

### ■ Long-term effects of migraine on cognitive function

Gaist et al. established headache diagnoses in a large population-based sample of middle-aged Danish twins. Cognitive scores of the 536 identified migraineurs were comparable to those of non-migraineurs. A lifetime diagnosis of migraine was not associated with cognitive deficits.

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*The editorial by Elkind and Scher notes that many investigators have concluded that MRI signal abnormalities represent sequelae of ischemia in migraineurs. This negative study should be reassuring to clinicians and patients. However, the limited sample of cognitive tests may not best reflect deficits expected in migraine. Neuropsychological tests of visual perceptual processing should be included in subsequent studies. Moreover, if negative effect of migraine on cognitive function was more evident at older ages, this study would not have detected such a difference.*

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### ■ <sup>1</sup>H-MRS changes in familial hemiplegic migraine

Dichgans et al. found regionally distinct metabolic abnormalities in the cerebellum of patients with familial hemiplegic migraine (FHM) type 1 caused by mutations in the *CACNA1A* gene. Cerebellar atrophy and atrophy-corrected *N*-acetyl aspartate (NAA) levels (an indicator of neuronal impairment) correlated with clinical cerebellar scores.

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*The editorial by Benatar and Ford notes that these findings provide in vivo evidence for regionally distinct effects of mutant calcium channels. Clinical relevance of these findings is underscored by the association between the reduction in NAA levels and the degree of cerebellar dysfunction. This study highlights the value of magnetic resonance spectroscopy for exploring the pathophysiology of FHM.*

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### ■ Migraine with aura and cardiovascular risk factors

In a large population-based cohort study by Scher et al., migraine sufferers particularly those with aura had a higher risk profile for cardiovascular disease compared to nonmigraineurs.

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### ■ IFN- $\beta$ -1b is effective in Japanese RRMS patients including the optic-spinal variant

Multiple sclerosis (MS) is different in Japanese patients compared with white patients in that demyelination is more likely to be restricted to the optic nerves and spinal cord and CSF IgG oligoclonal bands are less common. Saida et al. report that interferon beta-1b (IFN $\beta$ -1b) reduced relapse rates and MRI changes in Japanese patients with relapsing-remitting MS, and was comparably effective in optic spinal-MS and classical-MS. These results suggest that common pathogenesis and therapeutic response to interferon despite apparent racial/genetic differences in disease characteristics.

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*The editorial by Brian Weinschenker discusses the differences between "optic-spinal" (including neuromyelitis optica) and classical forms of MS in more detail, focusing on the diagnostic, genetic, and therapeutic implications.*

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### ■ Clinical diagnosis of MM2 type sporadic CJD

Brain MRI, SPECT, and PET are important in the diagnosis of Creutzfeldt-Jakob disease (CJD). Hamaguchi et al. showed that hyperintense cortical signals on diffusion-weighted imaging of MRI are useful for the cortical form, and thalamic hypoperfusion or hypometabolism on SPECT or PET for the thalamic form.

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### ■ The potential to improve tPA use for stroke

Based on a prospective study by S. Claiborne Johnston of all patients treated for ischemic stroke at 11 hospitals in California, it was found that calls to 911 at symptom onset should have a much greater impact on rates of thrombolytic treatment than providing perfect in-hospital care or extending the time window to 6 hours.

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## Exercise protection against Parkinson disease

In a large prospective cohort study, Chen et al. found that men with regular physical activity have a lower risk of PD than their more sedentary peers. No such relation was found among women.

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## Driving licensing in patients with controlled epilepsy

In a 40-year follow-up study by Sillanpää and Shinnar, people with childhood-onset uncomplicated epilepsy obtained a driving license significantly less often than controls. Predictors of non-licensing were female gender, nonidiopathic epilepsy, and the presence of learning disabilities. During a short-term follow-up, there was no increase in accidents among those who were licensed.

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## Cognitive anosognosia in Alzheimer disease and awareness of visuospatial and memory skills

Barrett et al. asked subjects with AD to self-estimate cognitive skills, comparing these estimates to actual test performance and control self-estimates. AD subjects overestimated visuospatial and memory skills (cognitive anosognosia) but not other cognitive domains. Controls also overestimated some skills.

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## Steroid dementia: An overlooked diagnosis?

Oliver Sacks and Melanie Shulman described a remarkable elderly man who was initially diagnosed with Alzheimer disease who completely recovered cognitive function when prednisone was discontinued.

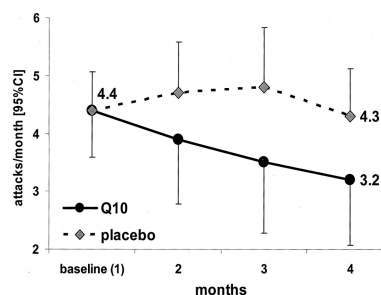
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## MELAS and L-arginine therapy

In an observational study trial, Koga et al. evaluated the effects of administering L-arginine on mitochondrial myopathy, encephalopathy, lactic acidosis, and strokelike episodes (MELAS). L-Arginine improved strokelike symptoms and decreased frequency and severity of strokelike episodes.

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## Coenzyme Q10 as migraine preventive



Prophylaxis in migraine is often limited by side effects. In this randomized-controlled trial, Sándor et al. showed coenzyme Q10 to be effective and well tolerated in migraine.

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## Early surgery to reduce infant-onset epileptic encephalopathy

In a surgical cohort, Jonas et al. found that children with shorter seizure durations had better postsurgery developmental outcomes with or without an infantile spasm history. Children with infant-onset epilepsy from a surgically treatable lesion are at risk for epileptic encephalopathy.

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