Epilepsy and EEG in Clinical Practice Online

Activity Description
This course is intended for neurologists, physicians in internal medicine, family practice and general practice physicians, pediatricians, physician assistants, nurses and allied health professionals involved in the care of patients with seizures and epilepsy.

Target Audience
This course is intended for neurologists, physicians in internal medicine, family practice and general practice physicians, pediatricians, physician assistants, nurses and allied health professionals involved in the care of patients with seizures and epilepsy.

Learning Objectives
Upon conclusion of this activity, participants should be able to:

- Discuss common errors when treating children and young adults with recurrent spells
- Describe the challenges associated with the diagnosis and management of seizures in patients with and without epilepsy
- Recognize the gaps in treatment that exist for adults with recurrent attacks when medication fails to provide control
- Discuss the impact of misdiagnoses in the treatment of epilepsy
- Recognize common normal variations in EEG including the benign variants that may be misleading
- Identify when to use different techniques in recording and monitoring patients with seizures
- Recognize the impact of video-EEG monitoring in the diagnosis and treatment of patients with recurrent seizures and attacks that are resistant to medication
- Compare treatment strategies for refractory seizure disorders

Attendance at this Mayo Clinic course does not indicate nor guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course.

Accreditation Statement

In support of improving patient care, Mayo Clinic College of Medicine and Science is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Statement(s)
AMA
Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 14.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC
Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 14.75 ANCC nursing contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.

Other Healthcare Professionals

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.

Disclosure Summary

As a provider accredited by Joint Accreditation Interprofessional Continuing Education, Mayo Clinic College of Medicine and Science 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 also will disclose any off label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of these relevant financial relationships will be published in activity materials so those participants in the activity may formulate their own judgments regarding the presentation.

Listed below are individuals with control of the content of this program who have disclosed…

Relevant financial relationship(s) with industry:

Brian N. Lundstrom, M.D., Ph.D.	Consultant	Medtronic, Inc. and Philips, Inc.
	Grant/Research Support	Principal investigator for the Medtronic Deep Brain Stimulation Therapy for Epilepsy Post-Approval Study (EPAS).
	Other: Inventor	Intellectual property licensed to Cadence Neuroscience Inc., which is co-owned by Mayo Clinic. Waived contractual rights to royalties.
Anthony L. Ritaccio, M.D.	Consultant	Guger Technologies (unpaid member of advisory board)
	Other	Licensing agreement Guger technologies Patent: Provisional Pat. Ser. No. 62/156,237, filed 2015
Joseph I. Sirven, M.D.	Grant/Research Support	UCB
	Other: Data Monitoring Safety Board	Gore, Medtronic
William Tatum, D.O.	Consultant	Bioserentity Medtronics International League Against Epilepsy (Task Force)
	Grant/Research Support	Grants: Esai, Mayo Clinic Industry support: Syneos, Xenon, LivaNova, Engage
	Honorarium	American Academy of Neurology American Clinical Neurophysiology Society
	Other: Stipend	Stipend, Elsevier, Editor-in-Chief Epilepsy Behavior Reports Royalties: Demos, Springer, Cambridge
Gregory A. Worrell, M.D., Ph.D.	Stock Shareholder (self-managed)	NeuroOnc, Inc.

No relevant financial relationship(s) with industry:

Karen E. Blackmon, Ph.D.
Benjamin H. Brinkmann, Ph.D.
Jeffrey W. Britton, M.D.
David B. Burkholder, M.D.
Gregory D. Cascino, M.D.
Amy Z. Crepeau, M.D.
Anteneh M. Feyissa, M.D.
William D. Freeman, M.D.
Alfonso S. Lopez Chiriboga, M.D.
Erik H. Middlebrooks, M.D.
Kai J. Miller, M.D., Ph.D.
Katherine H. Noe, M.D., Ph.D.
Raj D. Sheth, M.D.
Elson So, M.D.

Lily C. Wong-Kisiel, M.D.

References to off-label and/or investigational usage(s) of pharmaceuticals or instruments in their presentation:

Benjamin H. Brinkmann, Ph.D.	Medtronic	Summit RC+S
	UNEEG	SubQ Subscalp Electrode
Jeffrey W. Britton, M.D.	Multiple	methylprednisolone (for autoimmune encephalitis) intravenous IgG (for autoimmune encephalitis) rituximab (for autoimmune encephalitis)
	Genentech	tocilizumab (for new onset refractory status epilepsticus)
	Multiple	buccal lorazepam, diazepam, midazolam (treatment for acute repetitive seizures) intranasal midazolam via nasal nebulizer (treatment for acute repetitive seizures)
	Epilog	Epitel
	Biovotion	Everion
Kai J. Miller, M.D., Ph.D.	Dixi	SEEG Electrodes
Gregory A. Worrell, M.D., Ph.D.	Medtronic	Deep brain stimulation for epilepsy

For disclosure information regarding Mayo Clinic School of Continuous Professional Development accreditation review committee member(s) please visit: https://ce.mayo.edu/content/disclosures.

Disclaimer
Participation in this Mayo Clinic educational activity does not indicate nor guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course. You should be aware that substantive developments in the medical field covered by this recording may have occurred since the date of original release.

Prerequisites for Participation
There are no prerequisites needed prior to participating in this education activity.

Method of Participation
Participation in this activity consists of reviewing the educational material, completing the learner assessment and evaluation.

How to Obtain Credit
To obtain credit, complete the assessment, evaluation and submit.

Release and Expiration Dates*
Release Date: 2/5/2021
Expiration Date: 2/5/2024

Acknowledgement of Commercial Support
No commercial support was received in the production of this activity.

Faculty and Course Director Listing and Credentials
Course Directors

Brian N. Lundstrom, M.D., Ph.D.
William Tatum, D.O.
Gregory A. Worrell, M.D., Ph.D.

Faculty
Karen E. Blackmon, Ph.D.
Benjamin (Ben) H. Brinkmann, Ph.D.
Jeffrey W. Britton, M.D.
David B. Burkholder, M.D.
Gregory D. Cascino, M.D.
Amy Z. Crepeau, M.D.
Anteneh M. Feyissa, M.D.
William D. Freeman, M.D.
Alfonso S. (Sebastian) Lopez Chiriboga, M.D.
Brian N. Lundstrom, M.D., Ph.D.
Erik H. Middlebrooks, M.D.
Kai J. Miller, M.D., Ph.D.
Katherine H. Noe, M.D., Ph.D.
Anthony L. Ritaccio, M.D.
Raj D. Sheth, M.D.
Joseph I. Sirven, M.D.
Elson So, M.D.
William Tatum, D.O.
Lily C. Wong-Kisiel, M.D.
Gregory A. Worrell, M.D., Ph.D.

Bibliographic Resources
Bibliographic resources are provided within the activity.

Copyright