duces reactive hyperaemia, and catastrophic release of antigen into the circulation may occur. If further exposure to antigen is harmful during established anaphylaxis (which is not always the case) a tourniquet may be harmful. The compression bandage technique used in first aid for envenomation,³ which localises venom, does not damage tissue, and does not lead to deterioration on removal may be more suitable.

Jonathan O'B Hourihane and John O Warner emphasise that in patients with previous reactions the history is crucial, not of "little value." I stated that "the history is of vital importance." But attributing the cause of anaphylaxis to drugs on the basis of previous exposure is not valid and has led to fatal second reactions. I note that these authors regard laryngeal oedema as life threatening, whereas L C Luke does not.

R Alexander and colleagues (in contrast to Luke) suggest that anaphylaxis should always be treated with intravenous adrenaline. This is nonsense. The efficacy of early subcutaneous or intramuscular adrenaline is evident in those who self administer it. When venous access is not obtainable in adults or children other routes are satisfactory. Ventricular arrhythmias are more likely with intravenous use, and in the absence of electrocardiographic monitoring hypotension due to arrhythmias may not be detected and more adrenaline may be given. I do not, as John Clear and colleagues say I do, advocate withholding adrenaline until monitoring is in place. If there is no electrocardiographic monitoring, intramuscular adrenaline is safer for the reason given above and the added risk of infarction and cerebral haemorrhage.

Alexander and colleagues further advocate intraosseous injection in children and nebulised adrenaline. There is no evidence that either is more effective than intramuscular injection (including in the reference cited), and both techniques have practical difficulties. The authors' advocacy of halothane rather than isoflurane is illogical. Halothane is getting hard to find, has not been shown to be superior to isoflurane, and increases the risk of ventricular arrhythmias with adrenaline.

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1 Treatment of acute anaphylaxis [letters]. *BMJ* 1995;311:1434-6. (25 November.)

2 Fisher M. Treatment of acute anaphylaxis. *BMJ* 1995;311: 731-3. (16 September.)

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Patients should be taught how to inject adrenaline

EDITOR,—Although no clear consensus has yet emerged about the place of adrenaline injections in the treatment of children with acute allergy,¹ it is incontrovertible that families must be shown how to use any device that is prescribed. In the past two months 12 children have been referred to our clinic with presumed allergy to peanuts. Eight had already been prescribed adrenaline (Min-I-Jet (three) or EpiPen (five)), but only one family had received any training. In six cases neither a parent nor the child had been shown; in the remaining case the child but not the parents had been instructed.

Doctors have a responsibility to ensure that patients know how and when to take any medicine prescribed. This does not usually present a problem when medicines are taken by mouth (although timing and the relation to food can be important). For drugs given by injection—particularly a dangerous drug like adrenaline—it is plainly inadequate to issue a prescription with no demon-

stration. Further training is needed before a child comes to harm.

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"Jumping beans" are almost identical with medicines

EDITOR,—The ingestion of medicines by young children is an important problem in Britain and leads to many of them attending accident and emergency departments and needing admission to hospital. Six to 10 deaths each year in children aged under 10 are due to poisoning by medicinal agents.¹

Recently, "jumping beans," which can be bought from local shops, were distributed to children aged 4 to 6 at a party. The capsule of each "bean" dissolves easily in water and releases a 5 mm ball bearing; the lower row in figure 1 shows the beans and the ball bearing. The upper row in the figure shows the orange-white capsules of phenytoin (100 mg) and the magenta-yellow capsules of amoxycillin (500 mg).

Fig 1—Capsules of phenytoin and amoxycillin (top) and "jumping beans" and ball bearing (bottom)

The prevention of accidents due to the ingestion of medicines primarily requires the education of both parents and children, and it is therefore inappropriate that toys that clearly contradict guidelines are readily available. The message from these "beans" is that playing with "medicines" is acceptable; this is one of the follies of commerce.

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Women doctors' use of hormone replacement therapy

High prevalence of use is not confined to doctors

EDITOR,—A J Isaacs and colleagues report high rates of use of hormone replacement therapy among a sample of women doctors.¹ They note the relative paucity of information regarding the prevalence of use and remark that this high rate among female doctors may "presage more widespread use in the general population."

We carried out a survey of use of hormone replacement therapy among women attending the Oxfordshire NHS breast screening programme between November 1994 and November 1995. Women aged 50-64 who are registered with a general practitioner are routinely invited to attend for screening. A random sample of 2291 women were sent a self administered questionnaire with their invitation to attend for screening and were asked to bring the completed questionnaire with them to their screening appointment. Altogether 1707 (75%) of the women invited for screening attended and 1388 (81%) of these completed the questionnaire. Overall, 591 of the 1388 respondents (43%) had ever used hormone replacement therapy; 409 were using it currently and 200 had used it for five or more years. Table 1 shows the proportions of current and ever users by age for women aged 50-64. The prevalence of current use fell greatly with age, from 38% at age 50-54 to 17% at age 60-64. A significant trend with age was apparent for ever use.

Table 1—Prevalence of use of hormone replacement therapy by age in women attending for breast screening in Oxfordshire (figures are percentages (numbers))*

	Current use†	Ever use‡
Age group (years):		
50-54	38 (194/504)	51 (258/504)
55-59	31 (120/388)	46 (180/388)
60-64	17 (61/361)	28 (102/361)

*86 Women were aged <50 or >64 at screening; 49 values were missing.
Test for trend: $\chi^2=45.68$ (1 df), $P<0.00001$; $\chi^2=42.76$ (1 df), $P<0.00001$.

Oxfordshire may not be representative of Britain as a whole, and women participating in breast screening are of higher social class and are generally more health conscious than those who decline screening.² Nevertheless, this population based study provides evidence that the use of hormone replacement therapy is more widespread than previously reported and suggests that a high prevalence of use is not confined to female doctors.

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1 Isaacs AJ, Britton AR, McPherson K. Utilisation of hormone replacement therapy by women doctors. *BMJ* 1995;311: 1399-401. (25 November.)

2 Alexander FE, Anderson TJ, Brown HK, Forrest APM, Hepburn W, Kirkpatrick AE, et al. The Edinburgh randomised trial of breast cancer screening: results after 10 years of follow-up. *Br J Cancer* 1994;70:542-8.

May be to enable them to cope with demands of their job

EDITOR,—A J Isaacs and colleagues suggest that women doctors have a relatively high rate of use of hormone replacement therapy.¹ Women doctors do seem to be ahead of an increasing trend for women to take such therapy, but they are perhaps not as far ahead as the authors' review of the literature indicates.

A study of use of hormone replacement therapy

in one general practice (population 14 500) carried out at the same time as Isaacs and colleagues' study found that 19.9% of women aged 40-59 were currently taking therapy.² For comparison with the age grouping used in Isaacs and colleagues' study I have returned to the data from this study and find that, of women aged 45-64, 25.1% were currently taking hormone replacement therapy. This study also described the length of treatment and compliance.

In 1993 a postal questionnaire survey of 1649 women from eight general practices found that 20% of women aged 45-64 were currently taking hormone replacement therapy.³ This study also explored how women make decisions about taking the therapy.⁴ It is probably true that, as the authors state, women doctors "rely less on the views of their general practitioners than do other women." The study mentioned above,⁴ however, showed that most women used many sources of information and advice about hormone replacement therapy other than their general practitioner.

In an interview study that I am analysing several women have talked about using hormone replacement therapy to control menopausal symptoms to make it easier for them to continue their employment successfully. These were women working in contact with the public, who needed to be available and accessible and were working alongside men. Other women have talked about their strategies to cope with hot flushes without therapy. Strategies have included being flexible about what they are doing and when, and checking out how they feel with female friends and colleagues.

I suggest that women doctors are ahead of the tide in taking hormone replacement therapy only partly because of their ease of access to information and treatment. The demands of their job may be a major influence on their decision. For some women, taking therapy will be acceptable; for others it may be a compromise to enable them to continue in work that they value and enjoy. Any preventive effect may be just an added bonus to taking hormone replacement therapy for social reasons.

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Magnesium sulphate should be used for eclamptic fits

EDITOR,—The letter by Robert Fox and Tim Draycott has a misleading title: the fits under discussion are eclamptic, not pre-eclamptic (as the definition of eclampsia is the occurrence of fits superimposed on pre-eclampsia). The letter is also misleading in giving advice to use diazepam rather than magnesium sulphate for the initial control of eclamptic convulsions. This advice could lead to maternal morbidity.

The description of the treatment regimens used in the collaborative eclampsia trial makes it clear that magnesium sulphate was given both to prevent further fits and to control active fits.² Compliance with the allocated treatment in this trial was extremely good, as 99% of 453 women who were allocated magnesium received it and only 9%

received an additional anticonvulsant. Just 15 of these 453 women received diazepam in addition to magnesium. This use of magnesium sulphate resulted in a halving of the risk of recurrent convulsions when the women were compared with women allocated diazepam (relative risk 0.48 (95% confidence interval 0.36 to 0.63)). Put another way, for every 100 women treated with magnesium rather than diazepam, 15 fewer had further fits. The only other published randomised trial comparing these agents in eclampsia (which recruited 51 women) is cited by Fox and Draycott to support their belief that diazepam is "highly effective at stopping convulsions." In this trial the risk of further fits was also reduced (although the reduction did not achieve significance) in women who received magnesium sulphate rather than diazepam (relative risk 0.80 (0.29 to 2.20)).³

Taken together, these trials provide strong evidence to support the use of magnesium sulphate rather than diazepam in women with eclampsia (during acute fits and to prevent further convulsions). Fox and Draycott's argument that diazepam is more readily available and more familiar to British doctors is unlikely to persuade many pregnant women that the drug is therefore an acceptable alternative for the management of acute fits. Instead, the issues that should be tackled are how to make magnesium sulphate readily available in places where it is likely to be needed and ensuring that clinicians (both midwives and obstetricians) are properly trained in its use.

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- 1 Fox R, Draycott T. Prefer diazepam for initial control of pre-eclamptic fits. *BMJ* 1995;311:1433. (25 November.)
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General physicians are as good as cardiologists at interpreting ECGs

EDITOR,—A recent study identified major deficiencies in the ability of medical staff to identify normal electrocardiographic variables such as the QT interval.¹ In the clinical setting, however, knowledge of such variables may be less important than the ability to use an electrocardiogram to achieve a diagnosis. Interpretation of the electrocardiogram in these circumstances is as much an art as a science, entailing recognition and assessment of subtle, frequently non-specific abnormalities.² In view of the importance of electrocardiographic interpretation in the management of patients with chest pain, we examined the interpretative skills of the acute medical receiving team in our hospital.

Over two months 84 patients with chest pain were admitted to the acute medical ward (admissions to the coronary care unit were excluded from the study). An electrocardiogram was obtained on admission and was reported by the acute receiving team (a consultant, a senior house officer, and a junior house officer). In most subjects (76) a second electrocardiogram was obtained on day 2 of admission. The electrocardiogram was reported as normal, presence of acute ischaemia, presence of an old myocardial infarction, or other findings. All electrocardiograms were subsequently reviewed by a senior member of the cardiology team (registrar or senior registrar). Information regarding presentation, history, previous electrocardiograms, and cardiac enzymes was available to both groups.

The acute medical team indicated that 104 of the 160 electrocardiograms obtained were normal, while the cardiologists thought that 102 were normal. Ischaemia was identified in 26 electrocardiograms by the acute medical team (though two of these were reported as normal by the cardiologists) compared with 28 by the cardiologists. Old myocardial infarction was identified in 14 of 84 electrocardiograms by the medical team and in 15 by the cardiology staff. Other findings (right bundle branch block, atrial fibrillation, supraventricular tachycardia, and a paced rhythm) were noted to be present in four of 84 by both groups. Overall, the acute medical team and cardiologists agreed on the electrocardiographic findings in 154 of the 160 electrocardiograms.

This study shows that the ability of general physicians to interpret the electrocardiogram of patients presenting with chest pain is broadly similar to that of cardiologists.

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Incidence of and mortality from breast cancer since introduction of screening

Scottish figures show higher incidence and similar mortality

EDITOR,—Mike Quinn and Elizabeth Allen's analysis of trends in the incidence of and mortality from breast cancer in England and Wales prompts us to report equivalent data for Scotland. Overall, during 1979-92 the average annual age standardised incidence of breast cancer (standardised to the European standard population) was higher in Scotland (90.7/100 000) than in England and Wales (85.9). Analysis of age specific incidence shows that most of the excess incidence arose consistently over time among older age groups in Scotland. Obviously, the number of cases in Scotland is substantially lower than that in England and Wales, so that annual incidence and mortality are more susceptible to random fluctuation. However, trends in European age standardised incidence (fig 1) and age specific incidence follow a broadly similar pattern to that observed in England and Wales.

Scottish data on mortality are not subject to the

Fig 1—Age standardised incidence of breast cancer among women (1979-92) and age standardised mortality from breast cancer in women aged 55-69 (1950-94), England and Wales and Scotland