cases of travellers' diarrhoea belonged to serogroups previously associated with infantile gastroenteritis. Indeed, one of our toxigenic strains could not be typed at all. Therefore in screening for ETEC in travellers with diarrhoea not associated with *Salmonella* and *Shigella* we feel that it is important to underline the need to test several colonies of *E coli* isolated from the primary culture, regardless of serotype.

Full details of this work will be published separately.

SUJATHA PANIKKER
ANNE DAVIES

Department of Bacteriology and
Virology,
University Medical School,
Manchester M13 9PT

¹ Guerrant, R L, *et al*, *New England Journal of Medicine*, 1975, **293**, 567.

² Dean, A G, *et al*, *Journal of Infectious Diseases*, 1972, **125**, 407.

³ Echeverria, P, Blacklow, N R, and Smith, D H, *Lancet*, 1975, **2**, 1113.

⁴ Bach, E, Blomberg, S, and Wadstrom, T, *Infection*, 1977, **5**, 2.

Pituitary suppression in chronic airways disease?

SIR,—We were interested to read the letter "Pituitary suppression in chronic airways disease?" by Dr Pd'A Semple and others (19 May, p 1356). We have been assessing pituitary function in our patients with radiological changes in the pituitary fossa,¹ including also a further group of male hypercapnic patients.

Preliminary results show that in two-thirds of the patients a subnormal serum testosterone level was associated with low or normal levels of serum luteinising hormone (LH) and follicle-stimulating hormone (FSH). Moreover, in these patients the LH response to an intravenous injection of 100 µg of gonadotrophin-releasing hormone was impaired, supporting the suggestion of Dr Semple and his colleagues that abnormal hypothalamic-pituitary function is present in these patients. Basal thyroid-stimulating hormone (TSH) levels and TSH responses to thyrotrophin-releasing hormone were normal.

Thus evidence is mounting of endocrine dysfunction mainly involving hypothalamic-pituitary-gonadal function in these patients, for which there may be a therapeutic dividend.

DUNCAN NEWTON
I BONE
S M BARROW
P SHERIDAN

Department of Medicine,
St James's Hospital,
Leeds LS9 7TF

¹ Newton, D A G, Bone, I, and Bonsor, G, *Thorax*, 1978, **33**, 684.

A luxury drug?

SIR,—Some issues of the *BMJ* have carried treble-page colour spreads advertising Timoptol. Never in my 40 years of ophthalmology have we been exposed to such a barrage of salesmanship. Yet from none of the representatives and copious brochures, the various glaucoma symposia subsidised by the manufacturers, or the reports from radio and television and the national and medical press has there been any mention of the one major non-asset, its enormous price.

The manufacturers deserve particular re-

proof for directing their publicity unabashedly at the layman, so that we oculists are now being constantly assailed by patients demanding the new wonder treatment, which they or their friends have all seen, heard, or read about (a little blame, too, to the media for conniving at the propaganda).

We appreciate that research is always costly, but beta-blockers are not so expensive to prepare, particularly in such tiny quantities; yet the cost of Timoptol, even at its cut-rate for NHS hospitals, is about 25 times that of the pilocarpine we use (£5 for a 5 ml bottle compared with about 20p). It was reckoned by the pharmacist of one major eye hospital that, if all our glaucoma patients were changed over from pilocarpine to Timoptol, this would swallow up well over half of our entire annual drug budget. The loss to the taxpayers would be vast, given that there are around a quarter of a million people with glaucoma in the UK.

Timoptol has indeed advantages over pilocarpine in certain cases; it is sad that, if we are to remain solvent, so few will be able to afford this luxury. If only the manufacturers could have spent less flamboyantly on all that advertising, and charged us a little less for those few drops.

PATRICK TREVOR-ROPER

London NW1

Heatstroke in a "run for fun"

SIR,—In his letter (20 January, p 197) Dr Tom Bassler describes four cases of death in marathon runners, each of which he ascribes to heatstroke. We would like to point out that in none of these cases is there sufficient evidence to implicate heatstroke as the primary diagnosis, although as three of these athletes died during prolonged exercise the possibility that an elevated body temperature, in contradistinction to heatstroke, may have played some role cannot be excluded.

The first case, reported in detail by Green *et al*,¹ was that of a 44-year-old runner who collapsed, pulseless and apnoeic, after running 24 miles of the 1973 Boston marathon. Cardiopulmonary resuscitation was instituted. On admission to hospital the patient was in ventricular fibrillation and his rectal temperature was 38.4°C, features which are both inconsistent with a diagnosis of heatstroke. In five large series²⁻⁶ of exertion-related heatstroke, involving 297 patients, there was not one reported case of ventricular fibrillation or of cardiac arrest. To support a diagnosis of heatstroke in the patient of Green *et al* there would have to be an explanation of why the rectal temperature on hospital admission was only 38.4°C. In a group of 30 heatstroke victims, a mean rectal temperature of 41.2°C was recorded even half an hour to two hours after the initial collapse.⁵ Thus the combination of ventricular fibrillation and a low rectal temperature makes a diagnosis of heatstroke untenable unless further information is forthcoming.

Because sudden death due either to ventricular fibrillation or to cardiac arrest is not a feature of heatstroke, it also follows that heatstroke was not the cause of death in two of the other three cases of death among our South African marathon runners—a 19-year-old athlete who died suddenly during a marathon race and a 47-year-old who collapsed and died in sight of the finish of an eight-mile mountain race. The fourth case, that of a 35-year-old highly trained athlete, has been fully reported,⁷ yet Bassler fails to report all the clinical features. For the benefit of your readers, we would like to restate what we consider to be significant features of this case.

A 35-year-old athlete developed chest pain or pain between the shoulder blades or both on six of eleven runs in January 1974. The pain was severe

enough to force him to stop running on a number of occasions. He did not run on the day of his death, choosing rather to go surfing. However, while surfing he became "too breathless" to continue. He left the water and drove home, but within the hour he developed severe precordial chest pain. He was driven to his physician, who referred him to hospital. During the car ride he complained that his chest pain was now worse and that his left hand felt paralysed. He died shortly after admission to hospital. The electrocardiogram showed ST depression in leads 2, 3, and AVF. In the absence of a necropsy, ischaemic heart disease as the cause of death seems likely but cannot be proved. However, on the basis of the clinical history, heatstroke can absolutely be excluded as a diagnostic possibility.

We agree with Dr Bassler that heatstroke is a menace in long-distance running and we did in fact first draw attention to this as early as 1973.⁸ By incorrectly attributing all cases of exertional collapse in marathon runners to heatstroke Dr Bassler is not, as he claims, increasing the safety of this sport, because he ignores the dangers imposed by other conditions such as coronary heart disease and hypertrophic cardiomyopathy, both of which occur in marathon runners.^{7 9 10}

T D NOAKES
L H OPIE

MRC Ischaemic Heart Disease
Research Unit,
Department of Medicine,
University of Cape Town and
Groote Schuur Hospital,
Cape Town, South Africa

¹ Green, L H, Cohen, S I, and Kurland, G, *Annals of Internal Medicine*, 1976, **84**, 704.

² Malamud, N, Haymaker, W, and Custer, R P, *Military Surgeon*, 1946, **99**, 397.

³ Barry, M E, and King, B A, *South African Medical Journal*, 1962, **36**, 455.

⁴ Kew, M C, Tucker, *et al*, *American Heart Journal*, 1969, **77**, 324.

⁵ Shibolet, S, *et al*, *Quarterly Journal of Medicine*, 1967, **36**, 525.

⁶ Costrini, A M, *et al*, *American Journal of Medicine*, 1979, **66**, 296.

⁷ Noakes, T, *et al*, *Annals of the New York Academy of Sciences*, 1977, **301**, 593.

⁸ Noakes, T D, *South African Medical Journal*, 1973, **47**, 1968.

⁹ Noakes, T D, Rose, A G, and Opie, L H, *British Heart Journal*, in press.

¹⁰ Noakes, T D, *et al*, *New England Journal of Medicine*, in press.

NHS security beds

SIR,—Your leading article on Butler-type regional security units (16 June, p 1585) has given encouragement to those of us who publically opposed the setting up of these units, and who favoured instead the concept of the "simple staff-intensive units."

Mr S Quinn, nursing officer of the Lyndhurst Unit at Knowle Hospital, Fareham (the first and, so far as I know, the only open-door, simple staff-intensive unit in existence), discussing the efficacy of the unit, has said, "...inquiries in February indicated that virtually no patients with mental illness were going to prison in Wessex who should certainly be in a hospital. There are none at present, to our knowledge, being held up in special hospitals for want of a bed in Wessex. Regional health authorities are no longer receiving complaints that beds cannot be found for those difficult mentally ill patients, though there is still a problem with the subnormal patients."

If this is the case, what a tragedy that such specialist open-door forensic units were not set up many years ago—a tragedy both in terms of the suffering of the patients waiting for transfer in grossly overcrowded Broadmoor and also in terms of the harm done to relationships between those working in the special

hospitals and those working in conventional psychiatric hospitals.

R W K REEVES

HM Remand Centre,
Bristol BS17 3QJ

¹ Quinn, S, *Nursing Times*, 1979, 75, 237.

Falciparum malaria despite chemoprophylaxis

SIR,—Mr P Moody rightly points out the great current difficulty involved in the selection of optimal malaria prophylactics for some parts of the world (9 June, p 1565) and shows the disadvantages of almost all the options available.

His view that advice may be difficult to obtain is, however, fortunately less correct. The Ross Institute of the London School of Hygiene and Tropical Medicine (01-636 8636) is happy to provide such advice on malaria prophylactics to both doctors and the general public, and does provide it to many thousands of people each year; while the Liverpool School of Tropical Medicine, the Hospital for Tropical Diseases in London, and the East Birmingham Hospital all provide similar advice.

DAVID BRADLEY

Ross Institute of Tropical Hygiene,
London School of Hygiene and
Tropical Medicine,
London WC1E 7HT

Multiple-puncture tuberculin testing

SIR,—We have been considerably interested in the articles and correspondence on this subject, because we screen approximately 500 new employees in the NHS hospitals in the Ipswich health district and we found it convenient to use the tine test. Unfortunately our experience of a marked BCG reaction after negative tine readings led us to review this procedure.

Traditionally, Heaf testing had been used for many years. We found that when employees with negative tine reactions were tested by this method a significant proportion gave a grade 2 reaction, and BCG was unjustified. Two years ago therefore we discontinued the use of tine testing. As we were looking for people needing protection the procedure for us was too unreliable. We can summarise our experience as being "a positive tine test is reliable, but don't trust a negative one."

P K WILSON

Staff Health Department,
Ipswich Health District,
Ipswich, Suffolk

Contaminated hospital water supplies

SIR,—The reports (3 February, p 350) and letter about contaminated water supplies (9 June, p 1564) drew attention to a potential hazard that fortunately manifests itself but rarely.

At present, "wholesomeness" is the accepted requirement applicable to all water supplied for human consumption, whether from the public supply or commercially bottled. The term does not imply sterility but indicates that the water complies with the standard.¹

Members of the *Pseudomonas* group do not usually survive the normal methods of water treatment as applied at water works, but they

may gain access to the distribution system in small numbers subsequently. If these organisms reach a site where nutrients are available, which may often be the result of using unsuitable plumbing materials, then multiplication is possible. Raising the water temperature will, within limits, encourage multiplication of certain bacteria, including *Pseudomonas aeruginosa*. Increasing the water temperature to the 50–60°C range will largely overcome this problem. The use of the correct plumbing materials and recommended water temperature will be effective only if the roof tanks are in a good state of repair and properly covered.

The National Water Council publishes a list of plumbing items which have been constructed from materials that will not support microbial growth.

J D ROSS

Thames Water,
New River Head Laboratories,
London EC1R 4TP

¹ Joint report from the Department of Health and Social Security, the Welsh Office, and the Department of the Environment, *Public Health and Medical Subjects, No 71*. "Bacteriological Examination of Water Supplies." 4th edn 1969, reprinted 1974, London, HMSO.

Review Body report

SIR,—I suppose we should be grateful for the recent award by our Review Body but in the area of general practice it has been palliative rather than remedial. There is a sad lacking of any long-term policy and planning that might have been so easily able to improve standards of practice generally. The following areas come specifically to mind.

A greater increase in the basic practice allowance would have encouraged practices to increase partnership size. By this means more jobs would have been created, and a decrease in the patient-doctor ratio would improve medical standards. A greatly increased fee for performance of cervical cytology would have offset the heavy losses made by most practices performing this service voluntarily on the under-35-year-olds, again improving medical standards.

Finally, the awards for the out-of-hours payments are still derisory. The toil and bane of general practice lies for most doctors in their out-of-hours responsibility. Where deputising services are available they are expensive and where the GP is forced to cover himself the cost to mind and body can be destructive. Once again the Review Body has failed to recognise and reward this very great responsibility. After-hours calls in general practice (and this should mean after 6 pm) can never be paid at less than a recall fee for a hospital consultant.

The Review Body has more than a duty simply to prevent doctors from resigning en masse: it could be used as an intelligent tool to improve medicine. This time, as ever, it has failed.

A R ROGERS

Exeter, Devon

Pay and contracts

SIR,—In my retirement, I sympathise deeply with those who struggle to obtain acceptable contracts for the work of doctors and nurses. The provision of a service that is free for all seems to involve some loss of appreciation by

the public, and also to lessen the incentives which helped us in the past to give of our very best.

However, we must also bear in mind that in the present state of worsening chaos in many parts of the world it seems quite ludicrous that Western nations should keep struggling to improve their already high standard of living, and there is a universal need to encourage and admire those who adopt a simple pattern of living. For us to be members of an interesting profession is rewarding in itself, so that we might at least consider the possibility of setting the much-needed example of a group that is willing to accept somewhat less than we are entitled to demand. We must try to discourage the competitive lunacy which is so damaging to today's world.

W RITCHIE RUSSELL

Oxford OX2 7PW

Domesticated doctors

SIR,—I read with some annoyance the letter from Dr Ruth E Ferguson about the so-called domesticated doctors (16 June, p 1632).

Women doctors have a choice these days and she has made hers. Many of us have opted for the half-way house, which involves "neglecting our families" for a minimum of 20 hours a week. We married women doctors cannot have everything handed on a plate. If a woman doctor wants to be involved in medicine then she herself must make a considerable effort both at work and at home. If she is prepared to do this then the RHA and the postgraduate dean will help her with her training. We must make sacrifices, go to meetings, take postgraduate examinations, and practise medicine actively (even if only part time). Otherwise we will not be taken seriously as professional women.

Most of us thoroughly enjoy our double life and hope that we are making a small contribution to the running of the NHS now, and will be doing more in the future when we have fewer domestic commitments.

C ANGELA SCOTT

Bath Clinical Area Pathology Service,
Royal United Hospital (North),
Bath BA1 3NG

The general practitioners' work load

SIR,—I was disturbed to hear of the Review Body's rejection of the professions' claim that work load has increased, particularly when I read that the Review Body quoted a reduction in the number of prescriptions issued as one of the indications of a falling work load.

As a dispensing practitioner who has made a particular effort over the last few years to reduce my prescribing of medicines, I can assert that a fall in the number of prescriptions issued results in a considerable increase in the general practitioners' consultation time and hence work load. If we are to give more time to counselling our patients, then the outcome should be a fall in prescriptions issued.

It seems that the Review Body's misinterpretation of a statistic may have cost general practitioners dearly. It is all the more unjust since a fall in the numbers of prescriptions issued not only represents a great saving to NHS funds but I believe is very much better for our patients. Indeed, the recent LMC