Short cuts

What's new in the other general journals

Active elderly people live longer

Yet more evidence has emerged that staying active in old age is linked to prolonged survival. In a study of 302 elderly US adults, burning more energy was associated with a significantly lower risk of death over a mean follow-up of six years—every extra 1.2 MJ (287 kcal) a day cutting the risk by about 30%. The most active participants were substantially and significantly less likely to die during follow-up than the least active (hazard ratio comparing top and bottom thirds of energy expenditure, 0.33 (95% CI 0.15 to 0.74)) even accounting for age, sex, race, weight, height, percentage of body fat, sleep duration, smoking habit, education, and health.

The authors used doubly radiolabelled water to measure energy expenditure, then computed a figure for energy burnt during activity by subtracting the basal metabolic rate and allowing for the thermic effects of eating. The most active participants burnt 603 more “activity” calories a day than the least active. Less than half the difference was due to extra exercise. They burnt the rest simply moving around, fidgeting, and generally getting on with life.

Although these results are fairly striking, they don't translate easily into specific public health messages, writes a linked editorial (pp 216-8). Next time, researchers should try to record the intensity of people's activity too, preferably using an objective method such as accelerometry.

JAMA 2006;296:171-9

One per cent of children in a UK cohort have an autistic spectrum disorder

Twenty years ago, most people accepted that childhood autism was a rare developmental disorder with a prevalence of about four or five per 10 000 children.

Japanese researchers were the first to notice an increase in the late 1980s. Europeans and Americans followed suit a decade later, and the prevalence has continued to rise since then, with 116 per 10 000, or more than 1%, of children having an autistic spectrum disorder in the latest report from England.

The researchers looked carefully for all children with autism or the broader autistic spectrum disorders in a well defined population of 56 946 children aged 9-10 years. After screening all children with special educational needs, and all those known to the health authorities who had impaired social skills or language problems, they came to a consensus that 38.9 per 10 000 were autistic and 77.2 per 10 000 had an autistic spectrum disorder, a total of 116.1 per 10 000. Even these figures are probably an underestimate since the researchers would have failed to find any affected children who had fallen beneath the radar of local health and educational services. Of those they did find, fewer than two thirds had already been diagnosed locally. Children with poorly educated parents were most likely to be missed.

Lancet 2006;368:210-15

Heart failure runs in families

We already know that some cardiovascular disease runs in families. Family history is a well established risk factor for coronary atherosclerosis, for example, and new evidence from a US study suggests the same is true for heart failure.

Using data from the Framingham heart study, which began more than 50 years ago, and from the study of the original cohort's children, which began in 1971, researchers found that having at least one parent with heart failure increased the risk in offspring by 70% during a mean follow-up of 20 years (hazard ratio 1.70 (95% CI 1.11 to 2.60)). In a linked cross sectional analysis, the children of parents with heart failure were also about twice as likely to have asymptomatic left ventricular systolic dysfunction than the children whose parents had no heart failure (odds ratio 2.37 (1.22 to 4.61)).

Both analyses were adjusted for multiple risk factors—including age, sex, ischaemic heart disease (prior heart attack), diabetes, blood pressure, height, and weight—which suggests the effect of family

history is independent and worth asking about during routine history taking. These researchers estimate that family history was directly accountable for 17.8% of the heart failure among the 2214 offspring included in the longitudinal analysis.

N Engl J Med 2006;355:138-47

A lifetime of weight gain is linked to postmenopausal breast cancer

Circulating oestrogens are directly linked to breast cancer. Since body fat produces oestrogen, particularly after the menopause, weight gain is a plausible risk factor for breast cancer and one that could be modified with the right kind of help.

Testing the relation between weight gain and postmenopausal breast cancer takes a long time. But the massive “nurses health study” (n = 87 143) has been going for 30 years and now provides the best evidence so far of a significant association between weight gain in adulthood and breast cancer.

Researchers recently estimated that 15% of postmenopausal cancers in this cohort were directly attributable to getting fatter since the age of 18, and that 4.4% were attributable to weight gain since the menopause. The link between weight gain and cancer was particularly obvious among women who had never taken hormone replacement therapy. The more weight they put on, the greater the risk, until women who gained ≥ 25 kg as adults were nearly twice as likely to develop cancer after the menopause as women who had stayed the same weight (relative risk 1.98 (95% CI 1.55 to 2.53)). Weight gain after the menopause was also important: a gain of ≥ 10 kg was enough to increase risk significantly (relative risk 1.18 (1.03 to 1.35)).

JAMA 2006;296:193-201

Patients with neurocysticercosis probably benefit from specific antiparasitic treatment

Neurocysticercosis, a brain infection caused by tapeworm larvae, is a leading cause of acquired epilepsy worldwide. Treatment is controversial, and has been for about 25 years, since the appearance of the first specific treatment, praziquantel. Albendazole followed in 1987. Both are meant to kill the parasites, shrink the brain lesions they cause, and reduce the risk of seizures. Research is conflicting, but neither treatment seems to have particularly dramatic effects and some experts argue that patients do just as well without them.

In an attempt to resolve the controversy, researchers from Ecuador, Peru, and the US searched systematically for all randomised controlled trials testing either treatment against non-specific treatments such as antiepileptic drugs or no therapy. They found 11 trials, all of which evaluated albendazole, but only two also had an arm testing praziquantel.

The combined results suggest that these drugs probably do speed up the disappearance of cysts and other lesions identified by neuroimaging, but their effects are modest and not always significant in the statistical sense. They also seem to reduce the occurrence of seizures: this meta-analysis reports an odds ratio of 0.36 (95% CI 0.21 to 0.62) for patients treated with albendazole. More work is needed, however. These trials were small, heterogeneous, and not particularly reliable. Only five of the 11 trials were rated by the authors as good quality.

Ann Intern Med 2006;145:43-51

Women smokers are more likely to develop lung cancer than men

Traditionally, lung cancer has been a predominantly male disease, although women are now catching up, thanks to their male pattern smoking habits. It's still unclear, however, whether women smokers are more or less susceptible to lung cancer than male smokers.

A new study of cancers detected by screening found that women smokers and former smokers had about twice the risk of lung cancer compared with men of the same age and smoking habit (prevalence odds ratio 1.9 (95% CI 1.5 to 2.5)). But it also confirmed that women were more likely than men to live through their disease (hazard ratio for death 0.48 (0.25 to 0.89)).

Nearly 17 000 asymptomatic volunteers were screened using spiral computed tomography, a tool that is not yet fully evaluated for lung cancer screening. So, at least one commentator suspects that this study's results may not apply to lung cancers that present in the normal way—by causing symptoms (pp 218-9).

The survival data are less controversial and show once again that women with lung cancer do better than men. So far, no one has managed to fully explain their advantage. The difference seems to be unrelated to tumour stage at diagnosis, type of cancer, or treatment.

JAMA 2006;296:180-4.

Some couples with unexplained infertility should be left alone

Couples with unexplained infertility are unlikely to benefit from intrauterine insemination and ovarian hyperstimulation, and should probably be left alone to try naturally for a baby, write researchers from the Netherlands. In their randomised trial comparing active treatment with a "wait and see" policy, active treatment made no difference to the couples' chances of a pregnancy, which were about one in three over six months in both groups. Early miscarriages were common, so in the end only 23% (29/127) of the actively treated women and 27% (34/126) of controls stayed pregnant for more than 12 weeks. Most of them had live births, although a handful in each group were lost to follow-up.

The couples in this study were selected because standard prognostic tests suggested that they had an intermediate chance of conceiving naturally (30-40% over a year). The researchers say that couples in this category, and anyone else judged to be more fertile, should be allowed at least six months of expectant management before putting them through the discomfort, inconvenience, cost, and risks of daily injections of follicle stimulating hormone.

Multiple pregnancy is the biggest worry. In this study, one actively treated woman conceived triplets.

Lancet 2006;368:216-21

Raloxifene is no magic bullet for postmenopausal women

Tamoxifen and raloxifene are both selective oestrogen receptor modulators that are being evaluated for their potential to alleviate various female health problems associated with oestrogens and ageing, including breast cancer, osteoporosis, and heart disease. Tamoxifen has been shown to help prevent breast cancer among selected women. So does raloxifene, according to the latest placebo controlled trial.

Postmenopausal women taking the drug had 44% fewer breast cancers (55% fewer oestrogen receptor positive cancers) than women taking placebo during the 5.6 year follow-up. But, like tamoxifen, raloxifene also caused an excess of strokes (49% increased relative risk of fatal stroke) and venous thromboembolism (44%). Raloxifene helped prevent vertebral fractures, but not heart disease events. All 10 101 participants in the study had heart disease or were likely to get it.

Translating these risks and benefits into practical advice for individual women is a serious challenge, writes one expert in an accompanying editorial (pp 190-2). Selective oestrogen receptor modulators are clearly not a "magic bullet" for postmenopausal women, especially those with an average or low risk of breast cancer. In this trial raloxifene prevented 1.2 breast cancers and 1.3 vertebral fractures for every 1000 women treated for a year. Weighing in on the other side of the equation were 1.2 extra venous thrombotic events and 0.7 extra fatal strokes.

N Engl J Med 2006;355:125-37

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