Short cuts

What's new in the other general journals

Condoms reduce transmission of genital herpes

Genital herpes is a common sexually transmitted infection that lasts for life. Intuitively, condoms should help prevent transmission among sexual partners, but there are surprisingly few decent data on the subject. Randomised trials are impossible, so researchers have to glean what they can from secondhand data, often collected for other purposes. This latest study included 1843 men and women recruited from sexually transmitted disease clinics for a randomised trial of a vaccine that turned out to be ineffective.

None had genital herpes (caused by the type 2 herpes simplex virus) at the start of the trial, but 118 participants (6.4%) were infected by the end, 18 months later. Risk of infection was inversely related to use of condoms. Out of the three categories of condom use (for 0-25% of sexual encounters, for 25-75%, and for more than 75%), participants in each were 26% less likely to become infected than participants in the category below.

The findings were more convincing for men than for women and were confined to infections with herpes simplex type 2. The researchers found no association between condom use and herpes simplex type 1, a virus that also causes cold sores.

Annals of Internal Medicine 2005;143:707-13

Placental weight is associated with breast cancer risk in Swedish women

Researchers from Sweden have found that placental weight is associated with risk of breast cancer in Swedish women; the bigger the placenta, the higher the risk. Since a woman's placenta makes most of her

pregnancy hormones, and bigger placentas presumably make more than smaller ones, the researchers think their findings are further evidence that placental hormones modify breast cancer risk in women. They are not yet sure which hormones are responsible.

Their data came from a historical cohort of 314 019 Swedish women who had had their first baby between 1982 and 1989, when placental weight was recorded routinely in Sweden's birth register. Data on cancers came from national cancer and death registers, both of which were unusually complete. Women whose placentas weighed at least 700 g in two consecutive pregnancies were twice as likely to develop breast cancer by 2001 as women whose placentas weighed less than 500 g in both pregnancies (hazard ratio 2.05, 95% CI 1.15 to 3.64). Each 100 g increase in placental weight was associated with a 7% increase in breast cancer risk. Almost all the breast cancers in this study were premenopausal.

JAMA 2005;294:2474-80

Making it up as you go along

A paediatrician reflecting on 20 years of being a doctor and a mother says that she has little concrete advice for anyone planning to do the same. Despite two decades of thinking, writing, and talking about it (much of it in public), she concludes that all you can really do is make it up as you go along, try to enjoy the little triumphs, learn lessons the hard way, and don't forget to mop up after the spills.

It's a long time since women had to choose between motherhood and medicine, and there are as many ways of combining the two as there are people out there trying to do it. In fact, being a doctor and a parent at the same time "is not a problem, or an issue especially for women, or a knotty dilemma amenable to clever tips" she writes. It's just life.

Your children may even appreciate it occasionally. Especially when you point out that if you didn't have a job you might have to satisfy your competitive instinct by outperforming other parents at school. And who wants their mother hand knitting jumpers, performing in school assemblies, and "going at the job of being a parent not just full-time but also full-tilt."

New England Journal of Medicine 2005;353:2107-9

Malaria vaccine is making good progress

Several antimalarial vaccines are currently under development, including one from GlaxoSmithKline—RTS,S/AS02A—which targets the pre-erythrocytic stage of *Plasmodium falciparum*. This vaccine has already shown promise in a preliminary randomised trial in children from Mozambique. Extended follow-up of these children now indicates that the vaccine can protect young children for up to 18 months, although the protection is only partial.

More than 2000 children aged between 1 and 4 years were recruited for the original trial and were randomised to receive three doses of the new vaccine or a control vaccination schedule without the new vaccine. In the next 18 months, the new vaccine reduced clinical episodes of falciparum malaria by 35% (186/745 v 251/745, $P < 0.0001$) and reduced severe episodes by about half. The researchers found no evidence that the vaccine became less effective over time.

Exactly how the vaccine works is still not clear, although it was designed to provoke a cellular and humoral response to a malarial protein. The authors hope that vaccines against malaria will be ready for use in endemic areas of Africa within the next 15 years.

Lancet 2005 Nov 15 (www.thelancet.com) doi:10.1016/S0140-6736(05)67669-6

Thromboembolism is most likely in the few months after having a baby

Pregnancy increases a woman's risk of venous thromboembolism. But her risk goes up even further during the first three months post partum. In a historical cohort of US women, venous thrombosis was five

times more likely in the three months after delivery than during the nine months of pregnancy (511.2 v 95.8 per 100 000 woman years). Events were dominated by deep vein thrombosis during pregnancy, and pulmonary embolism afterwards—usually with no warning peripheral thrombus. The youngest (15-19) and the oldest women (older than 35) were most at risk. The overall incidence of venous thromboembolism in women who were pregnant or had recently given birth was over four times higher than the expected incidence in other women.

These events are still rare, however. Between 1966 and 1995, 50 080 women in Olmsted County, Minnesota, had a baby. Only 105 had a pulmonary embolus or a deep vein thrombosis. The incidence of pulmonary embolism in the post partum period fell substantially during the study, possibly because new mothers no longer stay in bed or in hospital after delivery.

Annals of Internal Medicine
2005;143:697-706

Healthy diet rich in “good fat” or protein helps reduce blood pressure

A great deal has already been written about the influence of diet on coronary risk, but we are still a long way from understanding exactly which components of a healthy diet have the biggest beneficial effects. The latest attempt to fill the gaps is a feeding experiment in 164 mostly overweight or obese Americans with mild (or very mild) hypertension. Researchers fed them in random order three healthy diets—one

relatively rich in carbohydrate, one rich in protein, and one rich in unsaturated fat from plant oils, seeds, and nuts. All the diets were low in saturated fat and contained recommended amounts of cholesterol, vegetables, minerals, fibre, and fruit. The diets were carefully controlled so that the participants did not lose weight.

After six weeks, all three diets reduced blood pressure, improved serum lipids, and reduced coronary risk. But the diets rich in protein or unsaturated fat did better than the traditional healthy diet rich in carbohydrate.

It's always hard to generalise from carefully controlled feeding experiments in carefully selected people to the real world, where very different kinds of people have to buy and prepare their own meals. But this study does at least suggest that replacing some of the carbohydrate with “good fat” or protein might make the traditional healthy diet even healthier.

JAMA 2005;294:2455-64

Modifiable risk factors cause over a third of cancer deaths worldwide

In 2001, seven million people died of cancer worldwide. Researchers estimate that over a third (2.43 million, 35%) of these cancers were potentially preventable, caused by well known and easily modifiable risk factors such as smoking, drinking alcohol, obesity, poor diet, and unsafe sex. Their study, which is based on data from published studies quantifying risks and from government reports and international databases, found that lung cancer accounted for 37% of all preventable cancers or 908 000 deaths in 2001. Smoking alone caused 21% of all deaths from cancer worldwide. Alcohol and poor diet caused an estimated 5% each.

A third of all preventable cancer deaths occurred in high income countries, even though these countries contain only 15% of the world's population.

Lancet 2005;366:1784-93

Promising gene therapy for saphenous vein grafts doesn't work

Graft failure because of intimal thickening is a big problem after coronary artery bypass surgery with saphenous veins. A new gene therapy that acts as a decoy for the factors that cause intimal hyperplasia looked promising in animal studies and a small preliminary trial. So researchers were disappointed when it didn't work in the biggest and most definitive trial so far.

Almost half of the 2400 patients developed severe stenosis of at least one graft in the first 12 to 18 months after surgery. Patients whose grafts had been treated with the new therapy, edifoligide, did just as badly as controls whose grafts had been treated with a saline placebo. Failure rates were substantially higher than

expected in both groups (436/965 (45%) in the edifoligide group v 442/955 (46%) in the placebo group).

The authors and a linked editorial agree that this trial was big enough and powerful enough to conclude with some confidence that edifoligide does not help keep saphenous vein grafts open after coronary artery bypass surgery.

JAMA 2005;294:2446-54

Cervical cancer screening now within reach of developing countries

Poorer countries should now be able to afford cervical cancer screening. A cost effectiveness study from Peru, India, Kenya, Thailand, and South Africa reports that a single screen with simple but effective tests done in one or two visits to a primary care centre would reduce a woman's life time risk by 25-36%, and cost less than a few hundred US dollars for each life year saved. Two rounds of screening, at 35 and 40 years, would reduce life time risk by a further 40%.

The most cost effective strategies involved testing for human papilloma viruses in cervical cells or visual inspection of the cervix with acetic acid, followed by treatment in the event of a positive test. Screening and treatment with cryosurgery could be completed in one or two visits to a clinic except for women with large cervical lesions who would be referred to hospital. Traditional cytological screening, which requires up to three visits and a colposcopic biopsy, was the least cost effective option.

Screening women once at the age of 35 using visual inspection of the cervix, or a test for human papilloma virus was as cost effective in this study as hepatitis B immunisation in India, second line treatment for tuberculosis in Peru, and bed nets to prevent malaria in Kenya. The researchers estimate that if screening were introduced across the developing world then the global incidence of cervical cancer could fall by up to 50%.

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Alison Tonks associate editor
atonks@bmj.com