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Girls should be taught at school about importance of folic acid

EDITOR,—Last year the Health Education Authority announced that it would be mounting a £2.3 million public information campaign, funded by the government, to encourage women to increase their intake of folic acid before conception and during early pregnancy. The campaign aimed at health professionals started last year and the campaign aimed at the general public started this year.¹ This is four years after an expert advisory group recommended that a major education programme should be set up.²

We have shown previously that awareness that preconceptional folic acid can help prevent neural tube defects has been increasing slowly among pregnant women.^{3,4} With funding from the Association of Spina Bifida and Hydrocephalus, we have now compared awareness among women at the end of their pregnancies with that among young, non-pregnant women. From September 1994 to May 1995 we questioned 150 women in the postnatal ward at Leeds General Infirmary. Altogether 125 were aware that an increase in folic acid intake before and during early pregnancy reduced the chances of having a baby with a neural tube defect. Sixty one of the women, however, were already pregnant when they obtained this information. Among the 34 women aged 16-25 in this group 10 were still unaware of the benefits of folic acid at the end of their pregnancy.

During the same period we questioned young women in the general population. Among 150 first and second year undergraduates 35 of 50 medical students and 26 of 100 arts and science undergraduates were aware of the benefits of folic acid. However, only 21 of 150 women aged 16-19 (sixth formers, further education students, and youth trainees) were aware of the benefits and more than half of this age group said that they had not heard of folic acid.

These findings indicate that any campaign to raise awareness of folic acid needs to be directed at women who have yet to embark on their first pregnancy. Those who become pregnant in their later teens are particularly uninformed and are unlikely to consult health professionals before becoming pregnant. If their nutrition is poor they are at increased risk of having a baby with a neural tube defect. Knowledge about folic acid requirements could be effectively and efficiently delivered in schools, and this aspect of the campaign should be set in motion as soon as possible.

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Health checks and coronary risk

Effect of health checks was underplayed

EDITOR,—P Hanlon and colleagues unduly underplay the results of their randomised controlled trial of health checks to reduce the risk of coronary heart disease.¹ In fact, the outcome is remarkably good: it is not a "small effect."

A 10% reduction in serum cholesterol concentration reduces the risk of coronary heart disease by 54% at age 40, falling to 20% at age 70.² In the study the concentration fell by 2.2% (from a baseline value of 5.88 mmol/l) to give a 9.6% fall in the risk of coronary heart disease, assuming that the age distribution of the intervention group was the same as that of the total study population. This is not bad for a single health promotion session. Of course, to have its full effect the observed reduction must be sustained. Again, there are grounds for optimism. A three year follow up in the broadly similar OXCHECK study showed that improvements in health behaviour were maintained over this period, even without annual follow up.³

There are not enough data in Hanlon and colleagues' paper for estimation of the cost effectiveness of their intervention. In a broadly similar trial (the family heart study), however, the risk of coronary heart disease fell by about 12% in one year and the risk of stroke fell by 10%, as judged from the observed reduction in blood pressure.⁴ If such an intervention is begun at age 40 and benefit continues until age 59 without further support, the cost would be £360 per life year saved—an exceptional bargain. Providing periodic follow up would increase costs; annual follow up (six monthly for the 40% of patients at highest risk) would increase the cost per life year saved to £1500, which would still be good value. By comparison, coronary artery bypass grafting for severe angina costs £2000-5000 per quality adjusted life year saved.

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Authors' reply

EDITOR,—Jeffrey Graham makes a valid point: the fall in cholesterol concentration detected in our randomised controlled trial is worthy of consideration. There were, however, several reasons why we exercised caution in drawing conclusions from this finding.

Firstly, there was no significant difference in the reduction in the overall reversible coronary risk (as measured by the Dundee risk score) between the health check and internal control groups, while the difference in the reduction between the health check and external control groups only just reached significance. Therefore, since our trial did not show a convincing effect on overall reversible coronary risk it is difficult to argue that the results support the use of health checks in the prevention of coronary heart disease.

Secondly, although the cholesterol concentration

fell in the health check group by 2.7%, the body mass index in that group rose slightly (albeit there was no significant difference in the change in the body mass index between the health check and control groups).

Thirdly, our findings were of the same order as those detected in other, similar trials carried out in the primary care setting.^{1,2} The conclusion in both of these trials was that the effects were small in relation to the resources required to achieve them.

Finally, we welcome Graham's attention to cost effectiveness and agree that decisions about the role of health checks should be based on an economic analysis that accurately assesses costs and outcomes and compares them with those of alternative approaches.

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Serum screening for Down's syndrome

Creates stress for carers and parents

EDITOR,—Philip Steer's article¹ and subsequent correspondence² have highlighted the controversy about serum screening for Down's syndrome. Our experience during an attachment in general practice suggests that the programme is creating confusion and stress for carers and parents alike.

General practitioners were confused about the nature of the test and lacked time to counsel people properly. The health care workers believed that the mother's perception of the test differed from their own. Parents underwent testing for reassurance that "everything is all right with the baby," whereas professionals search for unwanted defects. Thus parents may not have seriously considered the implications for further interventions. One midwife believed that screening had been detrimental to the nature of the professional relationship. She could no longer celebrate a happy event with women under her care but, rather, was obliged to offer them distressing hurdles on the course to delivery.

Parents found the statistical nature of the results of the tests hard to understand. One mother's risk on the basis of her age was 1 in 1300. Screening yielded a risk of 1 in 900—technically a negative result. She, however, was very concerned by the jump in her risk and wanted amniocentesis. Another couple was given a positive result, but a dating scan later reduced the risk to a negative result. Parents knew little about Down's syndrome. One father conjectured, "It's not very nice; they have arms and legs missing." Couples found