BMJ

BMJ 2012;344:e4301 doi: 10.1136/bmj.e4301 (Published 27 June 2012)

RESEARCH NEWS

All you need to read in the other general journals

A midurethral sling during prolapse repair? Women must decide

N Engl J Med 2012;366:2358-67

Women can become incontinent after surgery to repair a vaginal prolapse, and the risk is high enough for surgeons to consider placing a prophylactic midurethral sling at the time of the repair. This approach helps prevent incontinence but causes extra surgical complications, according to a randomised trial.

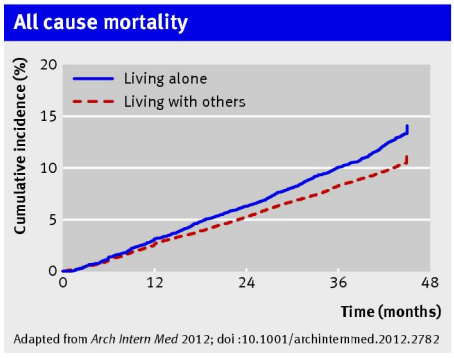
Women who had the prophylactic sling were half as likely to develop new incontinence in the year after surgery than controls who had small sham incisions to mimic placement of a sling (27.3% (45/165) *v* 43.0% (74/172); adjusted odds ratio 0.48, 95% CI 0.30 to 0.77). They were also significantly more likely to have a bladder perforation (6.7% (11/164) *v* 0% (0/172)), a major bleed or vascular complication (3.1% (5/164) *v* 0% (0/172)), a urinary tract infection (31.0% (49/158) *v* 18.3% (30/164)), or incomplete bladder emptying at discharge (42.6% (69/162) *v* 30.0% (51/170)).

Continent women scheduled for repair of a vaginal prolapse face a difficult choice, says a linked editorial (p 2422): a sling now, or potentially a sling later? Only they can make this choice, in conversation with an experienced surgeon. Most of the women in this trial had an anterior prolapse staged two or three out of a possible four—the vaginal wall bulging close to or just beyond the entrance to the vagina. They had a variety of operations, most commonly a combined anterior repair and apical suspension, at seven different hospitals in the US.

Being lonely, or just alone, predicts mortality

Arch Intern Med 2012; doi:10.1001/archinternmed.2012.2782

Arch Intern Med 2012; doi:10.1001/archinternmed.2012.1993



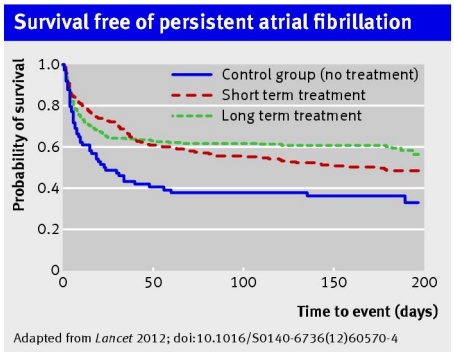
Living alone is different from being lonely, but both were associated with increased mortality in recent cohort studies.

One study explored all cause mortality in adults aged 45 or over with cardiovascular disease or a high risk of cardiovascular disease. Those living alone were significantly more likely to die during four years of follow-up than those who weren't living alone, even after extensive adjustments for social and clinical factors (14.1% *v* 11.1%; adjusted hazard ratio 1.11, 95% CI 1.01 to 1.23). In a second study, self reported loneliness was also associated with higher mortality (22.8% *v* 14.2%; 1.45, 1.11 to 1.88) and with functional decline in adults with a mean age of 71 years. Again, the authors made extensive adjustments in an attempt to isolate loneliness from the confounding effects of comorbidity, depression, and social class.

Both studies are broadly in line with a wider literature that links social isolation and poor health, says a linked comment (doi:10.1001/archinternmed.2012.2649). As populations become older and potentially lonelier, it becomes increasingly important to find out what is behind the association, so that we can design and test some workable interventions. Social support—or lack of it—is a complex and poorly defined construct that captures objective living arrangements as well as more subjective feelings of belonging. Both could be important determinants of health that operate in very different ways, says the comment. Living alone might mean no one to nag you about blood pressure tablets or call the ambulance during a crisis, whereas loneliness and lack of companionship might have diverse biological effects. These and other possible mechanisms deserve more urgent attention from researchers, says the comment.

Six months of flecainide works better than one after cardioversion for atrial fibrillation

Lancet 2012;doi:10.1016/S0140-6736(12)60570-4



Antiarrhythmic drugs such as flecainide help prevent the recurrence of atrial fibrillation after electrical cardioversion. How long do patients need to take these drugs? A trial

comparing short term and long term treatment suggests that long term treatment is better. A month of flecainide worked about 80% as well as six months but failed the non-inferiority test. Six months after cardioversion, 48.4% (95% CI 41.9% to 55.0%) of adults treated for a month and 56.4% (49.1% to 63.6%) of adults treated for six months were still alive and in sinus rhythm (Kaplan-Meier estimate of difference 7.9%, −1.9% to 17.7%; P=0.2081 for non-inferiority).

The two strategies had similar effects on quality of life. There were few serious adverse events in either group and no deaths.

Atrial fibrillation recurs because the chronic arrhythmia remodels atrial electrophysiology. The authors were hoping that a month of sinus rhythm after cardioversion would be enough to reverse the remodelling and maintain normal atrial rhythm for good. Although the strategy didn't work completely, a third arm of the trial, discontinued early, showed that short term flecainide works significantly better than nothing. It might still be good enough for patients with a high risk of side effects, or for those with a transient or mild underlying cause of atrial fibrillation, says a linked comment (doi:10.1016/S0140-6736(12)60950-7). Everyone else should probably take flecainide for at least six months. The 524 adults completing the active arms of this trial took 200-300 mg a day.

Parents warned of danger from magnetic toys

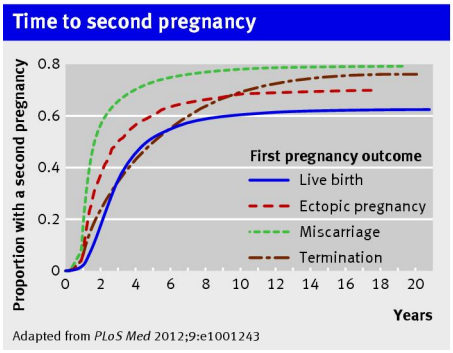
Lancet 2012;379:2341-2

Doctors from Nottingham in the UK have warned parents to be extra vigilant when their children play with magnetic toys, after two children swallowed magnetic parts and needed emergency laparotomies to fix the ensuing intestinal damage. Both children swallowed multiple small magnets, which clumped together, trapping tissue and causing pressure necrosis and fistulas. Surgeons retrieved 10 small magnetic beads from the upper gut of an 18 month old toddler and two magnetic strips from the caecum and terminal ileum of an 8 year old. It is not clear how long the magnets had been in situ, and both children presented with abdominal pain. The 8 year old was initially thought to have appendicitis.

Small swallowed objects can, and often do, pass harmlessly through the gut, but magnets are a special case, say the doctors. They can also cause problems if swallowed with other metal parts. The force of attraction is more than enough to cause serious internal injury, and parents should be made aware of the possibility. Toys with magnetic parts are increasingly popular in the UK and elsewhere, they write. Product safety commissions in the US and Canada have already recalled many such toys because of the dangers associated with ingestion. There have been no recalls yet in the UK.

One ectopic pregnancy predicts another

PLoS Med 2012;9:e1001243



Women who have an ectopic first pregnancy are less likely to conceive again in the next two years than women whose first pregnancy ends in early miscarriage, according to a cohort study from Scotland. But they are more likely to conceive again than women who have a live birth or a termination, perhaps because women who have a baby or a termination use contraception afterwards, whereas those who have an ectopic pregnancy may not. The authors linked Scottish databases that did not include contraceptive details.

Their study identified all women who had a first pregnancy in Scotland between 1981 and 2000 then tracked them to through any second pregnancies. In adjusted analyses, women with an ectopic first pregnancy were 12-13 times more likely to have an ectopic second pregnancy than women who had had a live birth (4.9% *v* 0.4%; adjusted hazard ratio 13.0, 95% CI 11.63 to 16.86) or a termination (4.9% *v* 0.5%; 12.84, 10.07 to 16.37), and they were six times more likely to have an ectopic second pregnancy than women who had had a miscarriage (4.9% *v* 0.6%; 6.07,4.83 to 7.62).

Analysis of pregnancy complications was more reassuring, say the authors. Among women with a uterine pregnancy after a previous ectopic pregnancy, the risks of abruption, placenta praevia, pre-eclampsia, or preterm delivery were similar to the risks associated with a uterine first pregnancy (primigravida women). A previous ectopic pregnancy did not seem to increase the risk of either elective or emergency caesarean section in a subsequent uterine pregnancy.

The authors hope that their findings will help health professionals to counsel women after an ectopic first pregnancy. But they warn that they weren't always able to adjust their observations for important confounders, such as smoking and body mass index.

tPA looks safe for selected stroke patients taking warfarin

JAMA 2012;307:2600-8

Tissue plasminogen activator (tPA) looks safe for eligible patients taking warfarin, say researchers, so long as their international normalised ratio (INR) is no higher than 1.7 when they are admitted with acute ischaemic stroke. In a large observational study from the US, the odds of an intracerebral haemorrhage, serious systemic haemorrhage, other complications of tPA, or death were no higher for eligible adults on warfarin than for other eligible adults once clinical differences had been accounted for (adjusted odds ratio for symptomatic intracerebral haemorrhage 1.01, 95% CI 0.82 to 1.25). Those taking warfarin were older, sicker, and had more

severe strokes than those not taking warfarin. So their crude risk of intracerebral haemorrhage after tPA was higher in unadjusted analyses (5.7% *v* 4.6%).

International guidelines on acute stroke allowing tPA for people with an INR at or below 1.7 are now more evidence based than they were, say the authors. They analysed data from 23 437 patients given tPA for acute ischaemic stroke, including 1802 (7.7%) who were taking warfarin and had an INR at or below 1.7.

We don't yet know how high INR should be allowed to go before tPA is contraindicated, say the authors. Further studies will also have to examine the risks associated with newer oral anticoagulants, such as dabigatran and rivaroxaban.

Meanwhile, underuse of tPA is the biggest threat to all adults with acute ischaemic stroke, says a linked editorial (p 2637). In this study, half the eligible patients taking warfarin were not given tPA.

Very low carb diet attenuates the body's metabolic response to weight loss

JAMA 2012;307:2627-34

People who lose weight often put it straight back on, partly because they start eating more and exercising less again. Could there be a metabolic reason too? Resting energy expenditure falls after weight loss and could contribute to rebound weight gain. So researchers tested three different maintenance diets to investigate which mix of carbohydrate, fat, and protein had the most favourable metabolic effects. Twenty two young adults who had lost 10-15% of their body weight tested the maintenance diets in random order, for four weeks each. Their resting energy expenditure fell least on a very low carbohydrate diet (10% carbohydrate, 60% fat, 30% protein), and fell most on a low fat diet containing the same number of calories (60% carbohydrate, 20% fat, 20% protein). The difference was significant. A third diet, designed to have a low glycaemic index (40% carbohydrate, 40% fat, and 20% protein) had an intermediate effect on resting energy expenditure.

The authors stress that this was a highly controlled feeding experiment and the results may not translate well to a general population of dieters trying to maintain their new body weight. But it does suggest that the balance of fat, carbohydrate, and protein in diets of the same overall calorie content could make a difference to the body's metabolic response to weight loss.

Cite this as: *BMJ* 2012;344:e4301