lessening of cardiac chamber size, wall tension, and oxygen consumption. After-load reduction, with a drop in impedance enabling ejection against less resistance, also lowers myocardial oxygen consumption. The duration of action is approximately four hours and the frequency of dosage should thus be at least every four hours. An effective dose should cause a reduction in systolic blood pressure an hour after ingestion. The starting dose is usually 10 mg five to six times daily and may be increased to as much as 40 to 50 mg at the same frequency. Some patients will initially have a headache which responds well to mild analgesics. This is usually not a persistent problem and in many patients the headache disappears or diminishes considerably despite continuing the drug.

We use sorbide nitrate frequently. In three of our patients with classic angina pectoris we conducted a double-blind, ergometric, exercise-tolerance study and found that in all there was a two to threefold increase in their work capacity after taking 10 or 20 mg of sorbide nitrate as compared to placebo. This improvement peaked at one hour and returned to control levels by four hours. The 20 mg dose was significantly superior to the 10 mg dose.

We should like to call the attention of those interested in this problem to an excellent recent review article¹ that concludes that despite past controversy the usefulness of long-acting nitrates in high dosage in angina pectoris is well established.

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M M BASSAN

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¹ Needleman, P, *American Journal of Cardiology*, 1976, **38**, 400.

² Danahy, D T, et al, *Circulation*, 1977, **55**, 381.

³ Glancy, D L, et al, *American Journal of Medicine*, 1977, **62**, 39.

⁴ *American Journal of Medicine*, 1978, **64**, 183.

Drugs and breast-feeding

SIR,—We read with interest your leading article on the problems of drugs and breast feeding and the uncertainty that surrounds much of our knowledge on this subject (10 March, p 642). May we therefore present some information pertinent to a widely prescribed product.

At Dudley Road Hospital we are investigating the use of metronidazole rectal suppositories (1 g eight hourly, seven doses) in the prevention of infection following caesarean section, and breast milk samples collected within 30 minutes of completing this treatment have been analysed. The initial results (eight patients) are as follows: mean metronidazole concentration in milk: 10 µg/ml (10 mg/l); maximum metronidazole concentration in milk: 25 µg/ml (25 mg/l).

Following the work of Khan and Nixon¹ the recommended paediatric dosage of metronidazole is 7.5 mg/kg/8 h (Data Sheet Compendium), which represents 15 mg/4 h for a 4 kg infant. Calculating from the average post-treatment metronidazole concentration in our study, it would require a breast milk intake of 1500 ml/4 h or, calculating from the maximum post-treatment metronidazole concentration, an intake of 600 ml/4 h, to achieve this dosage.

Our initial results suggest therefore that the prophylactic use of metronidazole suppositories

at the dosage stipulated is unlikely to have any harmful effect on the breast-fed neonate. The situation, however, may be different for the older breast-fed child taking larger quantities of milk from a mother receiving metronidazole.

Dudley Road Hospital,
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May and Baker Limited,
Dagenham, Essex

¹ Khan, O, and Nixon, H H, *Kinderchirurgie*, 1978, **25**, 196.

B MOORE

JOHN COLLIER

Cetiprin and oesophageal ulceration

SIR,—Mr F J Collins and others draw attention to a case of oesophageal ulceration following the ingestion of a tablet of emepromion bromide 200 mg (23 June, p 1673).

The fact that the patient "swallowed the tablet dry, as was her normal practice," demonstrates that the treatment was not prescribed according to the manufacturer's instructions—namely, that the tablet should be swallowed with an adequate amount of fluid.

All tablets nowadays are formulated to disintegrate rapidly in contact with water. This is achieved by incorporating swelling agents that need a small amount of water to exhibit their effect. When a tablet is swallowed with too little fluid the hygroscopicity of the tablet can cause it to stick to the oesophageal mucosa, resulting in local irritation and ulceration. Patients who have difficulty in swallowing Cetiprin tablets should take them as a slurry in water.

ALLAN D LAUDER

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Tory health

SIR,—Your leading article, "Tory health" (9 June, p 1522), discusses "joint responsibility of the Government and the medical profession to see that people know the basic facts about health," but points out the difficulties of spreading health education. Surely there is more scope for medical education through the mass media, particularly television. Medical programmes on television tend to highlight new and sensational developments. The information may be of great interest but will provide little direct benefit except perhaps for members of the medical profession. A recent programme on normal and abnormal sexual differentiation, for example, was fascinating but hardly likely to save lives, or significantly affect the health of the country.

Public education could be of particular value in preventing deaths from coronary artery disease, not only by reducing risk factors such as smoking but also by ensuring that patients with myocardial infarction reach medical care as promptly as possible. The following case illustrates the potential value of medical advice provided through television.

A 42-year-old man developed typical symptoms of myocardial infarction on 13 April, the day after watching a television programme about heart attacks. Not only did he correctly interpret his symptoms but he also arranged for a relative to take him directly to the nearest accident and emergency department. He developed ventricular fibrillation within a few minutes of being admitted. Immediate electrical defibrillation was successful and he lived

to tell the story. He is emphatic that had he not watched the programme he would have attributed his symptoms to indigestion and called his general practitioner. He pointed out that 13 April was Good Friday.

Television already provides education on the prevention of accidents. Is it not time that this role was extended? Perhaps there is a joint responsibility of the broadcasting authorities and the medical profession to see that people know the basic facts about health.

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Sodium in peritoneal dialysis solutions

SIR,—We agree with the conclusion reached in the paper by Dr P G Bisson and Mr K M Bailey on sodium in peritoneal dialysis solutions (19 May, p 1322). Similar standards should be applied to solutions for peritoneal dialysis and haemodialysis.

We do not, however, agree with the routine use of high-sodium dialysate (141 mmol/l) for chronic dialysis. Resultant high or high-normal postdialysis plasma sodium concentrations potentially contribute to both hypertension and excess thirst. Routinely using the low-sodium dialysate (130 mmol/l) we have not witnessed the hypernatraemia-related post-dialysis problems described. Neither have we noted any significant hyponatraemia. It is even possible that a sodium of 130 mmol/l is too high as we are aware of one large peritoneal dialysis programme which routinely and successfully uses dialysate with a sodium concentration of 120 mmol/l (C Comty, personal communication, 1978).

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Legal ignorance

SIR,—We are respectively a medically qualified clinical tutor in child health and a solicitor with a close involvement in the problem of child protection and medical law. The work of each of us means that we have to acquire some knowledge of the skills of our sister profession, and we are continually dismayed by the ignorance demonstrated by practitioners of certain fundamental facts and procedures that each profession should know. In our case this has become manifest in the field of child care, but we have reason to think that it exists at every level.

As an example of what we mean we quote some answers given by 101 medical students when asked the meaning of a "place of safety order." Ten thought that it prevents those over 14 years using playgrounds in public places. Eight thought it insists that playgrounds in all primary schools should be completely fenced in. Six thought that it compelled a parent to take a child for regular medical inspection. Five thought it was an order forbidding children under 12 years to handle fireworks except in a private garden. Twenty-three thought it was granted where a family of small children were homeless. Nine thought the order lasted for six months. Two thought the order had to be signed by the Chief Constable or his assistant. Eleven

thought the orders could only be made by a magistrate in a juvenile court. Fourteen thought such orders prevented parental access to the child unless the order was revoked or the order specifically gave parents access. Seven thought the place of safety was always a hospital if the child was under 12 months of age. Questions on the meaning of a "care order" were similarly seriously wrong.

If any lawyer feels smug about this, a solicitor can qualify without any tuition whatsoever in forensic medicine; the Council of Legal Education are, we understand, introducing forensic medicine as an optional subject in the final year for law students but without any examination. At universities known to us any facility for a law student to acquire any knowledge of medicine is haphazard or non-existent. The student actively has to seek involvement in such an activity.

The purpose of this letter is not to suggest that either law or medicine can provide remedies for the basic causes of violence to and abuse of children: but those practitioners in either profession who are going to have to deal in one role or another with individual patients and clients involved in these tragedies should surely be better equipped by proper training.

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Pressure in cuffed tubes

SIR,—I was interested to read Dr W G Notcutt's remarks about pressure on the tracheal mucosa (9 June, p 1566) but regret that he made no reference to the rise in pressure that occurs in a cuff if it is inflated with air and nitrous oxide is used as an anaesthetic agent.^{1 2}

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¹ Stanley, T H, Kawamura, R, and Graves, C, *Anesthesiology*, 1974, **41**, 256.

² Revenäs, B, and Lindholm, C E, *Acta Anaesthesiologica Scandinavica*, 1976, **20**, 321.

Emergencies and the laboratory

SIR,—Your leading article (9 June, p 1521) demonstrates a truly remarkable ignorance of the clinical chemistry "scene" on the other side of the Atlantic. For example, the number of clinical chemists per million of population is 27 in the UK and 14 in Ontario hospitals. Attempts at monitoring demand and ensuring legitimate utilisation that are possible in the UK are well nigh impossible in Ontario with this staffing ratio. Not only that—the work load per patient day can be up to 20-fold greater in a teaching hospital in Ontario than in a similar institute in the UK.

My approach¹ was subtitled "a method for improving communication between the physician and the emergency clinical biochemistry laboratory," and because of the priority form I now know exactly when an emergency test result is required. Therefore I have assured myself that legitimate requests will be adequately dealt with. Of course, many (nearly all?) priority requests are not essential, but before solving that problem I need accurate information on the extent of the

misuse. The priority form helps me to obtain this.

Since I wrote that paper last year, the number of emergency tests have increased considerably. The current ratio (June, 1979) of priority test (result required within a two-hour time period or less) to routine test is 0.97 for random glucose (n=858), 0.44 for electrolytes (n=701), and 0.73 for electrolytes with urea and creatinine (n=725). Being "more convincing" is the least of my worries.

A R HENDERSON

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¹ Henderson, A R, *Journal of Clinical Pathology*, 1979, **32**, 97.

Sweet medicines and teeth

SIR,—Of the children studied by Dr I F Roberts and Dr G J Roberts (7 July, p 14), half of the patient group had chronic disorders of the nervous system and apparently most had fits. While the authors explicitly set aside consideration of any relation between specific medication and dental disease, where anti-convulsants—and in particular phenytoin—are concerned this is to set aside a most important aetiological factor.

Unfortunately, phenytoin-induced hyperplastic gingivitis and poor oral hygiene conspire by positive feedback. The degree of gingival hyperplasia found in those receiving phenytoin over a long period is inversely related to the meticulousness of oral hygiene practised, as elegantly demonstrated in an unintentional controlled trial by a patient taking the drug whose gums proliferated only on the side that she had not been careful in brushing her teeth.¹ With failure to keep gum proliferation at bay the teeth may be set at further risk as a result of sequestration of food particles behind the intruding tissue. Any sugar in the phenytoin preparation adds to this risk to the epileptic child, and here in particular the authors' call for its replacement should be heeded.

SIMON KROLL

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¹ Bruun Kristensen, C, *Epilepsia*, 1977, **18**, 295.

Disposable syringes for insulin injection

SIR,—Dr A Greenough and others (2 June, p 1467) made an excellent case for the use of disposable syringes for insulin dependent diabetics.

The statement that the syringe carries the caption "Sterile. Destroy after single use" because sterility cannot be guaranteed once the syringe has been removed from the packet is correct, but this is only part of the story.

The compatibility and toxicity studies associated with such products are extensive but always assume that the product will be used once only. Any adverse effects associated with continuous contact of the syringe and its components with insulin and its vehicle and preservatives over a period of months is unknown.

The British Standard 5081, to which all products sold in the UK must conform, specifies that sterile hypodermic syringes and needles for single use are not intended for

containing injectable fluids or samples over extended periods.

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Direct debit payments

SIR,—The letter from Dr P J Hirsch (23 June, p 1714) contains one serious error of fact. He stated that, "there is no legal redress and once a mistake has been made that is just unfortunate." Before the Association was permitted to introduce the direct debit system, our sponsoring bank, the National Westminster, insisted that we entered into an indemnity in the form prescribed by them and this was lodged with the Committee of London Clearing Banks. Under this indemnity any mistakes have to be made good by the Association.

Dr Hirsch also stated that "the old banker's order could easily be changed when sending out notification of subscription changes." This can, of course, be done but in practice proves inconvenient to many of our members as we cannot do it for them. The variable direct debit is not only convenient to the member as it always ensures that his subscription is up to date, but is also highly economical for the Association.

Finally, there is no question of the Association being given a blank cheque. Our members are advised annually of the current subscription scale and our computer is programmed so that it cannot collect more than the standard subscription rate for any year. If for some reason too high a subscription is collected from a member, we are bound under the terms of our indemnity to refund it. In practice this is extremely rare.

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Functional budgeting

SIR,—We are concerned at some of the implications of Mr P J E Wilson's letter (2 June, p 1485) on the subject of functional budgeting. There appears to be a basic misunderstanding of what this is and attempts to do. "Functional" is a rather curious term which in the context means departmental. It can be applied only to identifiable departments with responsible department heads who will be budget managers. Clinical units manifestly do not fall within this definition because they use services supplied by many departments. The question Mr Wilson seems to raise is whether departmental budgeting will restrict resources available to clinicians and thereby affect their freedom of action.

Clinicians must be aware that they do not have unrestricted resources at their disposal; budgetary control has been around for a long time and has manifested itself as much in financial systems as in physical control of resources: allocated beds, clinic sessions, staff, equipment. This control has usually been exercised at district or area management team levels, resulting in frustration to departmental managers and clinicians alike, who may be unable to exercise full control over their own resources. The introduction of departmental budgeting will help to alleviate this problem because it allows the manager discretion in the use of his resources within a negotiated overall total. He will thus have flexibility to respond to