICAL CORRELATIONS
8:00   Physiology and Electrophysiologic Correlates of Nerve Pathology
        P. James B. Dyck, M.D.
8:45   Physiology and Electrophysiologic Correlates of Muscle Pathology
        Brian A. Crum, M.D.
9:30   Break
9:45   Electrophysiologic Correlates of Neuromuscular Junction Pathology
        Brent P. Goodman, M.D.
10:30  Motor Unit Number Estimates
        Jasper R. Daube, M.D.
11:30  Lunch (complimentary)

NERVE CONDUCTION STUDIES
12:30 p.m.  Pitfalls of Nerve Conduction Studies (NCS)
            Eric J. Sorenson, M.D.
1:00   Special Sensory NCS
        Mark A. Ross, M.D.
1:30   Uncommon Motor NCS Including Proximal and Late Responses
        Mark A. Ross, M.D.
2:15   NCS in the Pediatric Population
        Randa Jarrar, M.D.
3:00   Break
3:15   Repetitive Stimulation: Physiology and Techniques
        Brent P. Goodman, M.D.
4:00   Electrophysiologic Evaluation of Cranial Nerve Disorders
        Alex Hlubocky, M.D.
5:00   Dinner
6:00   Case Presentations
        Drs. E. Peter Bosch, P. James B. Dyck, Brent P. Goodman, and Ales Hlubocky
8:00   Adjourn
Monday, January 30, 2012 (EMG)

7:00 a.m.  Continental Breakfast

ELECTROMYOGRAPHY

7:45  Quiz & Discussion
8:15  Needle Examination Technique
      Devon I. Rubin, M.D.
8:45  EMG Signal Analysis: Introduction with Video Examples I
      Drs. Jasper R. Daube and Devon I. Rubin
9:45  Break
10:00 EMG Signal Analysis: Introduction with Video Examples II
      Drs. Jasper R. Daube and Devon I. Rubin
11:00 Needle EMG of Unusual Muscles
      Eric J. Sorenson, M.D.

Noon  Lunch
1:00 p.m.  Single Fiber EMG
           Brian A. Crum, M.D.
2:00  Crafting the EMG Report
      Benn E. Smith, M.D.
2:45  Break
3:00  Demonstrations: Nerve Conduction Studies
      – Common and Uncommon Upper Limb Motor and Sensory NCS
      – Common and Uncommon Lower Limb Motor and Sensory NCS
      – Somatosensory Evoked Potentials
4:00  Demonstrations: Nerve Conduction Studies
      – Common and Uncommon Upper Limb Motor and Sensory NCS
      – Common and Uncommon Lower Limb Motor and Sensory NCS
      – Motor Unit Number Estimates
5:00  Demonstrations: Nerve Conduction Studies
      – Common and Uncommon Upper Limb Motor and Sensory NCS
      – Common and Uncommon Lower Limb Motor and Sensory NCS
      – Cranial Nerve Conduction Studies and Repetitive Stimulation Techniques
6:00  Dinner
7:00  EMG Signal Analysis: Demonstration
      Drs. Jasper R. Daube and Devon I. Rubin
11:00 Adjourn

Tuesday, January 31, 2012 (EMG)

6:45 a.m.  Continental Breakfast

APPROACH TO SELECTED CLINICAL DISORDERS

7:15  Quiz
7:45  Carpal Tunnel Syndrome
      James C. Watson, M.D.
8:30  Brachial Plexopathy
      Alex Hlubocky, M.D.
9:00  Peripheral Neuropathy
      Benn E. Smith, M.D.
9:30  Break
9:45  Ulnar Neuropathies
      Mark A. Ross, M.D.
10:15 Lumbosacral Plexopathy
      P. James B. Dyck, M.D.
10:45 Motor Neuron Disease
      Eric J. Sorenson, M.D.
11:30 Neuromuscular Junction Disease
      Devon I. Rubin, M.D.
12:30 p.m.  Lunch (complimentary)
1:30  EMG Approaches to Pediatric Disorders
     Randa Jarrar, M.D.

2:15  Localization with EMG
     Brent P. Goodman, M.D.

3:00  Break

DEMONSTRATIONS

3:15  Group Demonstrations: Needle Electrode Examinations
     – Technique of the Needle Examination
     – Lower Limb Common and Uncommon Muscles
     – Quantitative Electromyography

4:15  Group Demonstrations: Needle Electrode Examinations
     – Upper Limb Common and Uncommon Muscles
     – Lower Limb Common and Uncommon Muscles
     – Single Fiber Electromyography

5:15  Group Demonstrations: Needle Electrode Examinations
     – Upper Limb Common and Uncommon Muscles
     – Lower Limb Common and Uncommon Muscles
     – Technique of the Needle Examination

7:00  Adjourn

Wednesday, February 1, 2012 (EMG/EEG)

7:00  Registration & Continental Breakfast

CNP FUNDAMENTALS

7:45  Electricity, Filters and Circuit Analysis: Electrical Safety
     Gregory A. Worrell, M.D.

8:15  Recent Developments in EEG for Seizures:
     Stimulation, Prediction and High Frequency Oscillations
     Gregory A. Worrell, M.D.

9:00  Intraoperative Monitoring Spinal/Cranial/Peripheral
     Brian A. Crum, M.D.

9:45  Break

10:00 Vestibular Testing
     Michael J. Cevette, Ph.D.

11:00 Essentials of Physiology of Muscle
     Benn E. Smith, M.D.

11:45 Lunch (complimentary)

12:45 p.m. Visual and Brainstem Evoked Potentials
     Jonathan L. Carter, M.D.

1:30  Routine Somatosensory Evoked Potentials
     James C. Watson, M.D.

2:15  Essentials of Physiology of the Cerebral Cortex
     Gregory D. Cascino, M.D.

3:00  Break

3:15  Long Latency Evoked Potentials
     Benn E. Smith, M.D.

3:45  Epidermal Skin Biopsy in Small Fiber Neuropathy
     Charlene Hoffman Snyder, DNP, NP-BC

4:15  Ultrasonography as a Compliment to Electrodiagnosis
     James C. Watson, M.D.

5:15  Ultrasonography Demonstration
     Drs. Eric J. Sorenson and James C. Watson

6:15  Adjourn

Thursday, February 2, 2012 (EEG)

CNP: MOVEMENT, SLEEP AND AUTONOMIC

7:30 a.m. Continental Breakfast

8:00  Evaluation of Sleep Disorders
     Michael H. Silber, M.B., Ch.B.
Program (EMG / EEG)

Friday, February 3, 2012 (EEG Core Principles)

7:30 a.m.  Continental Breakfast
8:00  Normal Infant and Children’s EEGs
       Lily C. Wong-Kisiel, M.D.
8:45  Abnormal Infant and Children’s EEGs
       Lily C. Wong-Kisiel, M.D.
9:30  Video Peds: EEG for Seizure Localization and Surgery Evaluations
       Raj D. Sheth, M.D.
10:15  Break
10:30  EEG Status Epilepticus Peds
       Randa Jarrar, M.D.
11:30  Normal Adult EEG with Benign Variants
       Matthew T. Hoerth, M.D.
12:15 p.m.  Lunch (complimentary)
1:15  Adult Epileptiform Activity
       Katherine H. Noe, M.D., Ph.D.
1:45  EEG in Status Epilepticus Adult
       Katherine H. Noe, M.D., Ph.D.
2:30  Break
2:45  Pitfalls in EEG Interpretation
       William O. Tatum IV, D.O.
3:45  Adult Video: EEG for Seizure Localization and Surgery Planning
       Gregory D. Cascino, M.D.
4:45  Adjourn

Saturday, February 4, 2012 (EEG Skills in the Hospital Setting)

7:30 a.m.  Continental Breakfast
8:00  EEG in the ICU
       Elson So, M.D.
9:00  EMU: Peds
       Elaine C. Wirrell, M.D.
10:15  Break
10:30  EEG in the OR
       Richard S. Zimmerman, M.D.
11:00  EMU Adult
       Joseph F. Drazkowski, M.D.
12:15 p.m.  Quiz
1:00  Adjourn
MAYO FACULTY

Charles H. Adler, M.D., Ph.D.
E. Peter Bosch, M.D.
Jeffrey W. Britton, M.D.
Jonathan L. Carter, M.D.
Gregory D. Cascino, M.D.
John N. Caviness, M.D.
Michael J. Cevette, Ph.D.
Brian A. Crum, M.D.
Jasper R. Daube, M.D.
Joseph F. Drazkowski, M.D.*
P. James B. Dyck, M.D.
Virgilio H. Evidente, M.D.
Brent P. Goodman, M.D.
Alex Hlubocky, M.D.
Matthew T. Hoerth, M.D.
Charlene Hoffman Snyder, DNP, NP-BC
Phillip A. Low, M.D.

Mark K. Lyons, M.D.
Katherine H. Noe, M.D., Ph.D.
Mark A. Ross, M.D.
Devon I. Rubin, M.D.
Raj D. Sheth, M.D.
Michael H. Silber, M.B., Ch.B.
Benn E. Smith, M.D.*
Elson So, M.D.
Eric J. Sorenson, M.D.
William O. Tatum IV, D.O.
James C. Watson, M.D.
Elaine C. Wirrell, M.D.
Lily C. Wong-Kisiel, M.D.
Gregory A. Worrell, M.D.
Richard S. Zimmerman, M.D.

*Course Directors

GUEST FACULTY

Randa Jarrar, M.D.
Child Neurology
Phoenix Children’s Hospital
Phoenix, Arizona

FACULTY DISCLOSURE:

As a provider accredited by ACCME, College of Medicine, Mayo Clinic (Mayo School of CPD) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course Director(s), Planning Committee Members, 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 will also 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.

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REGISTRATION FORM

EMG, EEG and Clinical Neurophysiology in Clinical Practice
January 29 – February 4, 2012

Registration at the standard fee may be completed using this form and faxing it to (480) 301-9176. Or you can mail it to: Mayo Clinic, Mayo School of CPD, 13400 East Shea Boulevard, Scottsdale, Arizona 85259.

An e-mail confirmation will be sent upon receipt of payment and completed registration. If you do not receive your confirmation, or if you have any questions, please e-mail us at mca.cme@mayo.edu or call (480) 301-4580.

No refund will be granted unless a written notice of cancellation is received. If registration must be canceled, tuition less a $75 administrative fee, will be refunded when notification is received on or before January 13, 2012. No refunds will be made after this date.

Although it is not Mayo Clinic’s policy to limit the number of registrants for a course, conference room facilities may necessitate closure of enrollment. Early registration is strongly recommended. Walk-in registrations cannot be guaranteed.

Mayo Clinic will not be responsible for expenses incurred by individuals who are not confirmed for courses with a closed registration status. Costs incurred by the registrant such as airline/hotel fees or penalties are the responsibility of the registrant.

ON-LINE SYLLABUS: Your registration fee includes access to an detailed on-line syllabus, e-mailed one week prior to the course. This allows you to view, save, or print the syllabus before attending the course. If you want to order a paper copy (additional fee), check the box at the bottom of this registration form.

Your type of practice: ☐ Solo ☐ Group ☐ University ☐ Resident/Fellow ☐ Retired ☐ Other: __________

Years in practice: ☐ 0-4 ☐ 5-10 ☐ 11-15 ☐ 16-25 ☐ > 25

Course Registrant List (Check only if you want your name removed)
☐ I do not want information (ie, name, degree, city, and state) to appear on the course registrants’ list.

Registration Please print. Use duplicate form for multiple registrations.

Name of Registrant – first, middle, and last name

Institution

Degree/Certification

Medical Specialty

Preferred mailing address is: (select one) ☐ Work/Business ☐ Home

Address

City

State/Province

ZIP/Postal Code

Country

Email

Daytime Telephone

Fax

If you have special assistance needs or dietary restrictions, describe here:

$75 DISCOUNT for online registration! Go to www.mayo.edu/cme (offer expires January 3, 2012)

Note: When registering on-line, please be sure to “check-out” after your profile is completed/updated.

☐ EMG + EEG $1,475 $ __________

☐ EMG only (Sunday – Wednesday) $1,050 $ __________

☐ EEG only (Wednesday – Saturday) $950 $ __________

☐ Paper copy of the EMG syllabus: $45 $ __________

☐ Paper copy of the EEG syllabus: $30 $ __________

Note: Due to printing deadlines, this option will not be available after January 13, 2012

Payment Information (US Funds Only)

☐ Check is enclosed in the amount shown at right – make checks payable to Mayo Clinic CPD Payment Total

Credit Card (select one)

Account Number

Exp. Date (mm/yy)

Discover ☐ MC ☐ Visa

Signature

Date

Note: Due to printing deadlines, this option will not be available after January 13, 2012