SHORT CUTS

ALL YOU NEED TO READ IN THE OTHER GENERAL JOURNALS

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Mild gestational diabetes is worth treating

Maternal hyperglycaemia in pregnancy is bad for both mother and baby. Even mild gestational diabetes was associated with worse pregnancy outcomes in a recent trial. The women had normal fasting concentrations of glucose, but mildly abnormal results on a formal glucose tolerance test at 24-31 weeks' gestation. The 473 women allocated to standard care had bigger babies (3408 g *v* 3302 g; P<0.001), more caesarean sections (33.8% *v* 26.9%; P=0.02), a higher risk of shoulder dystocia (4% v 1.5%; P=0.02), and a higher incidence of hypertensive disorders (13.6% *v* 8.6%; P=0.01) than the 485 women who were actively managed with monitoring, diet, and the option of insulin. No neonatal deaths occurred in either group, and active treatment had no effect on the combination of deaths, birth trauma, hyperbilirubinaemia, hypoglycaemia, and hyperinsulinaemia (32.4% *v* 37%).

Only 37 women in the treatment group needed insulin. The rest were successfully managed with dietary counselling and daily self monitoring. The treatment group gained significantly less weight than controls (2.8 kg *v* 5 kg; P<0.001)

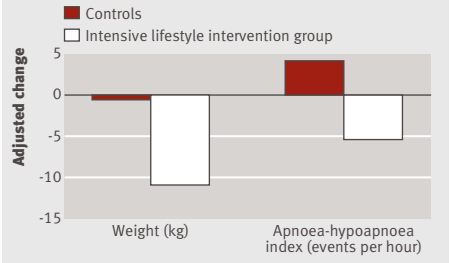
This is the second big trial to suggest that women with mild gestational diabetes should be monitored and treated, says an editorial (p 1396). The first, an Australian study published four years ago, found that treated women had fewer perinatal complications and a better quality of life.

N Engl J Med 2009;361:1339-48

Weight loss relieves obstructive sleep apnoea

A randomised controlled trial confirms observational evidence that weight loss is an effective treatment for obstructive sleep apnoea. The 264 participants were obese and had both type 2 diabetes and moderate to severe obstructive sleep apnoea. The 125 participants who were treated with intensive education, diet, and exercise for a year lost a mean of 10.8 kg. Controls, who had three sessions on diabetes management, lost just 0.6 kg. Symptoms of sleep apnoea improved significantly

WEIGHT LOSS AND CHANGE IN SYMPTOMS



Adapted from *Arch Intern Med* 2009;169:1619-26

in the weight loss group (from 23 to 18 episodes of hypoapnoea or apnoea an hour) and deteriorated in the control group (from 23 to 28). The difference was statistically significant and clinically important, say the authors. They were surprised that controls got so much worse during the study.

Further analyses suggested that weight loss works best for men and for people with severe sleep apnoea at baseline. In this middle aged population, people who lost at least 10 kg improved most.

Sleep apnoea is associated with hypertension, stroke, poor quality of life, and an early death, say the authors. The outlook is likely to be even worse for people who also have diabetes. Weight loss, if sustained, looks like an effective way to relieve the problem and could have important fringe benefits for cardiovascular health. Only 5% of participants used continuous positive airway pressure (CPAP) during the study.

Arch Intern Med 2009;169:1619-26

Test results are still ignored despite electronic alerts

Ordering imaging tests is relatively easy. Remembering to check the results and act on abnormal findings is much harder, so many electronic medical records systems incorporate alerts and reminders directing doctors to abnormal results. Some still fall through the cracks, however. In one study from the US, nearly one in five alerts was not acknowledged by the doctor who ordered the test, and 7.7% (92/1196) of alerts were not acted on within a month. All the alerts reported abnormal imaging tests. Most of the missed abnormalities in this study would have had important clinical implications if the authors hadn't contacted the doctor responsible and encouraged them to do something. Two thirds (62/92; 67.4%) of the "near misses" were suspected cancers.

The authors analysed alerts sent by the electronic medical record system at six linked outpatient facilities in Texas to more than 500 different healthcare providers. Alerts backed up by a telephone call from the radiologist were much less likely to be ignored (odds ratio 0.12, 95% CI 0.04 to 0.38). Alerts sent to two providers instead of one were more likely to be ignored (1.99, 1.06 to 3.48), possibly because dual alerting—intended as a safeguard—actually blurred lines of responsibility.

Electronic warnings clearly don't eliminate the problem of missed test results, say the authors. They suggest leaving alerts on doctors' screens for longer, leaving them on until a doctor records taking action, and taking steps to cut down the background noise created by unnecessary or redundant alerts.

Arch Intern Med 2009;169:1578-86

Surgical masks give the same protection against flu as respirators

Surgical masks are just as good (or bad) as tight fitting respirators at protecting nurses from influenza, a randomised trial has found. An editorial remarks that this is the first decent data to inform an intense and increasingly urgent debate (doi:10.1001/jama.2009.1494). A single trial won't be the final word, but it is a good start that others must now build on. US authorities, most recently the Institute of Medicine, already recommend tight fitting respirators, which cost more but protect wearers from smaller aerosol particles than regular surgical masks.

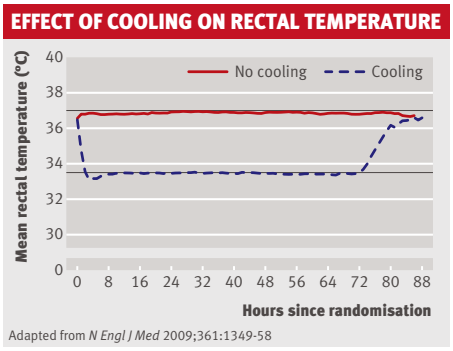
The 446 nurses worked in emergency departments, medical units, and paediatric units in eight Canadian hospitals. They wore surgical masks or moulded, fit tested, N95 respirators when caring for anyone with a respiratory infection throughout the 2008-9 flu season. Nearly a quarter of both groups had laboratory confirmed influenza that season (23.6% (50/225) of nurses using

masks *v* 22.9% (48/221) of those using respirators; absolute risk difference −0.73%, 95% CI −8.8% to 7.3%; P=0.86). Most of the infected nurses were diagnosed by serology, and more than two thirds of these infections were asymptomatic (66% (29/44) *v* 70% (31/44)). About one in 10 nurses had serology that indicated swine flu, which was surprising because the trial took place before the pandemic began in Canada.

This trial is welcome, but health authorities should not get too distracted by arguments about masks, says the editorial. Plenty of other measures are known to protect health staff from flu, including better hand hygiene, faster triage and isolation of patients with respiratory illnesses, and more robust controls to keep sick visitors and sick healthcare workers out of hospitals.

JAMA 2009;302:doi:10.1001/jama.2009.1466

Cooling improves outcomes for survivors of birth asphyxia



Babies asphyxiated during birth have a poor outlook. Many die or are left with serious disabilities. In theory, cooling the asphyxiated neonate soon after birth should help protect the vulnerable brain from neurological injury, but conclusive evidence has been hard to find.

The latest trial to test whole body cooling of asphyxiated neonates reported both positive and negative results. Cooling improved five out of 12 secondary outcomes measured at 18 months, including mental development, psychomotor development, gross motor function, risk of cerebral palsy, and the overall chance of surviving free from neurological abnormality (relative risk 1.57, 95% CI 1.16 to 2.12). But the authors were unable to show an improvement in the trial's primary outcome—death or serious disability at 18 months (0.86, 0.68 to 1.07). Controls had standard intensive care without cooling.

These babies were randomised within six hours of birth after a diagnosis of asphyxia confirmed by electroencephalography. Most were resuscitated for at least 10 minutes after delivery and about half had seizures. The researchers used a cooling blanket in a switched off incubator to keep core temperatures between 33°C and 34°C for 72 hours.

Cooling may not save lives but seems to improve neurological outcomes in survivors, say the authors. Other more subtle effects on cognitive function may emerge with longer follow-up.

N Engl J Med 2009;361:1349-58

Widely used treatment strategies help drug users cut down or quit

In October 2007, England's national treatment agency for drug misuse launched a standardised tool to record addicts' responses to front line community treatments. About 1000 providers nationwide now use it to record their clients' drug and alcohol use, health, and quality of life before and after recommended treatments such as maintenance opioids, psychosocial treatments, or both.

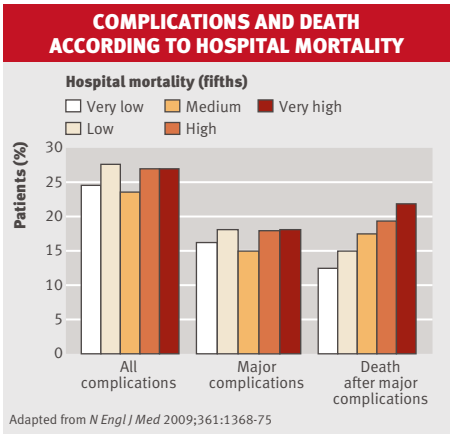
The first analysis of these data shows that many people addicted to heroin or crack cocaine cut down or even quit using drugs during the first six months of treatment. The 13 542 heroin users, for example, reduced their habit from 23 days (out of 28) before treatment, to 8.3 days (out of 28) leading up to their six month review. Overall, 37% (5016/13 542) of heroin users abstained from heroin completely during the 28 days before review, and 52% (3941/7636) of crack cocaine users abstained from crack cocaine during the same period. People who used either heroin or crack cocaine did significantly better than people who used both drugs.

More than three quarters of this cohort presented themselves to a community agency for treatment or were referred by the criminal justice system. Typically, clients were treated by multidisciplinary teams led by a key worker using maintenance methadone or buprenorphine for heroin addiction and up to 20 sessions of a psychosocial therapy (such as cognitive behaviour therapy) for cocaine addiction.

These strategies seem to work, at least in the short term, say the authors. Before and after studies are always hard to interpret, but this large dataset provides at least circumstantial evidence that drug users can get better with the treatments currently on offer in England. More needs to be done to help the large number of drug users addicted to both heroin and crack cocaine, however.

Lancet 2009; doi:10.1016/S0140-6736(09)61420-3

Death rates after complications help explain variations in surgical mortality



Death rates after surgery are higher in some hospitals than in others. Is this because some hospitals have more surgical complications, or because some hospitals are better than others at treating complications when they occur? In an attempt to find out, researchers analysed data from a surgical quality improvement programme in the US. Mortality after major surgery varied from 3.5% to 6.9% in the 186 hospitals taking part. The difference was largely explained by variations in death rates from surgical complications: patients treated in hospitals with high mortality were no more likely to have a surgical complication than patients treated in those with low mortality. But patients who did have a complication were significantly more likely to die. The authors saw the same pattern for all major complications, particularly stroke (46.4% death rate at hospitals in the highest fifth of overall surgical mortality *v* 22.5% at hospitals in the lowest fifth; P<0.05), serious wound infections (7.1% *v* 3.2%; P<0.05), and septic shock (46.2% *v* 28.7%; P<0.001) All analyses were adjusted for case mix.

Ongoing efforts to prevent surgical complications must be accompanied by equally strenuous efforts to diagnose them quickly and manage them effectively, say the authors. Their study included data on more than 80 000 adults who had general or vascular surgery at participating hospitals between 2005 and 2007. The authors confined their study to operations associated with a mortality risk of at least 1%.

N Engl J Med 2009;361:1368-75

Cite this as: *BMJ* 2009;339:b4054