

# SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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## UK researchers develop prototype blood test for vCJD

Researchers have developed a prototype blood test for variant Creutzfeldt-Jakob disease (vCJD) that exploits the powerful attraction between abnormal prion proteins and some metals. A solid matrix enriched with steel particles captures and concentrates abnormal prions in blood, bringing them within range of detection by commercially available assays. When researchers ran their new test on 190 masked blood samples, 15 of the 21 from people with clinical vCJD tested positive (sensitivity 71.4%, 95% CI 47.8% to 88.7%). All 169 blood samples from normal controls, people with sporadic CJD, or those with other neurological diseases tested negative (specificity 100%, 97.8% to 100%).

This is a very promising start, says a linked comment (doi:10.1016/S0140-6736(11)60057-3). The prototype picked up almost three quarters of the cases from a small series, and it can clearly find the tiny amounts of abnormal prion protein present in blood from people with clinical vCJD. Pathological prion proteins cannot be detected in conventional assays of blood. An accurate blood test for vCJD would be a breakthrough, particularly if it worked for asymptomatic people harbouring the disease, who presumably have even fewer abnormal prion proteins in the bloodstream than those with clinical disease. We don't know how many people in the UK and elsewhere have subclinical or preclinical vCJD, and screening blood donors is currently impossible. This preliminary study shows that a blood test is at least technically feasible. Further research is planned to find out if the test can ever be good enough to use on a large scale in a clinical setting.

*Lancet* 2011; doi:10.1016/S0140-6736(10)62308-2

## More evidence against axillary node dissection

Axillary node dissection is slowly going out of favour for women with early breast cancer because of accumulating evidence that looking for metastases beyond sentinel lymph nodes does more harm than good. Even women with positive sentinel lymph nodes can often be treated safely and effec-

tively without further axillary dissection, say researchers, after a trial suggested that aggressive removal of lymph nodes did not prevent recurrence or prolong survival.

The trial looked at 891 women with early breast cancer and a small number of positive sentinel lymph nodes (usually one or two). They all had a lumpectomy, followed by tangential field radiation of the whole breast. More than 90% also had adjuvant chemotherapy. Half the women had further axillary dissection and removal of at least 10 lymph nodes. The rest had sentinel lymph node dissection only. Survival over five years was essentially the same for both groups of women and better than expected for everyone (91.8% (95% CI 89.1% to 94.5%) after complete dissection and 92.5% (90.0% to 95.1%) after sentinel node dissection; adjusted hazard ratio 0.87 (90% CI, 0.62 to 1.23).

Researchers planned a much bigger trial but survival was so good it would have taken more than 20 years to accumulate the number of deaths specified in the original protocol. These truncated findings are good enough, says an editorial (p 606). With modern treatments, many women can safely do without extensive axillary surgery.

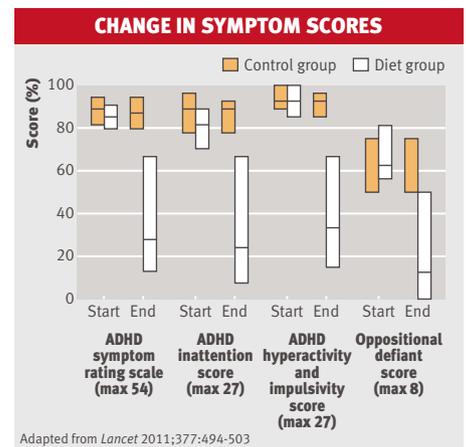
*JAMA* 2011;305:569-75

## Restricted diets can improve symptoms of ADHD

Further evidence of a link between food and behaviour in children has recently emerged from a randomised trial of dietary restriction for children with attention deficit hyperactivity disorder (ADHD). Children aged 4-8 who were fed an elimination diet based on rice, meat, vegetables, pears, and water for five weeks improved significantly more than controls whose parents received advice about eating healthily.

Nineteen of the 30 children who responded to a restricted diet relapsed when selected foods were reintroduced. Blood tests for IgG did not help predict which foods were most likely to cause relapse. Parents should be discouraged from buying these tests to define their child's diet, say the authors.

The trial was complicated, with two phases and multiple outcomes, most of which relied on information from parents, who knew which



group their children were in. The authors did their best to measure symptoms objectively with validated scores, but it is hard to exclude the possibility of bias, says a linked comment (p 446). These findings do suggest that ADHD is associated with diet in some children, however, and a trial of dietary restriction is a reasonable option for interested parents. Diets and subsequent food challenges must be supervised, and children shouldn't be on very restricted diets for longer than five weeks, says the comment.

*Lancet* 2011;377:494-503

## Sterile gloves help prevent contamination of blood cultures

Blood cultures must be taken carefully to minimise the risk of contamination, and sterile gloves can help, say researchers. In their cluster randomised crossover trial, cultures taken by junior doctors wearing sterile gloves were less likely to be contaminated than cultures taken by doctors given the option not to wear sterile gloves (adjusted odds ratio 0.57, 95% CI 0.37 to 0.87). Analyses included 10 520 cultures from 1854 patients treated in a large tertiary referral hospital in Seoul, Republic of Korea. During optional periods, doctors wore sterile gloves for just 7.3% (296/4037) of blood culture procedures, preferring clean but non-sterile gloves for the rest.

Sterile gloves almost halved contamination rates in this trial, but rates were low to start with (between 0.9% and 1.1% depending on the definition), says an editorial (p 202). Knowing that they were in a trial may have



**“How do you score in the use of scores? I’m afraid I did rather badly when I was still a jobbing GP, though my computer made up for some of my deficiencies”**

Read Richard Lehman’s journal blog at [bmj.com/blogs](http://bmj.com/blogs)

inspired these doctors to culture more carefully, or they may have been better trained than doctors elsewhere. Perhaps excluding the emergency department, where practice is more chaotic, kept overall contamination rates down.

Contaminated blood cultures are an expensive waste of time and effort, and they can cause serious harm to patients through unnecessary tests and treatments. These findings make a good clinical case for compulsory use of sterile gloves, but only when combined with meticulous attention to other elements of good technique, including hand washing, cleaning of the venepuncture site, wiping the top of culture bottles, and avoiding indwelling lines. The economic case has yet to be made, however. Sterile gloves are expensive too.

*Ann Intern Med* 2011;154:145-51

## New antibiotic for *Clostridium difficile* measures up against vancomycin

Fidaxomicin is a new oral antibiotic developed as an alternative to oral vancomycin for adults with *Clostridium difficile*. In the first phase III trial, 10 days of either antibiotic cured a similar proportion of adults with confirmed *C difficile* infection from sites in the US and Canada (88.2% (253/287) cure rate with fidaxomicin v 85.8% (265/309) with vancomycin). Around 60% of participants were in hospital.

Fidaxomicin looked better than vancomycin at preventing recurrence within four weeks (15.4% (39/253) v 25.3% (67/265); absolute reduction 9.9 percentage points; 95% CI -16.6 to -2.9), but only among the two thirds

of participants without the most virulent strain of *C difficile* (NAP1/BI/O27). The trial was sponsored by Optimer Pharmaceuticals.

*Clostridium difficile* is a serious pathogen with a worsening profile, says an editorial (p 473). Incidence is rising, symptoms are more serious, and deaths more common. The two standard antibiotic treatments—vancomycin and metronidazole—are not good enough to take on what could now be the most common cause of infectious diarrhoea in the US. Fidaxomicin looks like a promising alternative, it says, particularly if further trials confirm that the new drug helps control recurrence. Between 20% and 30% of patients relapse soon after apparently successful treatment with standard agents. We still have little idea why, although the destruction of normal gut flora may be partly to blame. Unlike vancomycin, fidaxomicin preserves at least some normal gut flora, notably anaerobic bacteroides.

*N Engl J Med* 2011;364:422-31

## Good safety profile for H1N1 vaccines used in China

Chinese health providers vaccinated nearly 90 million people against pandemic influenza A/H1N1 between September 2009 and March 2010. An analysis of data from national postmarketing surveillance found that just over 8000 vaccinated people had an adverse event, an overall rate of 90 events per million doses. Panels of experts classified four fifths of events as vaccine reactions (6552/8067; 81.2%) and the rest as psychogenic reactions or coincidental illnesses.

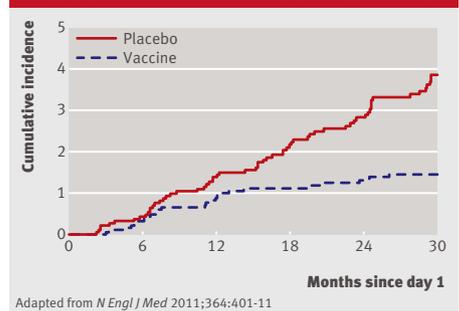
Serious events related to vaccination were rare (12.1 events per million doses) but included 1050 allergic reactions, 49 cases of anaphylaxis, and 75 cases of Henoch-Schönlein purpura. Just 11 people developed Guillain-Barré syndrome after vaccination (0.1 cases per million doses). Vaccination was the most likely cause in eight cases, a possible cause in two cases, and an unlikely cause in one person with a coincidental history of infection. The overall rate of Guillain-Barré syndrome in vaccinated people looked lower than the background rate in China.

Chinese regulators licensed various vaccines during the pandemic. All were split virion vaccines made from the same strain of H1N1, without adjuvant. These data suggest that H1N1

vaccines have a reasonable safety profile, say the authors. Eligible adults and children over 3 years old had one dose of vaccine. Eligible children aged between 6 months and 35 months had two. *N Engl J Med* 2011; doi:10.1056/NEJMoa1008553

## HPV vaccination for young men?

### INCIDENCE OF EXTERNAL GENITAL LESIONS ASSOCIATED WITH HPV VACCINE SUBTYPES



Merck’s quadrivalent vaccine against human papillomaviruses (HPV) helps protect teenage boys and young men from genital disease, according to its latest double blind placebo controlled trial. The vaccine worked best for boys and men who were not infected at baseline and who had no evidence of previous infection with the vaccine subtypes HPV 6, 11, 16, and 18. In this group, the vaccine prevented 90.4% (95% CI 69.2 to 98.1) of external genital lesions, mostly warts, caused by HPV 6, 11, 16, or 18 (0.2% (3/1397) v 2.2% (31/1408)). It prevented 83.8% (61.2% to 94.4%) of lesions caused by any HPV subtype. Participants, aged 16-26, were followed up for three years.

Analyses of the whole trial population, meant to replicate the mix of people captured by a mass vaccination programme, reported efficacy rates between 60% and 65%. Few participants in either group developed intraepithelial lesions of the penis, perineal, or perianal regions during the trial, and none developed HPV related cancer.

These data will reinvigorate the debate about routine vaccination of teenage boys against HPV subtypes now that we know they can benefit directly. One commentator writes that health authorities will want to see costs weighed against benefits first (p 393). Merck’s vaccine is one of the most expensive on the market.

*N Engl J Med* 2011;364:401-11

Cite this as: *BMJ* 2011;342:d784

### CURE AND RECURRENCE BY TREATMENT GROUP

