**Neuro-rehabilitation Overview**

If your schedule won’t allow you to stay for the whole meeting, maximize your time in Los Angeles and get the most out of a shorter trip with this Neuro-rehabilitation specialty track that will take place on consecutive days. Look for education and science covering the full gamut of neuro-rehabilitation topics, and don’t miss the related Frontiers in Neuroscience Plenary Session and scientific platform sessions taking place in the dynamic, interactive experiential learning areas.

**Tuesday, April 24**
3:30 p.m.–5:30 p.m.
C120  Lumbar Radiculopathy, Lumbar Spinal Stenosis, Low Back Pain, and Failed Back Syndrome

**Wednesday, April 25**
7:00 a.m.–9:00 a.m.
C143  Evaluation and Treatment of Common Spine Disorders
9:15 a.m.–9:35 a.m.
Frontiers in Neuroscience Plenary Session: The Dynamics of the Unconscious Brain under General Anesthesia
1:00 p.m.–3:00 p.m.
C145  Severe TBI: From ICU to Rehabilitation
3:30 p.m.–5:30 p.m.
C160  Neurology Update II: Movement Disorders, Spine Disorders, and Sleep Disorders
4:30 p.m.–5:10 p.m.
S36  Neuro-rehabilitation Platform Session

**Thursday, April 26**
7:00 a.m.–9:00 a.m.
C174  Rehabilitation in Neurology
1:00 p.m.–3:00 p.m.
C186  Myelopathies I: Recognizing and Evaluating Myelopathic Patients for Inflammatory and Vascular Causes
3:30 p.m.–5:30 p.m.
C200  Myelopathies II: Approaches to Rehabilitation and Psychosocial Challenges

**Friday, April 27**
3:30 p.m.–5:30 p.m.
C235  Neck Pain, Cervical Spinal Stenosis, Cervical Radiculopathy, and Cervical Spondylotic Myelopathy

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**Course**

**Tuesday, April 24, 2018**  
3:30 p.m.–5:30 p.m.

**C120**  
Lumbar Radiculopathy, Lumbar Spinal Stenosis, Low Back Pain, and Failed Back Syndrome

**Topics:**  
Pain and Palliative Care; Neuro-rehabilitation

**Director:**  
Ligia Viorela Onofrei, MD, Salt Lake City, UT

See complete course description on [page 173 »](#)

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**Course**

**Wednesday, April 25, 2018**  
7:00 a.m.–9:00 a.m.

**C143**  
Evaluation and Treatment of Common Spine Disorders

**Topics:**  
Neuro-rehabilitation; Pain and Palliative Care

**Director:**  
J. D. Bartleson, MD, FAAN, Rochester, MN

**Program Description:**

Neurologists should play a primary role in evaluating patients with spine and/or limb pain because of our ability to detect the presence of spinal cord, spinal nerve, and cauda equina injury. Many neurologists are uncomfortable evaluating patients with spine and limb pain because of a lack of training during residency and a paucity of instructional courses at neurology meetings. Faculty will describe important aspects of the history and neurological and musculoskeletal examination of patients with common spine disorders and cover the use of neurophysiologic testing in the diagnosis of spinal and limb pain. Treatment for common acute and chronic spine disorders is available and effective. Treatment
Neuro-rehabilitation of the patient with spine and limb pain can be gratifying. However, many treatment modalities, including surgery, are used prematurely and excessively. Faculty will describe the treatments that are appropriate for acute and chronic axial spine pain, radiculopathy, spondylolytic myelopathy, lumbar spinal stenosis, and cauda equina syndrome. This course will focus on common spine disorders, mostly due to spondylosis.

Upon Completion:
Participants will be able to diagnose and treat patients with common spine disorders. Treatment options include medications, physical therapies, injections, blocks, and surgery.

Lecture/Faculty:
- Evaluation of Common Spine Disorders
  Ligia Viorela Onofrei, MD, Salt Lake City, UT
- Treatment of Common Spine Disorders
  J. D. Bartleson, MD, FAAN, Rochester, MN

Core Competencies: Medical Knowledge, Patient Care

Teaching Style: Case-Based, Didactic

CME Credits: 2

Recommended Audience: Advanced Practice Provider, General Neurologist, Non-Neurologist, Specialist Neurologist, Trainee

Plenary Session

Wednesday, April 25, 2018 9:15 a.m.–11:30 a.m.

Frontiers in Neuroscience Plenary Session

Topics:
- Sleep;
- MS and CNS Inflammatory Disease;
- Aging, Dementia, Cognitive, and Behavioral Neurology;
- General Neurology; Neuro-rehabilitation;
- Child Neurology and Developmental Neurology

Moderator: Paul M. George, MD, PhD, MSE, Stanford, CA

9:15 a.m.–9:35 a.m.
- The Dynamics of the Unconscious Brain under General Anesthesia
  Emery Brown, MD, PhD, Cambridge, MA

9:45 a.m.–10:05 a.m.
- Severe TBI in the ICU: Management and Prognosis
  Susanne Muehlschlegel, MD, MPH, Worcester, MA
- Imaging in Severe TBI
  Brian Edlow, MD, Boston, MA
- Pharmacological and Rehabilitative Approaches to Neurological Sequelae of TBI
  David L. Brody, MD, PhD, Saint Louis, MO

Core Competencies: Practice-Based Learning and Improvement, Medical Knowledge, Patient Care

Teaching Style: Audience Participation, Case-Based, Didactic

CME Credits: 2

Recommended Audience: Non-Neurologist, Specialist Neurologist, Trainee, NeuroIntensivist, Advanced Practice Provider, General Neurologist, Neurohospitalist

Course

Wednesday, April 25, 2018 3:30 p.m.–5:30 p.m.

C160 Neurology Update II: Movement Disorders, Spine Disorders, and Sleep Disorders

Topic: General Neurology; Movement Disorders; Neuro-rehabilitation; Sleep

Director: Ralph F. Józefowicz, MD, FAAN, Rochester, NY

Program Description:
Traumatic brain injury (TBI) is one of the most common, disabling neurologic disorders. Severe TBI continues to be the leading cause of death and disability after trauma accounting for most of the 52,000 TBI-related deaths in the US annually. Severe TBI presents many difficult clinical and research challenges in diagnosis and treatment, including early diagnosis and management to limit secondary injury, as well as prognostication. This course will focus on severe TBI from the acute care stage in the ICU to rehabilitation. Faculty will discuss the mechanisms of brain damage after TBI, with emphasis on secondary brain injury, as well as best practices for acute management and prognostication after severe TBI. Speakers will present up-to-date guideline-based management strategies; cutting-edge clinical and research neuroimaging methods including diffusion tensor imaging; describe emerging research in biomarkers, prognostication, and decision-making; and address current controversies of diagnosis and treatment.

Upon Completion:
Participants should be familiar with the variety of pathophysiologic mechanisms associated with TBI and how to prevent or minimize secondary brain injury with up-to-date acute management recommendations emphasizing relevant guidelines; and be comfortable using clinical information and imaging techniques to aid in prognostication after severe TBI.

Lecture/Faculty:
- Severe TBI in the ICU: Management and Prognosis
  Susanne Muehlschlegel, MD, MPH, Worcester, MA
- Imaging in Severe TBI
  Brian Edlow, MD, Boston, MA
- Pharmacological and Rehabilitative Approaches to Neurological Sequelae of TBI
  David L. Brody, MD, PhD, Saint Louis, MO

Core Competencies: Practice-Based Learning and Improvement, Medical Knowledge, Patient Care

Teaching Style: Audience Participation, Case-Based, Didactic

CME Credits: 2

Recommended Audience: Non-Neurologist, Specialist Neurologist, Trainee, NeuroIntensivist, Advanced Practice Provider, General Neurologist, Neurohospitalist
Program Descriptions

Scientific Platform Session

Wednesday, April 25, 2018  4:30 p.m.–5:10 p.m.

**S36** Neuro-rehabilitation Platform Session

**Topic:** Neuro-rehabilitation

**Course**

Thursday, April 26, 2018  7:00 a.m.–9:00 a.m.

**C174** Rehabilitation in Neurology

**Topic:** Neuro-rehabilitation

**Director:** Marc W. Slutzky, MD, PhD, Chicago, IL

**Program Description:**

Neurologic rehabilitation is a dynamic process through which patients optimize physical, cognitive, and social functions. It is a patient-centered, multidisciplinary endeavor involving neurologists and a wide range of providers. The ultimate objectives are to renew or maintain independence, participation, and quality of life despite the impairments. Over the past two decades, growing evidence supports specific approaches to neurologic rehabilitation. Rehabilitation is also the translation of basic and clinical neuroscience research to maximize mechanisms of neural reorganization and compensation. Faculty will use the examples of post-stroke care, as well as the care of patients with spinal cord injury, to highlight the role of neurologists in rehabilitation, as well as highlight future directions and emerging technologies that promise to revolutionize neurologic rehabilitation.

**Upon Completion:**

Participants should be able to develop a greater understanding of the multidisciplinary care of patients with disability from neurologic diseases, as well as develop understanding of the current research for improving care.

**Lecture/Faculty:**

- Brain Repair After Stroke
  
  Steven C. Cramer, MD, FAAN, Irvine, CA

- SCI Rehabilitation
  
  An Hong Do, MD, Orange, CA

- Neurotechnology in Rehabilitation
  
  Marc W. Slutzky, MD, PhD, Chicago, IL

**Core Competencies:** Patient Care, Medical Knowledge

**Teaching Style:** Case-Based, Didactic

**CME Credits:** 2

**Recommended Audience:** Advanced Practice Provider, General Neurologist, Non-Neurologist, Specialist Neurologist, Trainee, Researchers

Course

Thursday, April 26, 2018  1:00 p.m.–3:00 p.m.

**C186** Myelopathies I: Recognizing and Evaluating Myelopathic Patients for Inflammatory and Vascular Causes

**Topic:** Neuro-rehabilitation

**Director:** Benjamin M. Greenberg, MD, FAAN, Dallas, TX

**Program Description:**

Acute and subacute myelopathies are common diagnostic considerations in neurological practice. Patients and clinicians are forced to consider multiple potential conditions that are considered neurological emergencies. Myelitis is one potential cause of acute and subacute myelopathy that must be considered. Updates to the approach to diagnosis and consideration of a variant of myelitis—acute flaccid myelitis—will be covered in this course. Furthermore, vascular myelopathies can be difficult to diagnose if clinicians are not familiar with both the presentation and options for testing. This course will use didactic and case-based presentations to cover topics related to the diagnosis and management of patients with inflammatory and vascular myelopathies.

This program complements C200: Myelopathies II: Approaches to Rehabilitation and Psychosocial Challenges, but covers independent topics.

**Upon Completion:**

Participants should be able to initiate a work up for acute and subacute myelopathy, initiate empiric treatment, and understand when to order comprehensive testing for vascular myelopathies. Participants will be able to differentiate classical transverse myelitis from acute flaccid myelitis and appreciate the therapeutic and prognostic implications of this differentiation.

**Lecture/Faculty:**

- Inflammatory Myelopathies
  
  Benjamin M. Greenberg, MD, FAAN, Dallas, TX

- Vascular Myelopathies
  
  Philippe Gailloud, MD, Baltimore, MD

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Audience Participation, Case-Based, Didactic, Interactive

**CME Credits:** 2

**Recommended Audience:** Advanced Practice Provider, General Neurologist, Non-Neurologist, Specialist Neurologist, Trainee, Researchers
**Course**

**C200** Myelopathies II: Approaches to Rehabilitation and Psychosocial Challenges

**Topic:** Neuro-rehabilitation  
**Director:** Benjamin M. Greenberg, MD, FAAN, Dallas, TX

**Program Description:**
Spinal cord disorders are frequently encountered by both general and subspecialty neurologists. They are potentially devastating, but treatable, conditions that require prompt recognition, testing, and treatment. Rapid scientific advances have enhanced and broadened our understanding of a wide spectrum of these disorders. The first part of this course will cover recognition, classification, diagnostic investigation, and management of myelopathies. Faculty will discuss vascular myelopathies, inflammatory and immune-mediated myelopathies, and the diagnostic approach to these syndromes. In this portion of the course we will review rehabilitation and symptomatic issues related to myelopathies. We will review gait assessments and psychosocial aspects of these conditions. Case-based learning points will be used and will focus on practical clinical information and a comprehensive update on recent developments.

This program complements C186: Myelopathies I: Recognizing and Evaluating Myelopathic Patients for Inflammatory and Vascular Causes, but covers independent topics.

**Upon Completion:**
Participants should be able to evaluate gait disorders related to spinal cord dysfunction, understand therapeutic approaches, and be able to understand the psychosocial impacts of these conditions.

**Lecture/Faculty:**
- Psychosocial Considerations in Myelopathy  
  Lana Harder, PhD, Dallas, TX  
- Evaluating Gait Patterns in Myelopathic Patients  
  Karen McCain, DPT, Dallas, TX  
- Case-based Study of Myelopathy  
  Benjamin M. Greenberg, MD, FAAN, Dallas, TX

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Didactic, Interactive

**CME Credits:** 2

**Recommended Audience:** Advanced Practice Provider, Trainee, General Neurologist, Non-Neurologist, Specialist Neurologist

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**Course**

**C235** Neck Pain, Cervical Spinal Stenosis, Cervical Radiculopathy, and Cervical Spondylotic Myelopathy

**Topics:** Neuro-rehabilitation; Pain and Palliative Care

**Director:** John W. Engstrom, MD, FAAN, San Francisco, CA

**Program Description:**
Neck and low back pain are the second most common reason outpatients seek the opinion of a neurologist. This program is designed to improve the competence of neurology care providers in the management of common cervical spine disorders, skills not commonly taught to neurology residents during training. Presenters will use a combination of case presentations and didactic teaching to engage the audience.

**Upon Completion:**
Participants should be able to affectively use “red flags” to identify patients at risk for a serious cause of neck pain, know how to follow the course of nerve roots on spine imaging to understand the common causes of radiculopathy, know how to assess cervical spinal stenosis for possible mimics of myelopathy, and be able to develop a rational plan for conservative or surgical care in the setting of cervical spondylotic myelopathy.

**Lecture/Faculty:**
- Initial Evaluation and Management of Neck Pain  
  Jeffrey Ralph, MD, San Francisco, CA  
- Cervical Spinal Stenosis  
  John W. Engstrom, MD, FAAN, San Francisco, CA  
- Cervical Radiculopathy  
  Jeffrey Ralph, MD, San Francisco, CA  
- Cervical Spondylotic Myelopathy  
  John W. Engstrom, MD, FAAN, San Francisco, CA

**Core Competencies:** Medical Knowledge, Patient Care

**Teaching Style:** Case-Based, Didactic, Interactive

**CME Credits:** 2

**Recommended Audience:** Advanced Practice Provider, General Neurologist, Non-Neurologist, Specialist Neurologist, Trainee