

## IN BRIEF

**MOTOR NEURON DISEASE****Smoking adversely affects survival in patients with amyotrophic lateral sclerosis**

Premorbid cigarette smoking is an independent risk factor for reduced survival in individuals with amyotrophic lateral sclerosis (ALS), according to new research from Italy. In 650 patients with ALS, premorbid smoking showed an inverse correlation with median survival after diagnosis. Importantly, this relationship persisted after stratification of the cohort for chronic obstructive pulmonary disease, suggesting that the adverse effects of smoking were not solely attributable to respiratory failure.

**ORIGINAL ARTICLE** Calvo, A. et al. Influence of cigarette smoking on ALS outcome: a population-based study. *J. Neurol. Neurosurg. Psychiatry* <http://dx.doi.org/10.1136/jnnp-2016-313793> (2016)

**HEADACHE****Headache disorders may be a harbinger of hypothyroidism**

A recent study published in *Headache* has established a link between headache disorders and the risk of new-onset hypothyroidism. Using data from the Fernald Medical Monitoring Program, Vincent Martin and colleagues found that individuals with headache disorders had a 21% increased risk of hypothyroidism, rising to 41% in patients with possible migraine. The longitudinal study design provided novel insights into the chronology of events, confirming that the headache disorders preceded the development of hypothyroidism.

**ORIGINAL ARTICLE** Martin, A. T. et al. Headache disorders may be a risk factor for the development of new onset hypothyroidism. *Headache* <http://dx.doi.org/10.1111/head.12943> (2016)

**ALZHEIMER DISEASE****Cerebral blood flow could be a marker for Alzheimer disease severity**

Low cerebral blood flow (CBF) is associated with poor cognitive performance in patients with Alzheimer disease (AD), a new report in *Alzheimer's & Dementia* indicates. The study included patients with AD ( $n = 161$ ), mild cognitive impairment ( $n = 95$ ) and subjective cognitive decline ( $n = 43$ ). CBF reduction was found to correlate with cognitive decline in the participants with AD, but not in the other two groups. The authors propose that CBF could be used as a marker of disease severity in AD.

**ORIGINAL ARTICLE** Leeuwis, A. E. et al. Lower cerebral blood flow is associated with impairment in multiple cognitive domains in Alzheimer's disease. *Alzheimers Dement.* <http://dx.doi.org/10.1016/j.jalz.2016.08.013> (2016)

**TRAUMATIC BRAIN INJURY****Carbon monoxide — a potential therapy for traumatic brain injury?**

Research published in *Nature Medicine* has demonstrated dual benefits of carbon monoxide (CO) in a mouse model of traumatic brain injury (TBI). The researchers found that the CO-releasing molecule CORM-3 decreased pericyte death in the injured mice. A resulting increase in crosstalk between pericytes and neural stem cells led to induction of neurogenesis. The CORM-3-treated mice also showed enhanced neurological recovery, as determined by a range of behavioural and motor tasks. The results suggest that CO warrants further investigation as a possible therapy for TBI.

**ORIGINAL ARTICLE** Choi, K. Y. et al. Dual effects of carbon monoxide on pericytes and neurogenesis in traumatic brain injury. *Nat. Med.* <http://dx.doi.org/10.1038/nm.4188> (2016)