



Eli M. Mizrahi, M.D.

- **Chair, Department of Neurology**
- **Professor of Neurology and Pediatrics**
- **Chief, Neurophysiology Service, St. Luke's Episcopal Hospital**

Clinical Service Area

Neurology

Specialty

Epilepsy
Clinical Neurophysiology
Child Neurology
Seizure Disorders

Board Certification

American Board of Pediatrics, Pediatrics
American Board of Psychiatry and Neurology, Neurology with Special Qualifications in Child Neurology
American Board of Psychiatry and Neurology, Clinical Neurophysiology

Medical School

M.D., University of Miami Leonard M. Miller School of Medicine, Miami, Fla.

Residency

Pediatrics, Albert Einstein College of Medicine of Yeshiva University, Bronx, N.Y.
Neurology, Stanford University School of Medicine, Stanford, Calif.

Clinical Fellowship

Neurophysiology, Baylor College of Medicine, Houston, Texas

Clinical Interests

Pediatric and neonatal neurology: neonatal seizures, pediatric epilepsy, medically refractory childhood seizure disorders, pediatric epilepsy surgery and clinical neurophysiology (electroencephalography, evoked potentials and EEG/video monitoring)

Contact Information

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Journal Publications

1. Dlugos D, Shinnar S, Cnaan A, Hu F, Moshe S, Mizrahi E, et al. Pretreatment EEG in childhood absence epilepsy: associations with attention and treatment outcome. *Neurology*. 2013;81(2):150-6. [\[View journal article\]](#)
2. Haneef Z, Levin HS, Frost JD, Jr, Mizrahi EM. Electroencephalography and quantitative electroencephalography in mild traumatic brain injury. *J Neurotrauma*. 2013;30(8):653-6. [\[View journal article\]](#)
3. Andropoulos DB, Mizrahi EM, Hrachovy RA, Stayer SA, Stark AR, Heinle JS, et al. Electroencephalographic seizures after neonatal cardiac surgery with high-flow cardiopulmonary bypass. *Anesth Analg*. 2010;110(6):1680-5. [\[View journal article\]](#)
4. Dulay MF, Levin HS, York MK, Li X, Mizrahi EM, Goldsmith I, et al. Changes in individual and group spatial and verbal learning characteristics after anterior temporal lobectomy. *Epilepsia*. 2009;50(6):1385-95. [\[View journal article\]](#)
5. Dulay MF, Levin HS, York MK, Mizrahi EM, Verma A, Goldsmith I, et al. Predictors of individual visual memory decline after unilateral anterior temporal lobe resection. *Neurology*. 2009;72(21):1837-42. [\[View journal article\]](#)
6. Mitra J, Glover JR, Ktonas PY, Thitai Kumar A, Mukherjee A, Karayiannis NB, et al. A multistage system for the automated detection of epileptic seizures in neonatal electroencephalography. *J Clin Neurophysiol*. 2009;26(4):218-26. [\[View journal article\]](#)
7. Co JP, Elia M, Engel J, Jr, Guerrini R, Mizrahi EM, et al. Proposal of an algorithm for diagnosis and treatment of neonatal seizures in developing countries. *Epilepsia*. 2007;48(6):1158-64. [\[View journal article\]](#)
8. Guerra MP, Hrachovy RA, Lugli L, Mizrahi EM, Ferrari F. A new lethal case of joint contractures, facial abnormalities, pachygyria plus early-onset encephalopathy with a suppression-burst EEG pattern. *Eur J Paediatr Neurol*. 2007;11(5):318-321. [\[View journal article\]](#)
9. Dulay MF, York MK, Soety EM, Hamilton WJ, Mizrahi EM, Goldsmith IL, et al. Memory, emotional and vocational impairments before and after anterior temporal lobectomy for complex partial seizures. *Epilepsia*. 2006;47(11):1922-30. [\[View journal article\]](#)
10. Karayiannis NB, Mukherjee A, Glover JR, Ktonas PY, Frost JD, Jr, et al. Detection of pseudosinusoidal epileptic seizure segments in the neonatal EEG by cascading a rule-based algorithm with a neural network. *IEEE Trans Biomed Eng*. 2006;53(4):633-41. [\[View journal article\]](#)
11. Karayiannis NB, Tao G, Frost JD, Jr, Wise MS, Hrachovy RA, et al. Automated detection of videotaped neonatal seizures based on motion segmentation methods. *Clin Neurophysiol*. 2006;117(7):1585-94. [\[View journal article\]](#)
12. Karayiannis NB, Xiong Y, Frost JD, Jr, Wise MS, Hrachovy RA, et al. Automated detection of videotaped neonatal seizures based on motion tracking methods. *J Clin Neurophysiol*. 2006;23(6):521-31. [\[View journal article\]](#)
13. Karayiannis NB, Xiong Y, Tao G, Frost JD, Jr, Wise MS, et al. Automated detection of videotaped neonatal seizures of epileptic origin. *Epilepsia*. 2006;47(6):966-80. [\[View journal article\]](#)
14. Karayiannis NB, Sami A, Frost JD, Jr, Wise MS, Mizrahi EM. Automated extraction of temporal motor activity signals from video recordings of neonatal seizures based on adaptive block matching. *IEEE Trans Biomed Eng*. 2005;52(4):676-86. [\[View journal article\]](#)
15. Karayiannis NB, Tao G, Xiong Y, Sami A, Varughese B, Frost JD, et al. Computerized motion analysis of videotaped neonatal seizures of epileptic origin. *Epilepsia*. 2005;46(6):901-17. [\[View journal article\]](#)
16. Karayiannis NB, Varughese B, Tao G, Frost JD, Jr, Wise MS, et al. Quantifying motion in video recordings of neonatal seizures by regularized optical flow methods. *IEEE Trans Image Process*. 2005;14(7):890-903. [\[View journal article\]](#)
17. Karayiannis NB, Xiong Y, Frost JD, Jr, Wise MS, Mizrahi EM. Improving the accuracy and reliability of motion tracking methods used for extracting temporal motor activity signals from video recordings of neonatal seizures. *IEEE Trans Biomed Eng*. 2005;52(4):747-9. [\[View journal article\]](#)
18. Karayiannis NB, Xiong Y, Frost JD, Jr, Wise MS, Mizrahi EM. Quantifying motion in video recordings of neonatal seizures by robust motion trackers based on block motion models. *IEEE Trans Biomed Eng*. 2005;52(6):1065-77. [\[View journal article\]](#)
19. Mitra J, Glover J, Ktonas P, Frost J, Hrachovy R, Mizrahi E. Rule-enhanced clustering in the detection of neonatal seizures. *Conf Proc IEEE Eng Med Biol Soc*. 2005;1:948-51. [\[View journal article\]](#)
20. Karayiannis NB, Mukherjee A, Glover JR, Ktonas PY, Frost JD, Jr, et al. Quantifying and visualizing uncertainty in EEG data of neonatal seizures. *Conf Proc IEEE Eng Med Biol Soc*. 2004;1:423-6. [\[View journal article\]](#)

21. Karayiannis NB, Sami A, Frost JD, Jr, Wise MS, Mizrahi EM. Quantifying motion in video recordings of neonatal seizures by feature trackers based on predictive block matching. *Conf Proc IEEE Eng Med Biol Soc.* 2004;2:1447-50. [[View journal article](#)]
22. Karayiannis NB, Tao G, Varughese B, Frost JD, Jr, Wise MS, et al. Discrete optical flow estimation methods and their application in the extraction of motion strength signals from video recordings of neonatal seizures. *Conf Proc IEEE Eng Med Biol Soc.* 2004;3:1718-21. [[View journal article](#)]
23. Mitra J, Glover JR, Frost JD, Ktonas PA, Hrachovy RA, Mizrahi EM. Enhanced spatio-temporal clustering in the detection of neonatal seizures using context-based rules. *Conf Proc IEEE Eng Med Biol Soc.* 2004;7:4717-20. [[View journal article](#)]
24. Mizrahi EM, Pedley TA. In memoriam. Peter Kellaway, Ph.D. 1920-2003. *Epilepsia.* 2004;45(1):93-5. [[View journal article](#)]
25. York MK, Rettig GM, Grossman RG, Hamilton WJ, Armstrong DD, Levin HS, et al. Seizure control and cognitive outcome after temporal lobectomy: a comparison of classic Ammon's horn sclerosis, atypical mesial temporal sclerosis, and tumoral pathologies. *Epilepsia.* 2003;44(3):387-98. [[View journal article](#)]
26. Blume WT, Luders HO, Mizrahi E, Tassinari C, van Emde Boas W, Engel J, et al. Glossary of descriptive terminology for ictal semiology: report of the ILAE task force on classification and terminology. *Epilepsia.* 2001;42(9):1212-8. [[View journal article](#)]
27. Karayiannis NB, Srinivasan S, Bhattacharya R, Wise MS, Frost JD, Jr, et al. Extraction of motion strength and motor activity signals from video recordings of neonatal seizures. *IEEE Trans Med Imaging.* 2001;20(9):965-80. [[View journal article](#)]
28. Saliba RM, Annegers FJ, Waller DK, Tyson JE, Mizrahi EM. Risk factors for neonatal seizures: a population-based study, Harris County, Texas, 1992-1994. *Am J Epidemiol.* 2001;154(1):14-20. [[View journal article](#)]
29. Kellaway P, Mizrahi EM, Noebels JL. Benign focal epilepsies of childhood: genetically determined pathophysiology. Report of an international workshop. *Epilepsia.* 2000;41(8):1049-50. [[View journal article](#)]
30. Mizrahi EM, Clancy RR. Neonatal seizures: early-onset seizure syndromes and their consequences for development. *Ment Retard Dev Disabil Res Rev.* 2000;6(4):229-41. [[View journal article](#)]
31. Mizrahi EM. Acute and chronic effects of seizures in the developing brain: lessons from clinical experience. *Epilepsia.* 1999;40 Suppl 1:S42-50; discussion S64-6. [[View journal article](#)]
32. Mizrahi EM. Pediatric electroencephalographic video monitoring. *J Clin Neurophysiol.* 1999;16(2):100-10. [[View journal article](#)]
33. Saliba RM, Annegers JF, Waller DK, Tyson JE, Mizrahi EM. Incidence of neonatal seizures in Harris County, Texas, 1992-1994. *Am J Epidemiol.* 1999;150(7):763-9. [[View journal article](#)]
34. Armstrong DD, Mizrahi EM. Pathologic basis of the symptomatic epilepsies in childhood. *J Child Neurol.* 1998;13(8):361-71. [[View journal article](#)]
35. Mizrahi EM. Alternate endpoint: EEG assessment of antiepileptic drug efficacy and toxicity. *Adv Neurol.* 1998;76:209-21. [[View journal article](#)]
36. Gotman J, Flanagan D, Rosenblatt B, Bye A, Mizrahi EM. Evaluation of an automatic seizure detection method for the newborn EEG. *Electroencephalogr Clin Neurophysiol.* 1997;103(3):363-9. [[View journal article](#)]
37. Plestis KA, Loubser P, Mizrahi EM, Kantis G, Jiang ZD, Howell JF. Continuous electroencephalographic monitoring and selective shunting reduces neurologic morbidity rates in carotid endarterectomy. *J Vasc Surg.* 1997;25(4):620-8. [[View journal article](#)]
38. Armstrong DD, Mizrahi E, George RE. Cortical dysplasia. *Pediatr Pathol Lab Med.* 1996;16(1):131-6. [[View journal article](#)]
39. Mizrahi EM. Avoiding the pitfalls of EEG interpretation in childhood epilepsy. *Epilepsia.* 1996;37 Suppl 1:S41-51. [[View journal article](#)]
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44. Mizrahi EM, Patel VM, Crawford ES, Coselli JS, Hess KR. Hypothermic-induced electrocerebral silence, prolonged circulatory arrest, and cerebral protection during cardiovascular surgery. *Electroencephalogr Clin Neurophysiol.* 1989;72(1):81-5. [[View journal article](#)]
 45. Mizrahi EM. Clinical and neurophysiologic correlates of neonatal seizures. *Cleve Clin J Med.* 1989;56 Suppl Pt 1:S100-4; discussion S121-3. [[View journal article](#)]
 46. Mizrahi EM. Consensus and controversy in the clinical management of neonatal seizures. *Clin Perinatol.* 1989;16(2):485-500. [[View journal article](#)]
 47. Coselli JS, Crawford ES, Beall AC, Jr, Mizrahi EM, Hess KR, et al. Determination of brain temperatures for safe circulatory arrest during cardiovascular operation. *Ann Thorac Surg.* 1988;45(6):638-42. [[View journal article](#)]
 48. Crawford ES, Mizrahi EM, Hess KR, Coselli JS, Safi HJ, Patel VM. The impact of distal aortic perfusion and somatosensory evoked potential monitoring on prevention of paraplegia after aortic aneurysm operation. *J Thorac Cardiovasc Surg.* 1988;95(3):357-67. [[View journal article](#)]
 49. Mizrahi EM. Epileptic facial automatisms and head movements. *Adv Neurol.* 1988;49:279-87. [[View journal article](#)]
 50. Goddard-Finegold J, Mizrahi EM. Understanding and preventing perinatal, intracerebral, peri- and intraventricular hemorrhage. *J Child Neurol.* 1987;2(3):170-85. [[View journal article](#)]
 51. Mizrahi EM, Kellaway P. Characterization and classification of neonatal seizures. *Neurology.* 1987;37(12):1837-44. [[View journal article](#)]
 52. Mizrahi EM. Neonatal seizures: problems in diagnosis and classification. *Epilepsia.* 1987;28 Suppl 1:S46-55. [[View journal article](#)]
 53. Mizrahi EM. Neonatal seizures: the need for precise clinical characterization. *Ann Neurol.* 1987;21(3):312-3. [[View journal article](#)]
 54. Frost JD, Jr, Kellaway P, Hrachovy RA, Glaze DG, Mizrahi EM. Changes in epileptic spike configuration associated with attainment of seizure control. *Ann Neurol.* 1986;20(6):723-6. [[View journal article](#)]
 55. Mizrahi EM, Pollack MA, Kellaway P. Neocortical death in infants: behavioral, neurologic, and electroencephalographic characteristics. *Pediatr Neurol.* 1985;1(5):302-5. [[View journal article](#)]
 56. Mizrahi EM, Crawford ES. Somatosensory evoked potentials during reversible spinal cord ischemia in man. *Electroencephalogr Clin Neurophysiol.* 1984;58(2):120-6. [[View journal article](#)]
 57. Mizrahi EM, Kellaway P. Cerebral concussion in children: assessment of injury by electroencephalography. *Pediatrics.* 1984;73(4):419-25. [[View journal article](#)]
 58. Mizrahi EM. Electroencephalographic/polygraphic/video monitoring in childhood epilepsy. *J Pediatr.* 1984;105(1):1-9. [[View journal article](#)]
 59. Mizrahi EM, Maulsby RL, Frost JD, Jr. Improved wave V resolution by dual-channel brain stem auditory evoked potential recording. *Electroencephalogr Clin Neurophysiol.* 1983;55(1):105-7. [[View journal article](#)]
 60. Michaud J, Mizrahi EM, Urich H. Agenesis of the vermis with fusion of the cerebellar hemispheres, septo-optic dysplasia and associated anomalies. Report of a case. *Acta Neuropathol.* 1982;56(3):161-6. [[View journal article](#)]
 61. Mizrahi EM, Tharp BR. A characteristic EEG pattern in neonatal herpes simplex encephalitis. *Neurology.* 1982;32(11):1215-20. [[View journal article](#)]
 62. Mizrahi EM, Dorfman LJ. Sensory evoked potentials: clinical applications in pediatrics. *J Pediatr.* 1980;97(1):1-10. [[View journal article](#)]
 63. Mizrahi EM, Holtzman D, Tharp B. Haloperidol-induced tardive dyskinesia in a child with Gilles de la Tourette's disease. *Arch Neurol.* 1980;37(12):780. [[View journal article](#)]
 64. Mizrahi EM, Angel RW. Impairment of voluntary movement by spasticity. *Ann Neurol.* 1979;5(6):594-5. [[View journal article](#)]
 65. Mizrahi EM, Hobbs JF, Goldsmith DI. Nephrogenic diabetes insipidus in transplacental lithium intoxication. *J Pediatr.* 1979;94(3):493-5. [[View journal article](#)]
 66. Einhorn A, Mizrahi EM. Basilar skull fractures in children. The incidence of CNS infection and the use of antibiotics. *Am J Dis Child.* 1978;132(11):1121-4. [[View journal article](#)]

Books and Volumes

1. Yoshor D, Mizrahi EM, editors. *Clinical brain mapping.* McGraw-Hill Professional Publishers; 2012.

2. Mizrahi EM, Hrachovy RA, Kellaway P, Stockard-Pope JE. Atlas of neonatal electroencephalography. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2004.
3. Mizrahi EM, Kellaway P. Diagnosis and management of neonatal seizures. Philadelphia: Lippincott-Raven; 1998.

Book Chapters and Other Publications

1. Mizrahi EM, Moshe SL, Hrachovy RA. Normal EEG and sleep: preterm and term neonates. In: Schomer DL, Lopes da Silva F, editors. Niedermeyer's electroencephalography: Basic principles, clinical applications, and related fields. 6th ed. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins; 2011. p. 153-162.
2. Mizrahi E, Goldsmith I. Intraoperative monitoring. In: Bradley W, Daroff R, editors. Neurology in clinical practice. 5th ed. Philadelphia: Butterworth-Heinemann (Elsevier); 2008. p. 517-20.
3. Hrachovy RA, Mizrahi EM, Kellaway P. Electroencephalography of the newborn. In: Daly DD, Pedley TA, editors. Current practice of clinical electroencephalography. 2nd ed. New York: Raven Press; 1990. p. 201-242.
4. Kellaway P, Mizrahi EM, Hrachovy RA. Seizures of newborns and infants. In: Wada JA, Ellingson RJ, editors. Clinical neurophysiology of epilepsy. EEG handbook. Amsterdam: Elsevier Science Publishers BV; 1990. p. 311-330.
5. Mizrahi EM, Hrachovy RA. Neonatal seizures and infantile spasms. In: Johnson RT, editor. Current therapy in neurologic disease. 3rd ed. Philadelphia: BC Decker; 1990. p. 23-29.

Poster and Platform Presentations

1. Mizrahi EM, Frost JD, Jr., Friedman DE, Hrachovy RA, Slater JD. Assessment of acute mild traumatic brain injury by quantitative EEG analysis — Mission Connect: Mild Traumatic Brain Injury Translational Research Consortium — The Integrated Clinical Protocol: Neurophysiology Core. Presented at the US Department of Defense, Military Health Research Forum 2009 in Kansas City, Mo. (Aug. 31 - Sept. 3, 2009). [\[View poster\]](#)
2. Dulay MF, Levin HS, York MK, Mizrahi EM, Goldsmith IL, Goldman A, et al. Predictors of individual visual memory decline after right anterior temporal lobe resection. *Epilepsia*. 2008;49(Suppl 7):132. [\[View poster\]](#)
3. Dulay MF, Levin HS, Mizrahi EM, York MK, Li X, Goldsmith IL, et al. Growth curve analysis of changes in spatial and verbal learning characteristics after anterior temporal lobectomy. *Epilepsia*. 2007;48(Suppl 6):226-7.
4. Dlugos D, Mizrahi E, Moshe S, Shinnar S, Berg A, Conry J, et al. What is the duration of EEG needed to diagnose childhood absence epilepsy (CAE)? *Epilepsia*. 2005;46(Suppl 8):166.
5. Dulay MF, Levin HS, York MK, Yoshor D, Grossman RG, Verma A, et al. Verbal memory declines are largest for patients with depression and anxiety after anterior temporal lobectomy. *Epilepsia*. 2005;46(Suppl 8):63. [\[View poster\]](#)
6. Schmolck H, York MK, Verma A, Goldsmith IL, Yoshor D, Levin HS, et al. Impaired semantic memory in temporal lobe epilepsy — What is the role of anterior temporal lobectomy? *Epilepsia*. 2005;46(Suppl 8):71. [\[View poster\]](#)
7. Wright RJ, Verma A, Goldsmith IL, Mizrahi EM. Measurement of cerebral blood flow regulation by transcranial doppler during complex partial seizures. *Epilepsia*. 2005;46(Suppl 8):33.
8. Schmolck H, Foreman PJ, Verma A, Goldsmith IL, York MK, Levin HS, et al. Semantic memory is more impaired in dominant than in nondominant temporal lobe epilepsy. Program No. 191.16. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005. Online. [\[View poster\]](#)
9. Richards KC, Hrachovy RA, Mizrahi EM, Jefferson LS. Utility of intermittent bedside electroencephalographic monitoring in the pediatric intensive care setting. *Epilepsia*. 2004;45(Suppl 7):253.
10. Mizrahi EM, Clancy RR, Dunn JK, Hirtz D, Chapieski L, McGuan S, et al. Neurological impairment, developmental delay and postneonatal seizures two years after EEG-video documented seizures in near-term and full-term neonates: Report of the clinical research centers for neonatal seizures. *Epilepsia*. 2001;42(Suppl 7):102.
11. Verma A, Mizrahi EM, Frost JD Jr. Vagus nerve stimulation: Correlation of changes in spike morphology with seizure control. *Epilepsia*. 2001;42(Suppl 7):41.

12. York MK, Mizrahi EM, Levin HS, Armstrong DD, Rettig GM, Hamilton WJ, et al. The effect of amon's horn sclerosis and atypical sclerosis on seizure frequency following temporal lobectomy. *Epilepsia*. 2001;42(Suppl 7):202.
13. Saliba RM, Annegers JF, Waller DK, Mizrahi EM. Risk factors for neonatal seizures: A population-based study, Harris County, TX, 1992-1994. *Epilepsia*. 1997;38(Suppl 8):247.