

CARPHOLOGY by A Fo Ben



Pract Neurol 2011; 11: 202

Test? match; special

When designing a screening test for a very rare disorder, it needs to be very specific (no false positives). When the condition is as emotive as Creutzfeldt-Jakob disease (CJD), the discovery of the real time quaking induced conversion (RT-QUIC) assay could be an important breakthrough. This CSF test could replace the existing biomarkers and rival brain biopsy as a gold standard in diagnosis. It identified sporadic and iatrogenic CJD correctly, but the real test will come in clinical practice.

Nat Med 2011;17:175–8.

Evidence driving practice

Driving law currently varies state by state in the USA and country by country in Europe. A move to harmonise European driving law following seizures motivated Tony Marson *et al* to assess whether European recommendations were correctly based. A re-analysis of the Multicentre Study of Epilepsy and Single Seizures (MESS) (*Lancet* 2005) dataset suggests broadly that 6 months after a single seizure, the chance of another seizure in the next year drops below accepted levels. However, an abnormal EEG and a remote symptomatic seizure were both associated with an unacceptably high risk of seizure recurrence.

BMJ 2010;341:c6477.

What's your poison?

Is UK drug policy based on firmer evidence than UK driving law? One would hope so—particularly with the wealth of scientific evidence available in the fields of behavioural neuroscience, addiction and psychopharmacology. A recent review using multicriteria decision analysis suggests that evidence 'correlates poorly' with UK policy. Overall, alcohol was the most harmful drug (overall harm score 72), with heroin (55) and crack cocaine (54) second and third. The social effects of alcohol were responsible for most of its 'harm score'. Should

we ban alcohol—or perhaps tax heroin and crack?

Lancet 2010;376:1558–65.

Brain training

Bad news for gym phobics everywhere—a recent study in adults aged 55–80 years investigated aerobic exercise as opposed to stretching and toning over a 6 month period. The exercise group showed significantly increased hippocampal grey matter volume bilaterally over this period; compellingly, the degree of increase correlated highly with improvement in memory performance. The conclusion? You may not enjoy going to the gym but at least you'll remember why you're there.

Proc Natl Acad Sci USA doi: 10.1073/pnas.1015950108

Brain cells/cell phones

Unsubstantiated health concerns abound in poor quality UK newspapers; certain themes persist, such as foods causing cancer, immunisations causing developmental disorders and mobile phones causing brain tumours. Responding to this uncertainty, researchers used positron emission tomography scans to demonstrate that a 50 min phone call increases glucose metabolism adjacent to the phone's antennae. Mobile phones generate low frequency and extremely low frequency electromagnetic fields, the biological effects of which are poorly understood. Whether they can activate neural tissues or even provoke cancerous change remains unknown.

JAMA 2011;305:808–13.

Major diseases need major studies

Determining the genetic basis of common neurological conditions is fraught with difficulty, and particularly recruiting enough patients for meaningful results. This large international study involved a meta-analysis

of datasets from five previous genome wide association studies for Parkinson's disease (5333 cases and 12 019 controls). Of the 11 significant loci ($p < 5 \times 10^{-8}$), six had been previously identified (MAPT, SNCA, HLA-DRB5, BST1, GAK and LRRK2), and five were new (ACMSD, STK39, MCCC1/LAMP3, SYT11 and CCDC62/H1P1R). In combination, these genes had a population attributable risk of 60%. More work is now needed to characterise fully their potential roles in disease pathogenesis and progression.

Lancet 2011;377:641–9.

Beauty is in the MRI of the beholder

A Fo Ben has long appreciated the beauty of medical images, and it is reassuring not to be alone in this. An exhibition at the Röntgen Museum showcases the work of the Austrian radiologist Franz Fellner, who digitally manipulates CT and MR images into art. You may have missed the exhibition in Germany, but now you might look at MRI in a different light (figure).

BMJ 2011;342:d240.



Röntgen Museum, Germany. <http://www.ars-intrinsica.com>

A Fo Ben is always on the lookout for suitable Carphology titbits and comments on what has been included. Email the editor-in-chief if you come across anything.