

Nature Reviews Neurology 7, 656 (2011);
[doi:10.1038/nrneurol.2011.178](https://doi.org/10.1038/nrneurol.2011.178);
[doi:10.1038/nrneurol.2011.179](https://doi.org/10.1038/nrneurol.2011.179);
[doi:10.1038/nrneurol.2011.180](https://doi.org/10.1038/nrneurol.2011.180);
[doi:10.1038/nrneurol.2011.181](https://doi.org/10.1038/nrneurol.2011.181)

IN BRIEF

MULTIPLE SCLEROSIS

Link between shift work and MS etiology

Working shifts between 2100 h and 0700 h at a young age could increase the risk of developing multiple sclerosis (MS) later in life, according to two large case-control studies in Sweden. Among individuals who had worked shifts for at least 3 years before the age of 20 years, the odds ratio of developing MS was around 2.0 compared with those who had not worked shifts. Circadian disruption and restricted sleep, which modulate the immune system, might underlie the study results.

Original article Hedström, A. K. *et al.* Shift work at young age is associated with increased risk for multiple sclerosis. *Ann. Neurol.* doi:10.1002/ana.22597

NEUROIMMUNOLOGY

Impaired long-term cognition in anti-NMDA receptor encephalitis

Anti-NMDA receptor encephalitis is a recently described autoimmune disease. The acute clinical features have been well-documented, but the long-term cognitive impact is poorly characterized. Now, Finke *et al.* have examined nine patients with this disorder, 23–69 months after disease onset. All but one of the patients displayed substantial cognitive impairments, particularly in executive functions and memory.

Original article Finke, C. *et al.* Cognitive deficits following anti-NMDA receptor encephalitis. *J. Neurol. Neurosurg. Psychiatry* doi:10.1136/jnnp-2011-300411

NEURODEGENERATIVE DISEASE

Presymptomatic spinal cord markers of amyotrophic lateral sclerosis

Clinical presentation with amyotrophic lateral sclerosis (ALS) is thought to follow a presymptomatic stage of neurodegeneration. Using magnetic resonance spectroscopy, Carew *et al.* investigated the neurometabolic profile of the cervical spine in individuals who were genetically predisposed to develop ALS. This group showed neurometabolite ratios that were different to those of controls and similar to those seen in patients with ALS. Neurometabolic changes might, therefore, be used as an early marker of the disease.

Original article Carew, J. D. *et al.* Presymptomatic spinal cord neurometabolic findings in *SOD1*-positive people at risk for familial ALS. *Neurology* 77, 1370–1375 (2011)

WHITE MATTER DISEASE

Tau as a prognostic marker of progression from optic neuritis to multiple sclerosis

Patients with optic neuritis are at an increased risk of developing multiple sclerosis (MS) compared with the general population, but prognostic markers for this conversion are lacking. Researchers in Denmark analyzed the cerebrospinal fluid (CSF) of 66 patients with optic neuritis and/or MS. They found that CSF levels of tau protein were significantly increased in patients with optic neuritis who went on to convert to MS, but not in patients with monosymptomatic optic neuritis.

Original article Frederiksen, J. *et al.* Tau protein: a possible prognostic factor in optic neuritis and multiple sclerosis. *Mult. Scler.* doi:10.1177/1352458511424588