the 24 hours. We did not find the variation in serum lithium level to be "quite outside the therapeutic range" and I feel that statements such as that "the lithium level fluctuates greatly during the 24 hours" are misleading and alarmist. I agree that it is important to realize that serum lithium is not at a constant level throughout but, rises and declines as described, and that it is necessary to know the relationship between the time of the blood sample and the last medication when interpreting the biochemistry result. The usual practice is to take the blood sample prior to the next dose.

Finally, I would dispute the statement that "a basal level less than 2.0 mmol/l. lithium remains an empirical safety rule." Schou¹ has stated that levels over 1.3 mmol/l. should be reported as soon as possible. As the authors point out, the post-absorption level can be 2.5 times the basal level. Thus to accept a resting level of less than 2.0 mmol/l. means that for part of the day the serum lithium level can be in excess of 4.0 mmol/l. The risk of lithium accumulation and consequent severe toxicity is great at these serum levels and we would advise that the basal lithium level should not exceed 1.3 mmol/l.—I am, etc.,

ERNEST H. BENNIE

Leverdale Hospital,
Glasgow

¹ Schou, M., Amdisen, A., and Baastrup, P. C. *British Journal of Hospital Medicine*, 1971, 6, 53.

Side Effects of Lithium Carbonate

SIR,—Dr. J. E. Duffield (24 February 1973, p. 491) will be interested to know that we have made precisely the same observations regarding lithium's effect on the taste of butterfat.

In a group of over 450 people treated with lithium carbonate approximately one out of 20 patients complains that butter and other dairy products with butterfat taste spoiled and that the spoiled taste disappears three days after they stop taking lithium. Even more patients note an alteration in the taste of celery and many in our clinic have sworn off celery sticks, chow mein, chop suey, etc.

We have been so impressed by lithium-related alterations in gustation that we have begun a large clinical and laboratory study. One of us (I.H.) has already shown that in rats lithium is concentrated in the olfactory bulbs, caudate, and pituitary to a greater extent than that observed in other parts of the brain. This accumulation in the olfactory bulbs could conceivably be responsible for taste distortion in our patients.—We are, etc.,

JONATHAN M. HIMMELHOCH
ISRAEL HANIN

University of Pittsburgh,
Western Psychiatric Institute and Clinic,
Pittsburgh, Pennsylvania

Oedema of Mountains

SIR,—Recent experience of mine and of others shows that the term pulmonary oedema of mountains¹ is far too narrow and that oedema of mountains affects other organs as much as the lungs. I was in a

recent expedition to the Hindu Kush mountains, Afghanistan. Including two other expeditions at the same base, whom I helped, there were some 30 climbers attempting mountains up to a height of 24,500 ft (7,448 m). Two cases of oedema of mountains occurred.

In the first a fit man aged 45 climbed to 18,000 ft (5,472 m) on the third day of arriving at the base camp, which was at 16,000 ft (4,864 m). He returned with some malaise and dyspnoea and with definite swelling of the face, hands, and ankles accompanied by severe oliguria. The signs disappeared quickly after an oral dose of bumetanide 2 mg but recurred on two further occasions, including one ascent to 22,000 ft (6,688 m), accompanied by much more severe malaise. After another week's rest at base camp he managed to climb slowly to 22,000 ft without incident. This was perhaps a renal form of oedema.

A second man aged 41 remained six days at 22,000 ft because of storms. On the sixth day he appeared drowsy and complained of headache. He remained in bed for a few hours, when it became obvious to his friends that he was severely ill and in coma. I met him at 20,000 ft (6,080 m), when he had already begun to improve a little. He was stuporose and had definite signs of paraplegia, with very brisk reflexes and bilateral extensor plantar responses. There was slight oedema of the face and hands, and apparently he had passed hardly any urine during the previous 24 hours. He improved quickly with an intravenous dose of 1 mg bumetanide and was brought down to base camp the same day. Over the next few days he rapidly improved and the findings on physical examination became quite normal. Unfortunately, no ophthalmoscope was available. This was certainly a cerebral form.

In both patients a few late inspiratory crackles were present without other cardiorespiratory signs. No other case of oedema of mountains occurred.

Thus the proper term for this singular illness of high altitudes is "oedema of mountains." Others have also drawn attention to involvement of the brain or eye in this illness as well as the lungs.^{2,4} Climbers and doctors on expeditions should be aware of this, while theories of pathogenesis directed entirely to pulmonary explanations are far too narrow. The oliguria and the swelling of the face and hands others and I^{5,6} noted suggest that the kidney may be an important factor, and this is being investigated.—I am, etc.,

A. PINES

East Herts Hospital,
Hertford, Herts

¹ *British Medical Journal*, 1972, 3, 65.

² Singh, I., et al., *New England Journal of Medicine*, 1969, 280, 175.

³ Wilson, R., *Annals of Internal Medicine*, 1973, 78, 421.

⁴ Radford, P., *British Medical Journal*, 1973, 3, 294.

⁵ Sheridan, J. W., and Sheridan, R., *Lancet*, 1970, 1, 242.

⁶ Pines, A., *British Medical Journal*, 1972, 3, 642.

Screening for Hypertension

SIR,—Dr. D. S. Short (12 October, p. 103) points out that in recording the diastolic arterial pressure the fourth phase represents the correct reading. I suggest, however, that in practice the recognition of this phase may be difficult. I have seen a number of cases of healthy persons penalized for life assurance on account of an allegedly high diastolic pressure (and apparently abnormal pulse pressure) erroneously recorded at the fourth phase. The fifth phase is unmistakable and therefore more reliable, provided one realizes that it is 4 or 5 mm Hg below the true diastolic pressure.—I am, etc.,

T. W. PRESTON

Reigate, Surrey

Economies in the N.H.S.

SIR,—I agree entirely with the comments of Dr. H. P. Hughes concerning unnecessary procedures and investigations (5 October, p. 41). Apart from x-ray investigations, there are multitudes of unnecessary pathological tests requested daily. The result of this blunderbuss approach is certainly a gross wastage of staff time and millions of pounds annually.

The medicolegal aspect is one side of the matter. The other side is simply a question of conscience with regard to a discriminatory approach to all investigations. It is a pity that the cost of individual investigations does not receive more publicity. I feel that a greater sense of awareness by the medical profession on this matter would produce tremendous savings—savings which could be used to modernize equipment generally and thus to help the very people who are investigating the unnecessary procedures.

If only they realized they were cutting their own throats!—I am, etc.,

A. R. MANNERS

Stockton-on-Tees

N.H.S. Contraceptive Services

SIR,—It was with extreme disquiet that I read the letter from Dr. R. W. Green (12 October, p. 109) on the subject of fees for contraceptive care. He considered it a fee of £1.56 was "money for old rope." This I find completely incredible.

Many general practitioners would not share his view that pelvic, blood pressure, breast examinations, etc. should be undertaken by a doctor only on the initial visit by the patient and that subsequent follow-up can, in most cases, be satisfactorily carried out by a practice nurse. I for one do not consider that a practice nurse is competent to decide the significance of a "pill erosion" and what advice this entails, nor the significance of glycosuria, nor what early signs of excessive oestrogen build-up are to be looked for, to name but a few complications commonly seen at follow-up.

To suggest that £1.56 is "money for old rope" for this kind of care and supervision is, to my mind, utterly contemptible and insulting to his colleagues, and plays into the hands of politicians who are only too happy to get medical care on the cheap.—I am, etc.,

MICHAEL J. EMSLIE

Eastbourne

SIR,—I read with increasing incredulity Dr. R. W. Green's personal views on the recommended rate for the yearly Pill prescription (12 October, p. 109); in fact I had to re-read his letter to believe my eyes.

Needless to say I am not among those who believe that £1.56 a year is "money for old rope" and sincerely hope that this type of divisive opinion, coming at a time when the profession as a whole is surely fighting not to improve its lot, but merely to maintain it, will not deter our negotiators from demanding a sensible fee for yet another item of service.

Let those who accept a fee of £1.56 take it. I will reject it and give family planning a miss.—I am, etc.,

JOHN P. LEWIN

Preston, Lancs