



## In Focus

### Spotlight on the July 2 Issue

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Editor-in-Chief, *Neurology*<sup>®</sup>



#### **Hippocampal interictal epileptiform activity disrupts cognition in humans**

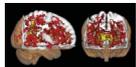
Ten patients had hippocampal depth electrodes implanted for preoperative seizure localization. Recordings were made during 2,070 total trials of a short-term memory task, with memory processing categorized into encoding, maintenance, and retrieval. Hippocampal interictal epileptiform discharges in humans may disrupt memory maintenance and retrieval, but not encoding.

See p. 18

*From editorialists Kucewicz, Worrell, & Gotman: "Knowledge gained from translating basic science discoveries into clinical research, as exemplified in the elegant approach of Kleen and colleagues, may lead to development of novel antiepileptic medications..."*

See p. 12

#### **Depressive symptoms and white matter dysfunction in retired NFL players with concussion history**



The authors examined 26 retired NFL athletes who underwent diffusion tensor imaging (DTI) scanning.

Depressive symptom severity was measured using the Beck Depression Inventory II including affective, cognitive, and somatic subfactor scores (Buckley 3-factor model). Depressive symptoms correlated negatively with fractional anisotropy, suggesting that DTI may be a biomarker for depression in this population.

See p. 25; Editorial, p. 14

#### **Traumatic brain injury may be an independent risk factor for stroke**

This study found an association between traumatic brain injury (TBI) and subsequent ischemic stroke hospitalization after adjusting for known and possible predictors of stroke. This association between TBI and stroke emphasizes the need to identify stroke predictors given the large proportion of stroke that is unexplained.

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#### **Cognitive outcomes of patients undergoing therapeutic hypothermia after cardiac arrest**

This study evaluated cognitive outcomes of cardiac arrest survivors treated with hypothermia using the modified Telephone Interview for Cognitive Status. The majority regained normal cognitive function and nearly 80% returned to work. Good cognitive outcome can be expected after cardiac arrest treated with prompt resuscitation and hypothermia.

See p. 40

#### **Prospective study of restless legs syndrome and mortality among men**

There is a high prevalence of restless legs syndrome (RLS) among the general population, with potential clinical consequences. In this study of 18,425 men, RLS was associated with a 30% higher risk of mortality during 8-year follow-up, after controlling for potential confounders.

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#### **Assay sensitivity and study features in neuropathic pain trials: An ACTION meta-analysis**

The treatment effects found in clinical trials can be associated with their research methods. This meta-analysis found that neuropathic pain medication trials permitting enrollment of patients with mild pain showed smaller standardized treatment effects. Such results provide a foundation for developing an evidence-based approach to the design of clinical trials.

See p. 67

#### **Neuro-ophthalmologic evaluation, quality of life, and functional disability in patients with MS**

Fifty-four patients with relapsing-remitting MS were evaluated over 3 years with neuro-ophthalmologic examinations including visual field testing, visual evoked potentials, and retinal nerve fiber layer (RNFL) measurements using optical coherence tomography. RNFL thickness reductions were associated with higher functional disability and lower quality of life.

See p. 76

#### **Long-term cognitive function, neuroimaging, and quality of life in primary CNS lymphoma**

Methotrexate-based chemotherapy without whole-brain radiotherapy (WBRT) can achieve long-term survival in primary CNS lymphoma with high functioning, whereas WBRT increases the risk of neurotoxicity. Prospective cognitive evaluation revealed higher scores and less neuroimaging abnormalities after methotrexate without WBRT vs with WBRT. As new treatments extend survival, long-term cognitive and neuroimaging evaluation is critical.

See p. 84

*NB: "Neurologist: Specialized primary care provider vs consultant," see p. e1. To check out other Resident & Fellow Opinion & Special Articles, point your browser to [www.neurology.org](http://www.neurology.org) and click on the link to the Resident & Fellow Section.*

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