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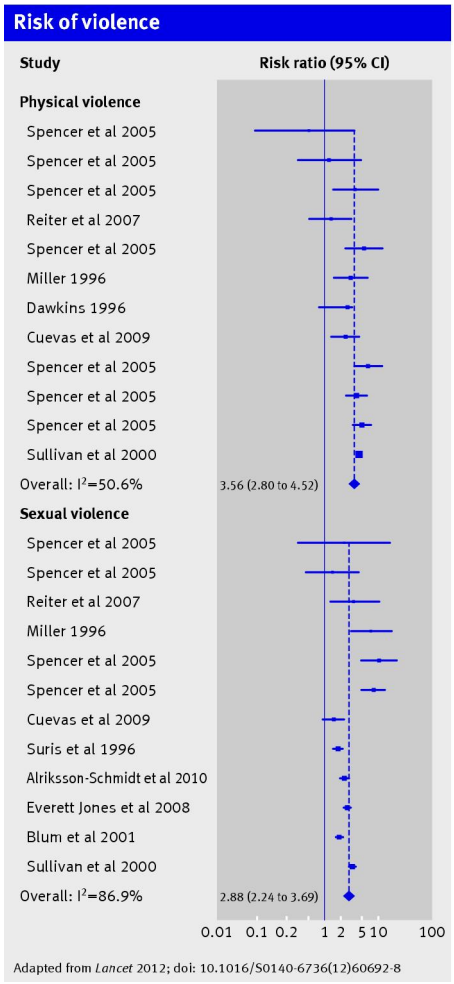
# RESEARCH NEWS

# All you need to read in the other general journals

## High rates of violence against children with disabilities

*Lancet* 2012; http://dx.doi:10.1016/S0140-6736(12)60692-8




A new meta-analysis reports high rates of sexual and physical violence, emotional abuse, and neglect in children with disabilities. Estimates are imprecise because of serious shortcomings in the available data, but the authors are confident that children with disabilities have a significantly higher lifetime risk of violence against them than their able peers. Pooled analyses gave odds ratios of 2.88 (95% CI 2.24 to 3.69) for sexual violence, and 3.56 (2.80 to 4.52) for physical violence, although the results of individual studies varied widely.

They found 17 eligible studies of more than 18 000 disabled children after a systematic search. Most studies were from the US, and a linked comment (http://dx.doi:10.1016/S0140-6736(12)61071-X) urges researchers to study children from middle income and low income countries too. Children living in countries with limited resources and poor support networks for carers are likely to be even more vulnerable.

A detailed study of children with different disabilities wasn't possible, although the authors found hints that violence is more prevalent against children with intellectual rather than physical disabilities.

Researchers in this area have a lot to do, says the comment. Definitions of both disability and violence are inadequate, sampling is haphazard, and study populations poorly characterised and too small. We urgently need reliable and reproducible information on children with well defined problems, including purely physical limitations. And we need to look more closely for peer to peer violence or bullying. Finally, future studies must try to differentiate more clearly between violence caused by disability and disability caused by violence.

## Fast food lunch is now slightly healthier in New York

*Ann Intern Med* 2012;157:81-6

Partially hydrogenated vegetable oil, a leading source of industrial trans fats, was finally banned from New York's chain restaurants in mid-2008. Has it made any difference to the population's intake of such fats? A before and after study suggests that lunches at leading fast food chains became significantly healthier between 2007 and 2009, as the trans fat content of each meal fell by a mean of 2.4 g (95% CI 2.8 to 2.0). Lunches contained slightly more saturated fat instead, but the researchers still report a net benefit big enough to have a noticeable impact on public health (mean decrease in content of trans fat plus saturated fat 1.9 g, 2.5 to 1.2).

They surveyed adults having lunch at 11 well known chains selling hamburgers, pizzas, fried chicken, sandwiches, and Mexican food. Trans fat content fell most in lunches from hamburger outlets and least at sandwich outlets. Nearly 7000 adults completed the survey in 2007. Nearly 8000 did the same in 2009. Researchers used till receipts to estimate the fat content of their lunch.

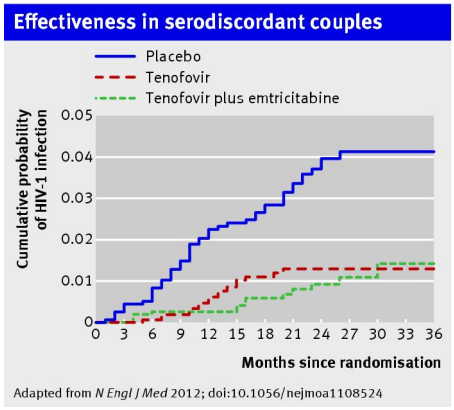
New York's bold legislation seems to have worked, says a linked editorial (p 144). Lunches at fast food chains improved in high income and low income neighbourhoods, and the legislation could serve as a model for others. But the biggest problem remains. US adults are still eating too much, and there is a danger that labelling fast food as zero trans fat will encourage them to eat even more. Future studies will need to look carefully for any adverse consequences from this potential "health halo."

## Two steps forward and one step back for HIV prevention in Africa

*N Engl J Med* 2012; doi:10.1056/nejmoa1108524

*N Engl J Med* 2012; doi:10.1056/nejmoa1202614

*N Engl J Med* 2012; doi:10.1056/nejmoa1110711




Three trials of pre-exposure prophylaxis for men and women at risk of HIV have reported mixed results. In two, daily tenofovir (with or without additional emtricitabine) reduced the risk of new infections by between 62% (95% CI 21.5% to 83.4%) and 75% (55% to 87%) in sexually active men and women in sub-Saharan Africa, including those in serodiscordant couples. In a third trial, the combination of tenofovir and emtricitabine failed to protect uninfected women, and the trial closed early after a data monitoring board decided further treatment was futile.

Inconsistencies are not new in research on HIV prevention, and uncertainty remains about the precise role of these drugs in healthy heterosexual adults, says a linked editorial (doi:10.1056/NEJMe1207438). But, as the epidemic continues at an alarming rate in Africa, we must investigate fully all measures at our disposal, including prophylactic drugs, condoms, male circumcision, and full treatment of adults already infected with HIV. Preventing HIV is a global health priority, and drug prophylaxis will be part of an integrated strategy. These trials tell us that it can be successful and also direct our attention to potential problems, including poor adherence, long term safety, the risk associated with unintended pregnancies during treatment, and the emergence of resistance in people who acquire HIV while taking prophylactic tenofovir.

## Cranberries look protective against UTI

*Arch Intern Med* 2012;172:988-96

Cranberry products probably do help prevent urinary tract infections, according to a meta-analysis of 13 randomised trials. A significant effect emerged from pooled analyses that excluded one outlying trial (risk ratio 0.62, 95% CI 0.49 to 0.80), confirming results from a previous much smaller meta-analysis.

Juice seemed to work best in subgroup analyses (0.47, 0.30 to 0.72), although only four of 13 trials tested non-juice products such as capsules or tablets. Cranberry products protected women with recurrent infections, children, and anyone taking more than two doses a day. Results for older adults, pregnant women, and people with neuropathic bladders were less clear cut. The trials had limitations, including a tendency for participants to drop out before completing their treatment. They weren't well reported and tested a wide range of doses. Results are encouraging but not definitive say the authors.

Cranberries (genus *Vaccinium*) have been used as a natural remedy for at least 100 years, and in the 1980s scientists discovered that the berries contain an active ingredient (possibly proanthocyanidins) that stops bacteria sticking to uroepithelial cells. Future trials might usefully test different doses of cranberry and specify proanthocyanidin content from the outset. Many other potentially active ingredients are waiting to be investigated.

## Reassuring trends in end of life practices from the Netherlands

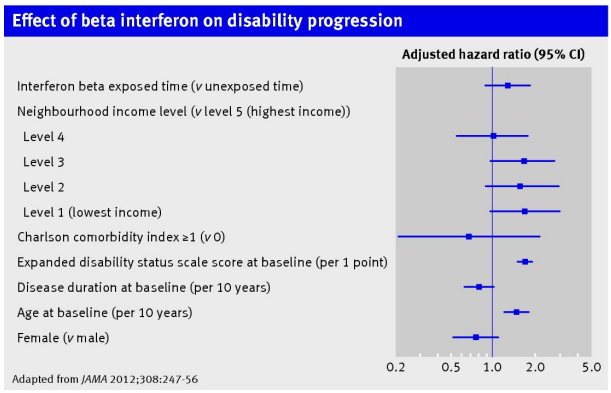
*Lancet* 2012; http://dx.doi.org/10.1016/S0140-6736(12)61034-4

Euthanasia became legal in the Netherlands in 2002. Between 2001 and 2005 the frequency of euthanasia dropped slightly to an estimated 1.7% of all deaths (95% CI 1.5% to 1.8%), before returning to pre-legislation levels by 2010 (2.8% of all deaths, 2.5% to 3.2%). A detailed study of trends reports that the characteristics of people dying this way have remained stable since the introduction of the euthanasia act. The authors found no evidence of overuse in vulnerable groups, and no evidence that doctors have shifted from palliative care to actively hastening death. Doctors were more likely to intensify symptom control at the end of life in 2010 (36.4% of deaths, 35.2% to 37.6%) than in 2001 (20.1% of deaths, 19.1% to 21.1%).

The authors analysed a series of stratified samples of all deaths in the Netherlands between 1990 and 2010, and they asked attending doctors to report the nature and intent of their end of life care. Overall, an estimated 4050 people died from euthanasia or physician assisted suicide in 2010. About a fifth were not reported to a euthanasia review committee, which is a legal requirement. Doctors who failed to report described their actions as "palliative or terminal sedation" or "alleviation of symptoms" rather than euthanasia. These cases deserve closer scrutiny, says a linked comment (http://dx.doi.10.1016/S0140-6736(12)61128-3). So do those much rarer cases identified as "ending of life without an explicit patient request." The frequency of these deaths dropped from 0.8% (0.6% to 1.1%) of deaths before the legislation to 0.2% (0.1% to 0.3%) in 2010, but all are contrary to Dutch law.

## New doubts about interferon beta for multiple sclerosis

*JAMA* 2012;308:247-56




Interferon beta is an established treatment for relapsing remitting multiple sclerosis that helps prevent relapses and slows the development of brain lesions. An effect on disability has been harder to prove and remains in doubt after a rigorous observational study from Canada. The authors found no significant associations between treatment with interferon beta and slower progression of disability in fully adjusted analyses that compared a treated cohort with two untreated cohorts—one contemporary and one historical. Age and baseline disability scores were the only two factors that helped predict which adults would lose the ability to walk 100 m unaided during follow-up (score of 6 out of 10 on the expanded disability status scale).

When researchers compared treated adults with contemporary untreated controls, the hazard ratio for progression was a non-significant 1.30 (95% CI 0.92 to 1.83). Results were non-significant in the opposite direction in the comparison with historical controls (0.77, 0.58 to 1.02). One points towards worse disability with treatment, the other hints at some protection. The second result may be more reliable, says a linked editorial (p 290). Historical controls were managed before interferons were licensed. Contemporary controls could have had interferons but chosen not to, perhaps because their disease seemed more benign. Selecting slightly sicker adults for treatment could bias any observational analysis, however well adjusted.

Neurologists and patients should not write off this treatment, says the editorial. An effect on progression of disability is unconfirmed but still plausible.

## Performance rankings for stroke should account for baseline severity

*JAMA* 2012;308:257-64

US hospitals are ranked using risk adjusted estimates of mortality rates. The ranking tells users, payers, and policy makers whether patients at each hospital are doing better or worse than expected (or than at other hospitals with similar characteristics and patient mix). In a study that looked at mortality after stroke in 782 hospitals, rankings changed significantly when hospitals were judged using risk models that included a measure of stroke severity on admission. About a quarter (26.3%) of hospitals initially ranked in the top or bottom fifth were moved after the new adjustments. More than half of hospitals (57.7%) judged "worse than expected" for 30 day mortality were reclassified as having "expected" mortality. Other measures of model reliability such as calibration and discrimination also improved significantly when fully adjusted for stroke severity using the National Institutes of Health stroke scale.

Hospitals in the US are already being ranked, punished, or rewarded according to their outcomes for patients with heart attacks, heart failure, and pneumonia. Consideration of baseline severity is more important for patients with stroke, says a linked editorial (p 292). Collecting the necessary data won't be easy, but ranking hospitals without proper adjustment looks unreliable and could be misleading.

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