equated with physiological activity that would cause a twofold increase in noradrenaline release it is roughly equivalent to a patient standing for five minutes after lying down for ten. It is not reasonable to compare this situation with a catecholamine cardiomyopathy induced by very large doses of β -receptor agonists in animals or, as is sometimes seen, in patients with pheochromocytoma.

There is one other interesting implication, which was pointed out recently by Dr Rangno at a meeting in the Hague. The small degree of receptor hypersensitivity after withdrawal can be blocked by a very small dose of a β -receptor blocking agent. Thus a graded reduction in dose of the β -adrenergic blocker is not required; but a sudden reduction to a very small dose—that is, propranolol 10–20 mg/day—should be quite safe so long as this dose is continued for about two weeks before it is finally stopped.

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¹ Nattel, S, Rangno, R E, and Van Loon, G, *Circulation*, 1979, **59**, 1158.

² Ross, P J, Lewis, M J, and Henderson, A H, *British Medical Journal*, 1975, **1**, 875.

Vitamin B₁₂: an area of darkness

SIR,—We agree with Dr C W Picard (6 October, p 867) that there were some who doubted the predominant role of cyanocobalamin in metabolism as early as the 1950s. Nevertheless, for many years it was very widely assumed that cyanocobalamin was the main form of vitamin B₁₂ in the body, and we do not think our review falsified the general picture.

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Life-threatening arrhythmias and intravenous cimetidine

SIR,—In a recent paper (29 September, p 768) Dr J Cohen and others described the serious cardiovascular complications that occur during treatment with intravenous cimetidine. I would like to suggest that hyoscine butylbromide (Buscopan) can prevent these arrhythmias.

Hyoscine butylbromide has been shown to suppress the oculocardiac reflex during operations for correction of squint.¹ During a current study designed to show that it has as effective though briefer chronotropic and inotropic actions on the heart during general anaesthesia as intravenous atropine, it was noticed that hyoscine butylbromide has an antiarrhythmic action. Not only did it not cause arrhythmias as atropine can but it restored sinus rhythm for periods of up to one hour to hearts affected by arrhythmias associated with pancuronium and halothane. Among the 44 cases so far studied hyoscine butylbromide restored normal cardiac rhythm in two cases of nodal bradycardia and hypotension, in three cases of multiple ventricular extrasystoles, and in one case of auriculo-ventricular dissociation within one minute of intravenous injection.

Like Dr Cohen, I can only speculate about an evident temporal association; unlike him I cannot offer even one hypothesis to explain

my observations. However, the similarity between the arrhythmias following intravenous cimetidine and those associated with the oculocardiac reflex—that is, bradycardia with hypotension, a trioventricular dissociation, and asystolic cardiac arrest—suggests that a drug that can control one would also control the other.

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¹ Fry, E N S, and Hall-Parker, B J P, *British Journal of Ophthalmology*, 1975, **59**, 525.

Day-bed units

SIR,—We were interested to read the report "Operations for hernia and varicose veins in a day-bed unit" from Mr C V Ruckley (22 September, p 712) and we would support his enthusiasm for short-stay care. One could, however, be misled by the title into assuming that the majority of varicose veins were being treated by day care, but analysis of their data shows a small decline in such management over the last five years.

The authors are correct in stating that "it would not be right to claim efficiency in health care without taking account of the views of patients." We carried out a survey in 1978 of the Hammersmith Hospital experience in day surgery for varicose veins in which we sought the patient's opinion.¹ This showed that patients did not like day-care vein surgery when more than one incision was necessary. An increased number of general practitioner call-outs, unacceptable analgesia consumption, etc, accompanied multiple skin incisions and our practice was modified accordingly—especially the ending of the long saphenous strip on a day-care basis.

If one accepts that the success of a varicose vein operation can be directly related to the extent of surgery then day-care surgery will often provide inadequate treatment alone.

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¹ Clyne, C A C, and Jamieson, C W, *British Journal of Surgery*, 1978, **65**, 194.

SIR,—I was interested in the experiences of Dr J B Rainey and Mr C V Ruckley in the Edinburgh day-bed unit (22 September, p 714). I recently spent 18 months as an obstetric and gynaecological resident in Canada, where day beds are widely used. All our patients having minor gynaecological procedures and laparoscopies were admitted as day patients unless medically unsuitable.

Admittedly we did not have a waiting list problem, most patients being admitted within a month. When the decision that surgery was indicated was made in the clinic the patient's medical status was assessed, with examination of respiratory and cardiovascular systems and routine blood tests. When the patient arrived in the gynaecological day ward routine observations were made by the sister and she was seen by the doctor only when she arrived in theatre and again prior to discharge.

This system not only eased the bed situation

but also avoided the need for junior doctors to hurriedly request and re-examine several patients each morning before rushing off to theatre. I feel that with our ever-increasing waiting lists and work load day beds should be used wherever facilities permit.

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Smoking and acclimatisation to altitude

SIR,—Dr N MacLean's suggestion (29 September, p 799) that to starve Olympic athletes of oxygen by controlled smoking and so "acclimatise" them in the same way that altitude training does is ingenious but does not really follow from his observations of mountain sickness in himself and fellow climbers. Acute mountain sickness cannot be caused solely by induced alveolar hypoxia; if it were, asthmatics would exhibit the symptoms during prolonged attacks (which they don't) and the condition occurring at altitude would be alleviated by oxygen (which it isn't).¹

From my own observations of some hundreds of sea-level residents ascending to and living at 3000–4200 m in the Andes, I can say that smoking habits have no effect on susceptibility to mountain sickness. Neither would one expect them to have any effect, as they are overwhelmed by other, more important factors such as exertion and, not least, a huge individual variation in response. Whether artificial "acclimatisation by smoking" followed by abstinence prior to athletic endeavour could improve total aerobic capacity at sea level (or high altitude) in the medium term is quite another question, albeit of theoretical interest.

Whatever the answer (and there must be less deleterious ways of incurring reversible hypoxia—daily suffocation with a pair of running shorts, for example), acute mountain sickness has a more complex aetiology than suggested and the likelihood of its development in an individual is no guide to his future acclimatisation and physical performance at high altitude.

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¹ Ward, M, *Mountain Medicine: A Clinical Study of Cold and High Altitude*, p 266. London, Crosby, Lockwood, Staples, 1975.

Wanted: a new wound dressing

SIR,—We would agree with your leading article (22 September, p 689) that wound dressings in common use are less than ideal, and welcome the attention drawn to Turner's comprehensive review.¹ We would also agree with the properties suggested as necessary for an ideal dressing, but are surprised that no mention is made of the use of the silicone foam elastomers, which fully meet these requirements in relation to granulating wounds.

This material, developed as a wound dressing in Cardiff, is contour forming, soft, resilient, absorbent and non-adherent. We first reported the use of silastic foam dressing Q7-9100 (Dow Corning Ltd) in 1974^{2,3} and experience in this department now covers over 1000 patients treated for a wide variety of types of granulating wounds, including pilonidal sinus, infected abdominal wounds, sacral pressure sores, and anal and perineal wounds, skin graft donor sites, and varicose ulcers.

It has been studied in two formal, randomised trials.^{4, 5}

As well as having ideal physical properties for such a dressing, it is outstanding in relation to simplicity of application and the patient's comfort. In our experience 90% of patients are unable to manage their own dressing changes in their own homes, so that they have the frequent wound cleansing necessary for optimal healing yet require supervision only at weekly intervals. This saving of hospital beds and nursing time, combined with the low cost of the dressing (which is considerably cheaper than a week's supply of gauze packing), results in a major saving for the National Health Service.

We believe it to be no exaggeration to describe this dressing as revolutionary, not only in its physical properties but also in its advantages to the patient and the Health Service, and as such it deserves a mention in a leading article written five years after its introduction.

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¹ Turner, T D, *Pharmaceutical Review*, 1972, **222**, 421.
² Wood, R A B, and Hughes, L E, *British Journal of Surgery*, 1974, **61**, 921.

³ Wood, R A B, and Hughes, L E, *British Medical Journal*, 1975, **4**, 131.

⁴ Wood, R A B, Williams, R H P, and Hughes, L E, *British Journal of Surgery*, 1978, **65**, 554.

⁵ McFie, J, and McMahon, M J, *British Journal of Surgery*, in press.

SIR,—Your leading article (22 September, p 689) highlights a problem in medicine that has until recently attracted too little attention. The reasons for this seem to be inherently connected with difficulties in devising suitable, reproducible methods of measurement of wound healing in clinical practice.

The purpose of a wound dressing was taught to me to be twofold: (a) to cleanse the wound and (b) to protect it from (further) contamination. That the dressing should also protect clothing or bed linen was not discussed so far as I remember. In addition to your criteria for the physical attributes of a dressing, Scales in 1963 drew up a list of criteria for the ideal dressing, including absorption of exudate, removal of bacteria, the possibility of evaporation, and resistance to incorporation in eschar. Obviously lack of toxicity, ease of application and removal, and cheapness should also be considered.

Workers in the USA² have stressed the importance of capillarity in dressings. Rothman³ in Sweden, in experiments on chromatography in wounds, showed that continuous drainage of exuding wounds was possible and his work led to the development of dextranomer (Debrisan, Pharmacia), which fulfils many of the requirements you set out. It is a stable, non-adherent contact layer that allows a humidity gradient (so long as the layer is not fully saturated) and not only absorbs fluid but transports particulate matter and micro-organisms through the layer, concentrating them in the part of the layer furthest from the wound's surface by "reverse gel filtration." It is non-toxic, and used correctly has even shown itself to be cost effective.

Dextranomer has in controlled clinical trials (for example, that of Groenewald⁴) been shown to cleanse wounds, stimulate granulation, and remove bacteria. Those carrying out trials

have, however, been content to limit their comparisons to dextranomer and other wound treatments. Perhaps more studies should be made to compare dextranomer with other types of dressing. Few, if any, agents available combine dextranomer's effects on wound healing with its properties as a dressing.

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¹ Scales, J F, *British Journal of Industrial Medicine*, 1963, **20**, 82.

² Noe, J M, and Kalish, S, *Surgery, Gynecology, and Obstetrics*, 1976, **143**, 454.

³ Rothman, U, *Svensk Kirurgi*, 1974, **31**, 1.

⁴ Groenewald, J H, *South African Medical Journal*, in press.

SIR,—Your leading article (22 September, p 689) rightly draws attention to the continued unsuccessful search for a satisfactory dressing for the treatment of open wounds.

Reduced to the simplest terms, the open wound presents the problem of providing a dressing which will most closely provide a temporary substitute for normal skin cover until healing is achieved, either by natural or by surgical methods. Exposure of the wound with the formation of a surface coagulum, which forms a natural biological dressing, as you mention, proved to be a notable advance in the management of raw surfaces of burns but is not always apposite. Further developments of this line of approach has led to a great deal of research and endeavour in the production of a suitable biological dressing, but this aspect is not even considered in your article.

Although the provision of temporary skin cover by the use of viable skin homograft (fresh, preserved, tissue-typed, or random) is technically feasible, preparation of this material requires expensive and complex back-up facilities and for other reasons can be undesirable. However, lyophilised skin, which presents no storage problems, has repeatedly been shown to be a highly effective temporary skin substitute, providing an effective seal of the wound against fluid loss and the ingress of infection, with less scarring subsequently if the healing is by regeneration and a better bed for autografting if this is necessary. The method has been described in detail¹ and the material, in the form of lyophilised porcine skin, is produced commercially by Ethicon Limited under the name Corethium. Further work on the technology of dressing wounds with amnion shows particular promise. These biological materials in my view show far greater promise than the use of dressings of man-made materials and surely at least deserve a mention.

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¹ Hackett, M J, and Bowen, J, *British Journal of Surgery*, 1974, **61**, 427

Complication of acupuncture

SIR,—I was recently called to see a patient who told me over the telephone that she had filled both her shoes with blood. When I arrived at the house, she was lying on the floor with both legs elevated and no sign of active bleeding. As there was no varicose ulcer or other obvious cause of the bleeding I was at a loss to explain where the blood had come from, as there was nothing to see. Both shoes had a fair coating of blood in the soles. On direct questioning about

possible causes, she admitted that one week previously she had had acupuncture performed on both ankles for her asthma and this bleeding was a simultaneous bilateral secondary haemorrhage from the acupuncture sites. I do not know if anything similar has been reported before but felt that it was sufficiently interesting to bring to your attention.

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Serum thyroglobulin in differentiated thyroid cancer

SIR,—We read with interest the recent paper by Dr Serge C Ng Tang Fui and others (4 August, p 298) on serum thyroglobulin concentrations in the follow-up of patients with papillary and follicular thyroid carcinoma. Although we agree that serum thyroglobulin is a sensitive tumour marker in "almost all" patients with differentiated thyroid cancer we have reservations about the conclusion that a whole-body radioiodine scan is unnecessary when the serum thyroglobulin is undetectable.

Of the 11 patients found by Dr Ng Tang Fui and others to have both undetectable thyroglobulin levels and negative whole-body scans there was one who showed at one year "a slight recurrence" of radioiodine uptake in the neck. Schlossberg *et al*¹ have also described a patient who, despite having an undetectable serum thyroglobulin level, showed persistent radioiodine uptake both in the thyroid bed and at the angle of the mandible.

In these two recent series radioiodine scanning demonstrated functioning thyroid tissue in 4% of patients with undetectable thyroglobulin levels. Had both methods of surveillance not been employed then these patients might have been wrongly considered free of disease. For this reason, and until the natural history of thyroid cancer patients with undetectable thyroglobulin is established, we are unconvinced that the practice of radioiodine scanning should be abandoned as part of the routine follow-up in this type of patient.

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¹ Schlossberg, A H, Jacobson, J C, and Ibbertson, H K, *Clinical Endocrinology*, 1979, **10**, 17.

Revised consultant contract

SIR,—Discussing the new contract Mr A H Grabham (15 September, p 684) states that if the proposals were accepted divisions between consultants would be eroded. However, more would be created with five groups emerging. Whole-timers would be divided into those who did or did not do private practice, and those not so coerced might get the extra non-superannuable session awarded "exceptionally and on a strictly temporary basis." The other two groups would compose the 9/11ths and 10/11ths contract. Hardly an erosion of divisions?

Whole-time consultants who will do private practice will glean their increased remuneration at no cost to the Health Service. The checking or audit of accounts to see that the 10% limit is not exceeded is invidious and does not apply to the 10/11ths contract; it is possible here to increase private earnings at no risk to contractual sessions. Is this fair?