restored by adjustment of sensitivity controls in the normal fashion. Continuous recording of two echoes by time-position is not important because respiratory activity is continuously monitored by chart recorder. The time-position signals are merely used to verify the respiratory origin of the recorded signals.

The recording of fetal chest wall velocity provides additional information which may assist in distinguishing between different types of respiratory movement. We make no claim at this stage that this is clinically useful.

The capacity of the system to record movements of small amplitude is evidenced in fig 2 (a) in our paper, while the duration of recording available from our chart recorder is similar to that obtained from other systems. We have found that consideration of the comfort of our patients usually limits the duration of recording to a maximum of about 90 minutes.

We consider Dr Meire's criteria for a fetal breathing monitoring system to be arbitrary and unsupported by the reference he quotes.

R N TREMEWAN
D R AICKIN
J J TAIT

University Department of Obstetrics
and Gynaecology,
Christchurch Clinical School,
Christchurch,
New Zealand

Raynaud's phenomenon as side effect of beta-blockers

SIR,—We read with interest the paper by Dr A J Marshall and others (19 June, p 1498) concluding that the incidence of Raynaud's phenomenon in patients on three different beta-blockers lay between 59% and 22%. These figures are far higher than the incidence measured by other authors or from our own records of extensive clinical trials. Thus in five papers concerning propranolol (Inderal) where Raynaud's phenomenon or cold extremities was recorded the incidence was 8.2%,¹ 5.8%,² 3.8%,³ 3.3%,⁴ and 2.8%.⁵ With atenolol (Tenormin) out of 547 patients treated in 15 trials where in no instance was the dose higher than 600 mg/day the incidence of cold extremities was 2.6%. Clearly these figures are quite different from the 59% and 35% quoted by Dr Marshall and his colleagues.

We would make certain observations on the survey carried out by this Bristol group which may explain this discrepancy. Firstly, it has long been recognised that if one specifically asks about a side effect then one is very much more likely to receive a positive answer than if an open-ended question is used.⁶ This is presumably due to the background incidence of side effect-like symptoms which are part of everyday life. It is for this reason that a placebo control group and a double-blind design are essential when using direct side effect questionnaires. Unfortunately, no placebo group was included in the present survey, although the methyldopa group acted as a control. We consider that because there is evidence that methyldopa may produce peripheral vasodilatation⁷ the use of this as a control is unsuitable.

Further, although dose ranges for the drugs are given in the paper, the average is not. Reference to table II shows that with propranolol the mean fall in diastolic blood pressure was 32 mm Hg, with methyldopa 31 mm Hg, with atenolol 29 mm Hg, and with

oxprenolol 24 mm Hg. It is interesting to note that the rank order in which the three beta-blockers produced cold extremities in this survey is the same order as the falls they produced in diastolic blood pressure. We wondered therefore if the relationship of cold extremities to the dose of beta-blockers has been adequately allowed for, particularly in the case of oxprenolol.

While there can be very little doubt that cold extremities can be a side effect of beta-blockers and while it is probably true that this incidence varies from drug to drug, possibly related to pharmacological effects discussed by Dr Marshall and his colleagues, we would strongly question the conclusion that the incidence is anything like 20%-50%, as suggested.

Cecil W Marsden
Head of Medical Department,
ICI Pharmaceuticals Division

Macclesfield, Cheshire

P F C Bayliss
Managing Director,
Stuart Pharmaceuticals Ltd.

Cheadle, Staffs

- ¹ Zacharias, F J, et al, *American Heart Journal*, 1968, **83**, 755.
- ² Greenblatt, D J, and Koch-Wesser, J, *Drugs*, 1974, **7**, 118.
- ³ Tarazi, R C, and Dunstan, H P, *American Journal of Cardiology*, 1972, **29**, 633.
- ⁴ Conway, J, in *Modern Trends in Cardiology*, vol 3, ed M F Oliver, p 376. London, Butterworths, 1975.
- ⁵ Prichard, B N C, and Gillam, P M S, *British Medical Journal*, 1969, **1**, 1.
- ⁶ Wheatley, D P, *Journal of International Medical Research*, 1975, suppl 3, p 105.
- ⁷ Onesti, G, et al, *American Heart Journal*, 1964, **67**, 32.

Dangers of tinted glass for driving

SIR,—I feel sure that practically all medical men share the views of Professor R A Weale (15 May, p 1212) and Mr M J Gilkes (3 July, p 42) as to the dangers to drivers of using tinted spectacles and windscreens in conditions of impaired visibility.

It is, however, not generally appreciated that tinted screens are already probably illegal in the UK under section 22 of the Motor Vehicles (Construction and Use) Regulations 1973. I pointed this out in May 1975 in an article on safety for a popular motor magazine and as it drew no editorial comment I presume that it is recognised as being the correct interpretation of this section.

As far as I know there has not been a test case, but I would think that a motorist who had suffered injuries from an accident in fog or heavy rain might well be awarded heavy damages on suing the manufacturers of his car if this was a modern one and was fitted with a tinted screen.

C LANGTON HEWER

London N6

Other tunnels, other nerves

SIR,—We should like to congratulate you on drawing attention to the problem of peripheral nerve entrapment (3 July, p 3). You mention five sites where pressure commonly occurs. Those with a special interest in these conditions will also recall reports of entrapment at other sites—namely, the exit of the supraclavicular nerve through the clavicle,¹ the emergence of the saphenous nerve from the sub-sartorial canal,^{2,3} and the sural nerve at the lateral margin of the ankle.⁴ In the production

of many of these syndromes minor or repeated trauma plays a part.

We believe that entrapment neuropathy is much more common than is realised, but apart from the obvious motor entrapments such as the carpal tunnel syndrome many surgeons are dubious about the validity of this claim. Preoperative demonstration of a conduction defect appears to be the only objective evidence of compression, but facilities for this test—especially with regard to sensory nerves—are not widespread. We would suggest, therefore, that where possible the suspected patient should be referred for such study, as this will eliminate much of the confusion that surrounds the diagnosis.

D S COLBERT
E H CHATER

Orthopaedic Department,
Merlin Park Hospital,
Galway, Eire

- ¹ Gelberman, R H, Verdeck, W N, and Brodhead, W T, *Journal of Bone and Joint Surgery*, 1975, **57A**, 119.
- ² Kopell, H P, and Thompson, W A L, *Yearbook of Orthopedics and Traumatic Surgery, 1960-1*, p 232.
- ³ Mozes, M, Quaknine, G, and Nathan, H, *Surgery*, 1975, **77**, 299.
- ⁴ Colbert, D S, Mackey, D, and Cunningham, F, *Journal of the Irish Medical Association*, 1975, **68**, 544.

SIR,—It is disappointing to find, in an otherwise excellent leading article (3 July, p 3), no mention of abdominal wall pain due to nerve entrapment in the posterior wall of the rectus sheath. This was first described in 1968¹ and subsequently reported elsewhere.^{2,3} Our clinical experience in over 500 cases has been confirmed by other workers^{4,5} and the syndrome well recognised both in Britain and abroad.⁶

MARK MEHTA

Norfolk and Norwich Hospital,
Norwich

- ¹ Mehta, M, Annual Meeting, Royal College of Surgeons of England, 1968.
- ² Mehta, M, and Ranger, I, *Anaesthesia*, 1971, **26**, 330.
- ³ Mehta, M, *Intractable Pain*, p 122. London, Saunders, 1973.
- ⁴ Applegate, W V, *Surgery*, 1972, **71**, 118.
- ⁵ Cilento, R, *British Medical Journal*, 1972, **2**, 789.
- ⁶ Raftery, H, and de Valera, E, 1st World Congress on Pain, Florence, 1975.

Erectile impotence

SIR,—The leading article on the treatment of erectile impotence (29 May, p 1298) and the recent letter from Dr G R Freedman (3 July, p 44) emphasise the psychological component at the expense of the physical. Your leading article does mention multifactorial causation but says nothing about the appropriate screening for physical or endocrine abnormalities which might be contributing to or causing the impotence. Furthermore, by accepting aging as a sufficient cause for impotence it implies that investigation of impotence in the elderly is unnecessary.

We have recently completed a clinical trial of gonadotrophin releasing hormone in secondary sexual impotence¹ and have screened 34 consecutive patients for mental and physical pathology who were referred by general practitioners, physicians, and psychiatrists. Diabetics were not referred to us and none of the 34 were found to have abnormal glucose tolerance. Despite this a surprising number, 11 of the 34 referrals, were found to be suffering from a physical illness which could explain their erectile impotence—for example, hepatic

dysfunction, thyroid disease, and hyperprolactinaemia. Five of these patients, who were excluded from the trial, recovered their potency when the underlying abnormality was treated, although they had failed to respond to previous androgen supplements. These patients often felt physically well and had similar putative aetiological factors which were indistinguishable from those in patients with no physical abnormality. In other words they had their fair share of factors regarded as important in aetiology by Masters and Johnson²—acute alcoholic episodes, marital disharmony, maternal/paternal dominance, religious orthodoxy, premature ejaculation, etc.

It is possible that more physical abnormalities were discovered in our patients than in other published series because of advances in endocrine investigations. Masters and Johnson found that 27 patients out of 213 had associated physical disorder of whom only seven were considered to be impotent as the direct result of physical illness. This difference may be accounted for by the selection procedure.

We do not wish to detract from the importance of psychological factors, nor do we suggest that improved sexual education for doctors and undergraduates is unnecessary or undesirable. We do not dismiss the possibility of physical illness making patients more vulnerable to psychological stress. What we do suggest is that adequate sophisticated screening for physical, and particularly endocrine, abnormality should be undertaken before patients are subjected to lengthy psychotherapy.

C Q MOUNTJOY
TERRY F DAVIES

Department of Psychological Medicine
and Department of Medicine,
Royal Victoria Infirmary,
Newcastle upon Tyne

¹ Davies, T. F., *et al*, *Clinical Endocrinology*. In press.
² Masters, W. M., and Johnson, V. E., *Human Sexual Inadequacy*, p. 185. London, Churchill, 1970.

Nicotine, tobacco substitutes, and smoking habits

SIR,—The reports by Dr S Freedman and Professor C M Fletcher (12 June, p 1427) and Dr M A H Russell (p 1430) discuss the effects of changing cigarette design on smoking habits.

During 1975 we investigated, within the limitations of the Hunter Committee guidelines,¹ subjects smoking the tobacco substitutes NSM and Cytrel. Subjects smoked both a product containing 40% substitute and a matched control 100% tobacco product, each for 24 hours with an intervening period of seven days. Following each smoking period five cigarettes were "chain-smoked" and the butts collected and analysed in terms of length and filter nicotine. An estimate of the

smokers' dose of nicotine (observed nicotine) was calculated from the filter nicotine and "filter retention factor"²; for each subject an indication of the manner in which the cigarettes had been smoked may then be obtained by considering the ratio between the observed nicotine and the nicotine yield on machine smoking (expected nicotine). The results (see table) indicate: (1) that the NSM product was smoked to a significantly shorter butt length than the control; (2) that all subjects received significantly less nicotine when smoking the substitute products; (3) that the substitute products were being significantly "over-smoked," which might suggest an attempt to compensate for the reduction in nicotine.

A paired analysis between control and NSM smoking performed on the data of Dr Freedman and Professor Fletcher, as presented in fig 2 of their paper, similarly reveals a significantly higher ratio of observed:expected nicotine in the substitute smokers (group 1, $P < 0.001$; group 2, $P < 0.005$), again suggesting that the substitute product is being "over-smoked" in relation to the control product, a conclusion which is contrary to that drawn by the authors from their data.

Despite this attempt to "over-smoke," the relatively low-nicotine substitute product, in the study of Dr Freedman and Professor Fletcher there was no apparent increase in cigarette consumption. If a cigarette containing 1 mg of nicotine is necessary for smokers to achieve a minimal threshold nicotine increment per cigarette, as suggested by Dr Russell, this might explain why no increase in cigarette consumption was demonstrated on changing to a cigarette containing 1.01 mg of nicotine, while in the studies of Guillemin *et al*,³ Turner *et al*,⁴ and Russell *et al*,⁵ there were significant increases in cigarette consumption on changing to cigarettes containing 0.7 mg, 0.14 mg, and < 0.3 mg nicotine respectively.

There is a need for further study into the way in which people smoke, including measurement of puff number, puff volume, depth of inhalation, and butt length in addition to measurements of nicotine and carbon monoxide, in individual smokers at different times, in groups of subjects smoking cigarettes of differing specification, and in subjects changing from cigarettes of one specification to another. Such studies may further elucidate the continuing discussions as to the "ideal, safe cigarette."

ROGER G RAWBONE

Department of Medicine,
Charing Cross Hospital Medical School,
London W6

¹ Department of Health and Social Security, *Tobacco Substitutes and Additives in Tobacco Products, First Report of the Independent Scientific Committee on Smoking and Health*. London, HMSO, 1975.

² Ashton, H., *et al*, *British Medical Journal*, 1970, **3**, 679.

³ Guillemin, R., *et al*, *Bronches*, 1974, **24**, 211.

⁴ Turner, J. A. McM., *et al*, *Lancet*, 1974, **2**, 737.

⁵ Russell, M. A. H., *et al*, *British Medical Journal*, 1973, **3**, 512.

Priorities in the NHS

SIR,—Professor A. L. Cochrane's rambling monologue (3 July, p 41) is almost embarrassing. In addition to your excellent riposte may I mention the following?

Dr H. G. Mather's comparative study (17 April, p 925) is open to criticism for the following reasons. Firstly, young patients with hypertension and patients with complications (dysrhythmia, pulmonary oedema, and shock) were preferably not treated at home. This makes the selection of patients far from unbiased. Secondly, the high work load of general practitioners in areas of high morbidity, etc., makes the notion of delivery of adequate home care in this context unrealistic.¹

In response to the remark that "the acute sector could well survive a cut in resources without detriment to outcome," I can only say that Professor Cochrane must be carrying out his research in some splendid planet cocooned by the Illich fetish. My pilot study¹ on the health needs of a community reveals an alarming deficiency of available health care (in "acute" forms). Healey's axe, motivated by the gospel of diversion of resources, is certainly not going to help.

DIPAK RAY

Blackwood,
Gwent

¹ Royal College of General Practitioners Pilot Study. *Assessment of Health Needs of a Community (180 000 population)*. In preparation.

SIR,—Your answer (3 July, p 41) is as cryptic as those of the Delphic oracle. I asked for a reference (to the famous 0.1%), for further justification of your claim to absolute standards and for some explanation of the discrepancy between input and output over the last 20 years. Answer comes there none, but you publish a list of areas where money would probably reduce morbidity and mortality. The list is unexceptional, but what we need to know is the cost and effect of these proposals quantitatively. We could then see how this money could be saved in other sectors without detriment to patients and without interfering with the rising standards in the "care" sector, where I agree entirely with Dr J. C. Gunn (p 41). We all know where to look—prescribing, tonsillectomies, length of stay, treatment of coronaries at home, outpatient surgery, etc. This is a problem that should involve the whole of the profession, as we all want a more effective NHS. At the same time let me remind you that we are a poor country with a gross national product per head just above that of Italy. Are the facilities you mention available to all who need them in the USA, France, and Germany?

A. L. COCHRANE

Rhoose,
S Glamorgan

The long and the short of medicine

SIR,—Today I made a personal and perhaps a national breakthrough—I wore a pair of shorts for the whole working day. I have not seen any other doctor or any other public servant wear shorts at work nor anyone in the City, where pin-striped shorts must soon break through if business is not to come to a sticky halt.

How do shorts affect my effectiveness as doctor? It's very difficult to judge. Some might

Mean values $\pm$ standard error for butt length, observed nicotine dose to smoker, and observed: expected ratio in groups of subjects smoking control and substitute tobacco mixtures, with a paired statistical analysis

	Cytrel group (n = 11)			NSM group (n = 13)		
	Control (tobacco)	Substitute	Paired <i>t</i> test	Control (tobacco)	Substitute	Paired <i>t</i> test
Machine-smoked (expected) nicotine (mg/cigarette) ..	1.43	0.89		1.43	0.88	
Butt length (mm) ..	30.40 $\pm$ 2.2	28.75 $\pm$ 1.91	NS	31.67 $\pm$ 2.85	29.31 $\pm$ 2.34	$P < 0.05$
Observed nicotine (mg/cigarette) ..	1.16 $\pm$ 0.12	0.90 $\pm$ 0.12	$P < 0.05$	1.19 $\pm$ 0.12	0.92 $\pm$ 0.10	$P < 0.005$
Observed:expected nicotine ..	0.81 $\pm$ 0.09	1.06 $\pm$ 0.14	$P < 0.05$	0.83 $\pm$ 0.09	1.04 $\pm$ 0.12	$P < 0.02$