this effect is unknown and findings are the opposite to those on serum corticosteroids in immobilized patients, which are significantly raised.² There may be either reduced testicular response to gonadotrophins or decreased hypothalamus-pituitary gland activity.

It would seem that both extremes of physical activity have significant effects on serum androgens in men.—We are, etc.,

M. H. BRIGGS
P. GARCIA-WEBB
THOMAS CHEUNG

Alfred Hospital,
Prahran,
Victoria, Australia

¹ Chen, J., Zorn, E., Hallberg, M., and Wieland, R., *Clinical Chemistry*, 1971, 17, 581.

² Korpassy, A., Stoekel, H., and Vecsei, P., *Acta Anaesthesiologica, Scandinavica*, 1972, 16, 161.

Doxycycline in Enteric Fever and Brucellosis

SIR,—We have been familiar in the past 35 years in Egypt with enteric fever as well as brucellosis and their traditional treatment with chloramphenicol and chloramphenicol and streptomycin respectively.

During practice in the past two years in Nigeria we have been treating such cases with doxycycline. Recently we treated 20 cases suffering from either or both diseases. These patients had typical clinical manifestations and positive agglutination tests (for *Salmonella typhi* (5 cases), for *Brucella abortus* (5 cases), for both (6 cases), and for *Salm. typhi* and *paratyphi B* (4 cases), with rising titres. Defervescence was recorded on the fourth day of treatment on the average, together with marked amelioration of clinical symptoms. The patients were followed up for one month with no evidence of recrudescences or relapses.

The successful dosage of doxycycline hydrochloride was 200 mg daily for four days followed by half this dose daily for another six or seven consecutive days (total 1,400–1,500 mg). The dosage previously recommended was inadequate to bring about cure. There was neither any material side effect nor any change in the haematological picture.

Two patients with icterus, included in this series, showed rapid improvement in liver function as well as in their general condition.—We are, etc.,

A. Z. SHAFEEI
W. S. LUKA

General Hospital Ilorin,
Kwara State, Nigeria

Psychosurgery

SIR,—We settled down to read with interest the recent discussion on ethics, rather contentiously entitled "Changing the Patient's Personality" (9 June, p. 594), only to be disappointed because much of the discussion showed little awareness of contemporary psychosurgery.

Dr. Henry Rollin in particular could easily have been speaking 30 years ago in presenting his views about psychosurgery. He may like to be reminded that the enormous vogue for standard leucotomy occurred largely during the 1940s, and Tooth and Newton¹ described the results of over 10,000 such operations carried out up to 1954. This early operation was largely used in cases of schizophrenia, though it was noted on several

occasions that affective psychoses responded much better. But in those days schizophrenia was the primary therapeutic problem and, for many patients, the crude standard operation was probably preferable, with all its risks of serious side effects, to the continuation of chronic and severe psychological disturbance. As the *Lancet*² has put it, "such was the enormous pool of psychotic patients vegetating as chronic sick in the closed wards of mental hospitals, without effective drug control and without hope, that, when it became possible to help them in any way, this new method was taken up with more enthusiasm than caution, and with more technical skill than psychiatric or neurophysiological understanding."

With the advent of potent psychotropic drugs in the 1950s the use of psychosurgery declined greatly and the situation is now fundamentally different in two respects; firstly, psychosurgery is now only very rarely used for schizophrenia and, secondly, the operations have been considerably refined, with the result that effects on the personality are rare and, where they occur, are usually of socially negligible effect. The title of the discussion thus prejudges the issue.

Psychosurgical operations have continued to be modified and one of the most recent techniques which has become the most frequently used is Knight's stereotactic subcaudate tractotomy,³ the clinical effects of which have been reviewed by Ström-Olsen and Carlisle⁴ and by Bridges *et al.*⁵ This has proved a valuable treatment for those few patients disabled by chronic depression, obsessional neurosis, or anxiety whose response to routine treatments is temporary or inadequate. Effects on the personality depend to some extent on the criteria employed but they are certainly rare with this operation and where they occur they are mild. Probably the most serious side effects is that of epilepsy, occurring with an incidence of about 1%, but patients are usually willing to accept this if relief is offered from chronic and disabling psychiatric symptoms.

Dr. Rollin states "I solemnly took a vow many years ago that under no circumstances would I ever recommend another [psychosurgical operation]. . . . To do a destructive operation on such an infinitely delicate and complex organ is like kicking some equally delicate and complex machine which is out of order. . . ." This credo sounds rather grand and just a bit idiosyncratic, but it would be of little help to a chronically depressed and suicidal patient who has been able to obtain no relief from other forms of treatment. In addition it is a view that does not acknowledge the development of other treatments in medicine, often established empirically.

The most important aspect of the discussion concerned the use of psychosurgery for abnormal aggressive behaviour where the ethics are so far totally uncharted. Knight's stereotactic tractotomy is most unlikely to be indicated in such cases so we have no experience in this unit of the problems involved. It would therefore have been instructive to learn the views of others had they got their ground work clearer first.—We are, etc.,

P. K. BRIDGES
JOHN R. BARTLETT

Geoffrey Knight Psychosurgical Unit,
Brook General Hospital,
London S.E.18

¹ Tooth, G. C., and Newton, M. P., *Leucotomy in England and Wales 1942-1954*, Ministry of Health, Reports on Public Health and Medical Subjects No. 104. London, H.M.S.O., 1961.

² *Lancet*, 1972, 2, 69.

³ Knight, G. C., *British Journal of Psychiatry*, 1969, 115, 257.

⁴ Ström-Olsen, R., and Carlisle, S., *British Journal of Psychiatry*, 1971, 118, 141.

⁵ Bridges, P. K., Goktepe, E. O., and Maratos, J., *British Journal of Psychiatry*. In press.

American Medicine

SIR,—It is regrettable that Professor L. J. Witts in his Personal View (5 May, p. 299) should lend his prestige to propagating the myth of the "inferiority" of American medicine, and that apparently on the basis of reading one man's book on the subject. Does Professor Witts encourage his students to publish papers without experimental verification?

In 1970 I practised for five months as a locum consultant surgeon in England and worked in five provincial hospitals. In none of those hospitals was there a formal training programme for the residents such as is demanded in the U.S. In none of them did I find an intermittent positive-pressure breathing machine, whereas in the 200-bed community hospital I practise in here there is a separate department of respiratory physiology so that I.P.P.B. and blood gas analysis are available day or night. You stated in a recent leading article (21 April, p. 131) that T-3 and T-4 tests for thyroid function are not yet generally available (in the U.K.). In our hospital these tests are a matter of routine. In America general practitioners are everywhere included on hospital staffs, and though the independent family practitioner is not as common as formerly, our hospital has an outpatient department staffed by five family practitioners and open from 9 a.m. to 9 p.m. every day of the week.

Having practised in seven countries on four continents, I believe that the overall standard of medical care in the U.S. is the best I have seen, and that includes the U.K. True, medical care is expensive here, but then salaries are higher than elsewhere and the cost can be, and is in most cases, adequately covered by insurance. Medicaid takes care of the indigent and Medicare of the elderly. Legislation has already been passed which makes the Government responsible for the cost of dialysis and kidney transplantation, and finally legislation is pending for government funding of so-called catastrophic illness.

One could continue to enumerate many more positive aspects of American medicine, but Professor Witts must know that there are a great number of expatriate British doctors, and I am sure they would provide him with plenty of evidence to rebut what he reads in a book. I suggest, therefore, that Professor Witts comes here and sees for himself the state of American medicine before condemning us all on hearsay evidence.—I am, etc.,

I. LANGDALE GREGORY

Norwich, N.Y.

Haemophilus influenzae Apparently Resistant to Trimethoprim

SIR,—Professor J. R. May and Mrs. Judith Davies (12 August 1972, p. 376) suggested that the incidence of strains of *Haemophilus*

influenzae resistant to trimethoprim is increasing rapidly. The suggestion was based on their finding that many strains showed long trailing end-points in sensitivity tests by both the disc and the serial dilution methods. The effects were first observed in the disc method and the authors then assumed that they were due to the use of a medium which contained substances that partially reversed the action of trimethoprim and the sulphonamides. However, they rejected this explanation when similarly long trailing end-points were seen in the determinations of the minimum inhibitory concentrations of trimethoprim in media which they considered to be free from inhibitory substances. They therefore read as their end-point the concentration of trimethoprim that gave 100% inhibition instead of the more usual 90% inhibition and concluded that of the 24 strains examined by the serial dilution method, 18 were resistant to 10 µg or more of trimethoprim per ml.

Thymidine is the major interfering substance for trimethoprim and the sulphonamides and it is probably present to a variable extent in all non-synthetic media. The addition of lysed horse red cells improves media for sensitivity testing to these drugs by converting thymidine to thymine, which for most organisms is less effective for reversing the inhibitory effects of these antibacterial agents than is the nucleoside. The media used by Professor May and Mrs. Davies for their minimum inhibitory concentration determinations were not synthetic and therefore their original explanations for the trailing end-points is still feasible.

Through the courtesy of Professor May, 17 of these apparently resistant strains were examined at the Wellcome Research Laboratories in North Carolina and the occurrence of long trailing end-points was confirmed; they occurred in a variety of media, including Wellcotest agar, Oxoid diagnostic sensitivity test agar, and Difco Mueller-Hinton medium. However, more extensive investigations, which included diffusion transfer techniques, impression slide methods, bactericidal tests, and protective tests in animals, gave the following results: (1)—The organisms giving the long trailing end-points were shown to be morphologically abnormal and mostly dead. (2)—The few viable abnormal forms were incapable of further multiplication when transferred to medium containing the same concentration of trimethoprim as that in which they initially multiplied, and assumed normal morphology when transferred to trimethoprim-free medium. (3)—Though the 17 strains were not equally sensitive to the bactericidal action of trimethoprim, five of them were in fact killed by as little as 1 µg of trimethoprim per ml. (4)—In experiments in mice these allegedly resistant strains were no more resistant in vivo to trimethoprim than were the more usual ones. (5)—Serial passage in the presence of trimethoprim did not alter the end-points of strains with either long trailing or clear-cut end-points, indicating that long trailing end-points are not indicative of a phase in the development of resistance to trimethoprim. Details will be published elsewhere.

In vitro testing of sensitivity to sulphonamides has always presented difficulties and, though these are no less with trimethoprim, we conclude from the results of our study that these seemingly trimethoprim-resistant

strains of Professor May and Mrs. Davies are sensitive to therapeutic concentrations of trimethoprim.—I am, etc.,

S. R. M. BUSHBY

Wellcome Research Laboratories,
Research Triangle Park,
North Carolina

Oestrogen Treatment in Carcinoma of the Prostate

SIR,—Dr. M. Shahmanesh and his colleagues (2 June, p. 512) suggest that stilboestrol should be regularly used in a dose of 1 mg daily in the treatment of carcinoma of the prostate. We have performed 6-hourly estimations of plasma testosterone by radioimmunoassay in 12 patients with prostatic cancer, and the results show that androgen suppression may be incomplete and variable with stilboestrol 1 mg daily. In contrast, stilboestrol 1 mg thrice daily provides consistent suppression of plasma testosterone which is maintained throughout the 24 hours (see fig.).

Mean plasma testosterone levels ($\pm$ S.D.) at 6-hourly intervals, comparing the effects of stilboestrol 1 mg daily with 1 mg thrice daily.

We would therefore suggest that unless facilities are available for monitoring the effectiveness of hormone therapy—by plasma testosterone assay—a dose of 1 mg thrice daily may be more appropriate for routine use in the treatment of this disease.—We are, etc.,

R. J. SHEARER
W. F. HENDRY
J. D. FERGUSON

Institute of Urology,
London W.C.2.

Communication between Psychiatrists

SIR,—It seems to me that your leading article on this subject (2 June, p. 500) and similar pious exhortations are misguided. We have next to nothing by way of symptom analysis, signs, or tests that was not available to our by no means stupid colleagues of 50 years ago. It may even be mischievous to suggest that more time and publication space be given to going over and over the same material.

We need new weapons of attack if we are to extend our nosology. The computer appears to have failed us. Recent changes in our

diagnostic habits have come from responses to treatment. Electric convulsion therapy and chemical antidepressants have led us to see as depression much we used to call chronic neurosis, and steroids have changed many diseases formerly classified as psychosomatic into the organic category. It is very interesting and even possibly useful to compare national diagnostic habits, but apart from that it is not, in my view, right of you to encourage the further flogging of a dead horse, at any rate before we have a new whip.—I am, etc.,

E. A. BURKITT

Darlington

Mini-clinics in General Practice

SIR,—Mini-clinics (Drs. P. A. Thorn and R. G. Russell, 2 June, p. 534) are a means of stimulating and maintaining interest in the management of groups of patients. Could the principle be extended to other groups?

Antenatal clinics have been successfully run for many years on a mini-clinic basis. They have enabled a pattern of practice to be imposed, albeit gently, on the general practitioner. In return for this both the G.P. and the patient benefit from the less formal and more complete care that can be given in general practice. Other clinics run by hospitals which might be adapted to general practice are obesity clinics, asthma clinics, and encopretic and enuresis clinics, to name but a few. These are all dealing with problems that require a broader understanding of the family environment than a hospital doctor can hope to have.

Would mini-clinics be a valuable means of overcoming the problem of exchange of ideas between family and hospital medicine? Drs. Thorn and Russell mention an annual visit by the consultant to the mini-clinic as being welcomed by the family doctor. It must enable the relationship between consultant and G.P. to be put in its correct perspective, with the patient and his disease as the focus of the contact. The potential value of this alone might justify the extension of the mini-clinic idea.—I am, etc.,

P. H. BRUNYATE

Royal Devon and Exeter Hospital,
Exeter

Coeliac Disease and Schizophrenia

SIR,—Dr. Dermot Walsh, in commenting on the report by Dr. M. Mylotte and others (24 March, p. 703) of an exceptionally high incidence of coeliac disease in three western counties of Ireland, suggested (28 April, p. 242) "that a good case can be made for looking at the relatives of coeliac children in the west of Ireland . . . to see whether there is a raised incidence of schizophrenia among them." The suggestion is, I believe, an excellent one and well supported by: (1)—his demonstration¹ of a very high first admission rate for schizophrenia in Ireland (particularly in the western counties) compared with England and Wales and other countries; (2)—epidemiological and experimental evidence² that cereal grains may be harmful in schizophrenia as well as in coeliac disease; (3)—clinical and pathological observations^{3,4} suggesting that both diseases have many manifestations in common and may be genetically related; and (4)—the considerably greater per capita consumption of cereal