residual fragments at two months and 14% at 12 months; of those with multiple stones, 70% still had fragments at two months and 22% at 12 months.

We have to date treated 15 patients by percutaneous cholecystolithotomy, with complete success in 13—not a bad initial learning curve. Our last patient left hospital completely free of stones and tubes in 24 hours without any need for long term chemolysis.

We maintain that a direct endoscopic approach to the treatment of gall stones in a functioning gall bladder has much to commend it when compared with lithotripsy and long term chemolysis.

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Nifedipine for epilepsy?

SIR,—The study by Dr John Larkin and his colleagues (20 February, p 530) draws attention to the potential use of calcium channel blockers in the treatment of epilepsy. The absence of a control group, however, makes it very difficult to form any real conclusions about the efficacy of nifedipine.

The moderate reduction in the frequency of seizures could be explained by the placebo effect of a new medication and by the widely recognised reduction in frequency of seizures that accompanies admission to hospital. Moreover, the penetration of nifedipine into the central nervous system is likely to be limited. Although there are few formal studies available nifedipine is almost completely protein bound and animal studies suggest that very little of it crosses the blood brain barrier.¹ It is uncertain, therefore, whether the drug can achieve sufficient concentrations in the brain to produce a therapeutic effect.

A considerable number of patients with seizures remain symptomatic despite maximal pharmacological treatment, and there is a need for new therapeutic agents. Calcium channel blockers may have such a potential role since the influx of calcium ions into neurones is thought to be an important feature of epileptogenesis.^{2,3} Animal studies⁴ and limited clinical trials⁵ have also suggested that calcium channel blockers may be potentially useful in epilepsy. It is likely, however, that calcium channel blockers which have better central nervous system penetration—for example, nimodipine^{4,5}—would be more suitable agents for use in future controlled trials in the treatment of epilepsy.

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Hypnotic drug use among the elderly

SIR,—The papers by Dr Kevin Morgan and colleagues and Dr E K Rodrigo and others (27 February, p 601) on benzodiazepine users suggest, without openly stating, that the introduction of these drugs to elderly patients is by general practitioners. During 1975-9 I kept careful records of tranquillisers given to old patients. Much time was spent in weaning them off these drugs and occasionally in using placebo (vitamin C 50 mg). From 1970 onwards nitrazepam was heavily used in hospital at a time when open wards were in vogue. Visits paid to the ward sister indicated that she was at liberty to prescribe nitrazepam to keep the ward quiet at night.

Our practice was the south London practice studied by Cooper *et al* in their studies of depression rates in general practice and of how general practitioners' diagnoses corresponded with psychiatrists'.¹ During some of these discussions it became clear that depression is a dynamic state, often preceded by anxiety and stress. There seems little doubt that prolonged stress stimulates hypothalamic activity, leading to a rise in blood cortisol concentrations. This in turn activates tryptophan pyrrolase, leading to reduced synthesis of serotonin, inhibition of the amygdala, and activation of the hypothalamus. As a result, a vicious circle is formed which aggravates depression.²

The general practitioner encounters the patient at the beginning of this cycle and seeks to reduce exposure to stress, which may lead to depression. The widespread use of tranquillisers in the treatment of "depressed" people in the community is connected with the evidence that long term users of benzodiazepines report high levels of emotional distress. There is now widespread teaching of general practice trainees that the use of diazepam drugs must be short term but also that ability to cope with emotional stress is reduced, rather than enhanced, by these drugs.

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Procedures in dermatology

SIR,—May we sound a note of caution regarding the technique of curettage for superficial or small nodulocystic basal carcinomas referred to by Dr D W S Harris (12 March, p 769) in his article describing procedures which "can easily be used in general practice."

Though subject to controversy,¹ curettage and electrocautery has retained a place in the treatment of basal cell carcinomas because it is quick and simple and in expert hands recurrence rates (for carefully selected minor lesions) are similar to those with other treatments such as surgical excision or radiotherapy.^{2,4} There are, however, three important reasons why surgically minded general practitioners would serve their patients better with a scalpel than with a curette.

Firstly, the key to cure of a basal cell carcinoma lies in identifying its margins, and only careful histological examination of an excised specimen will show that this has been accurate. The distorted specimen obtained by curettage and electrocautery cannot yield such information.

Secondly, clinical diagnosis of skin lesions can be difficult even for experts (and should always be confirmed histologically if the lesion is removed,

though this step was omitted from the procedure for curettage given by Dr Harris). Simple excision with macroscopic clearance of 2-3 mm can be defended as satisfactory initial treatment for any small skin malignancy but the same cannot be said of curettage and electrocautery. To take an obvious and serious example, in assessing prognosis and the need for further treatment of a malignant melanoma (which can be mistaken for a basal cell carcinoma) the absolute thickness of the lesion and its depth of invasion are crucial. These histological features are ruined by curettage and electrocautery.

Thirdly, sutured excision wounds heal quickly by first intention whereas the open burnt wounds left by curettage and electrocautery heal slowly by second intention. Not surprisingly, the cosmetic results of excision are usually better⁵—an important consideration since most basal cell carcinomas occur on the face.

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Physical exercise and mental health

SIR,—In reviewing the possible association between physical exercise and improved mental health Dr E Szabadi (5 March, p 659) omits any discussion of the possible physiological mechanisms. For example, analogies have been drawn between the effects of exercise and opiate drugs.¹ Exercise has reward value, and like these drugs can induce positive moods so that "runner's high" has been described.² Exercise may also raise the pain threshold: Dale found unusually high concentrations of β endorphin in half marathon runners who collapsed.³ The opiate antagonist naloxone inhibits these effects of exercise on mood and pain perception.^{4,5} Similarly, withdrawal from regular exercise may lead to dysphoria.⁶

Any dependence on regular exercise may be regarded as a "positive addiction," compared with "negative addictions"—for example, to alcohol or drugs.⁷ Although both types of addiction may be mediated through opiates there appear to be important differences. With negative addictions the pleasurable effects tend to be more immediate with longer term disadvantages, whereas with positive addictions individuals gain beneficial results only after perseverance, often with some initial discomfort.

If exercise raises the concentrations of circulating endorphins which act on the same opiate receptors as exogenous opiates such as heroin this would support the notion of substituting drug dependence with a positive addiction such as exercise. There are also implications for the detoxification of opiate users, in whom exercise might be expected to facilitate this often difficult process.

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Peaks and troughs in demands on hospitals

SIR,—Dr M F H Bush may well be right that the occurrence of peaks and troughs in demand for hospital inpatient care has received little attention from planners and managers (12 March, p 786), but the attention that has been given has produced results partly at variance with his conclusions.

Firstly, the daily demand for emergency admissions should theoretically follow a Poisson rather than a normal distribution, and this has been confirmed in practice.¹ The fact that Dr Bush's observations in three specialties show variances very close to the corresponding mean suggests that this is probably also the case in East Suffolk. This would have some effect on the calculated number of beds to provide for admissions on 95% of occasions, particularly when the mean number of daily admissions is less than 10 or so, as occurs in two of the specialties presented.

Furthermore, Dr Bush has used two sided probability inappropriately, since the "mean and two standard deviations" approach excludes about 5% of a normal distribution in both tails together rather than just the upper tail. On half of his one day per three weeks there would be less demand rather than more. The specialties would expect to find difficulty on less than one day every six weeks, rather than one day every three weeks.

Finally, Dr Bush has suggested a model of bed use which is almost certainly not representative of reality.² In particular, no account is taken of the fact that bed occupancy as a phenomenon is dynamic rather than static. In the very trivial case, if daily emergency admissions were constant, each with a fixed length of stay, the number of admissions would balance the number of discharges every day, and no beds would need to be free (other than for part of a day to cover the change over). Dr Bush's model, however, would necessitate a number of beds kept free in advance equal to the number of admissions. In reality, it is the variation in numbers of emergencies from day to day and the variations in length of stay from one admission to the next which create the uncertainty and lead to beds sometimes being left unused. This capacity is plainly necessary, but overestimating the need by applying an inadequate model is unlikely to be helpful.

What then can be done to examine the need for capacity to cope with fluctuations in demand for admission? Firstly, bed occupancy can be modelled by a simulation technique, taking account of varying patterns of admission, discharge, length of stay, and day case work; this detailed and time consuming technique is capable of yielding a wealth of information. Alternatively, comparison can be made between local values for a range of bed use indicators and the corresponding values found in most other districts. Certainly it is desirable to examine the data carefully for accuracy, to be aware of particular local features, and to avoid using single indicators in isolation; further detail on emergency as against elective admissions would

also be useful. Comparison should preferably be with median values and certainly not with either extreme of the range. With these provisos, it is difficult to see how the approach can be decried as fundamentally unsound.

The spare capacity which must be maintained to cope with peaks in workload is best measured by turnover interval, the average length of time before a bed is next occupied. There are plainly still some unanswered questions when clinical units apparently dealing with similar emergency (and elective) loads can have such widely disparate turnover intervals as are apparent nationally.

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Prenatal screening

SIR,—Reading the Personal View in your journal is generally enjoyable in that a particular point of view is offered. The two articles on prenatal screening (20 February, p 566) were atypical in attempting to make small, albeit very personal, events have a more universal meaning. Single episodes of poor communication between patient and medical attendants were seized on and drawn out of perspective. The cause for very personal difficulties were being sought elsewhere.

Professor Drummond and his wife have reason to feel aggrieved that no offer of genetic counselling was made to a pregnant woman of 38. (The implications of the Alton bill would diminish the ability of the doctor to offer that service.) However, to take this oversight, wrestle with a guilty conscience, and then draw up a vague list of recommendations for reform is carrying the matter a little far.

I agree that individuals do vary in their attitude toward possible outcomes after prenatal testing, and that very difference is the basis of genetic counselling. We have not moved into the eugenic society where it is demanded that fetuses with a particular condition should be aborted. Resources will vary from region to region for the foreseeable future and money taken to standardise prenatal counselling for low risk conditions may not be welcomed by those faced with reductions in numbers of midwives or closure of neonatal intensive care cots.

Louise Knight was also treated badly but is seeking to absolve herself for being unable to cope with the implications of a prenatal test. There is a limit to the amount of information that can be offered to a patient to allow her to make an "informed decision." The doctor will always have difficulty in judging that amount. Major factors (risk of abnormality occurring, risk of miscarriage) obviously have to be discussed at length, although, as Professor Drummond identifies, different weights will be placed on these. The delivery of a live child with Down's syndrome is a result that will have major consequences for years. A miscarriage after amniocentesis, although catastrophic, will in most cases be an easier burden to carry and usually offers the option of starting again. In my experience the introduction into the discussion of rarer factors, especially those of a disputed scientific validity, may result in a confused patient and limited opportunity for a decision. Social and medicolegal forces demand a perfect outcome in a pregnancy and also the acquisition of

all possible information about a prenatal test. The confusion resulting from such an acquisition may make a decision about the test impossible and the outcome of the pregnancy less than perfect.

The doctor should advise the patient (despite the protestations of Ms Knight) but cannot decide for her. This is because the decision is in essence whether to allow a baby to die, and the patient initiates that process. Only after that decision is made should the problems concerned in the testing be considered. It will never be easy.

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Drug points

Erythromycin and nightmares

Drs R J BLACK and T A J DAWSON (Department of Dermatology, Craigavon Area Hospital, Craigavon BT63 5QQ) write: Following Dr Williams's communication (16 January, p 214) we report a further case of nightmares associated with erythromycin. A 21 year old woman was given erythromycin (Erymax) 250 mg once a day for acne. The night after starting treatment she had a terrifying dream in which she thought she witnessed the death of her mother. Nevertheless, she continued to take the erythromycin for the next month and experienced at least two nightmares each week. The erythromycin was then discontinued and the dreams stopped. When reviewed at the dermatology clinic one month later the patient had had no further nightmares. There was no history of nightmares or any other psychological disturbance.

Nifedipine for epilepsy?

Drs J W A S SANDER and S D SHORVON (Chalfont Centre for Epilepsy, Chalfont St Peter, Buckinghamshire SL9 0JR) write: Like Dr John G Larkin and colleagues (20 February, p 530), we decided to study the antiepileptic effects of nifedipine. We used nifedipine in 11 patients with intractable partial epilepsy. Nifedipine was given at 10 mg three times daily in addition to the patients' regular antiepileptic regimen for at least four weeks. In three a considerable improvement (>75%) was observed, and this was maintained for up to five months. Thus we support the suggestion that further studies are warranted to assess the potential antiepileptic properties of this drug and other calcium channel blockers.

Neuroleptic malignant syndrome

Dr R D MANN (Committee on Safety of Medicines, London SW8 5NQ) writes: Dr P Finucane and others (2 January, p 18) reported a case of the neuroleptic malignant syndrome in an elderly patient and commented that this was the fourth case of this syndrome reported from Britain. There have in fact been more reports than that and the Committee on Safety of Medicines (*Current Problems* No 18) noted in September 1986 that by July of that year 17 reports of neuroleptic malignant syndrome had been received (five of which were fatal). Currently, we have 59 reports of this syndrome and 13 of these cases were fatal. We note Dr A M P Kellam's important comments on the treatment of this condition (30 January, p 361) and are anxious that all cases of this important syndrome should be reported on yellow cards.

Ventricular arrhythmia precipitated by flumazenil

Drs T G SHORT, T MALING, and D C GALLETLY (Departments of Anaesthesia and Medicine, Wellington School of Medicine, Wellington, New Zealand) write: A 30 year old woman was admitted to our