way of knowing that sperms are normal. Without exception, when I inform prospective A.I.D. recipients that only proved donor semen will be used they are that much more reassured.

Frozen Semen.—The fact that good results are obtained in cows with semen frozen by liquid nitrogen has little bearing on human A.I.D. A farmer will have no second thoughts about killing a deformed calf. From my extensive reading of the American use of frozen semen I regard their apparently successful results—up to 70%—with great suspicion. No British doctor who practises A.I.D. has admitted a success rate of much greater than 50% using *fresh* semen. I have studied the method of using frozen CO₂ for freezing semen used by Dr. R. G. Bunge of Iowa (personal communication), who also claims excellent results, and found a considerable increase in immobility and fragmentation of sperms after defreezing. No one knows the effect on the genetic material in the frozen sperm, and there is no method of detecting any damage. The great majority of my patients who have been successfully inseminated by donor have resisted any type of follow-up. They want to forget the husband's infertility, and this reaction is understandable. Therefore I consider it extremely difficult for any organized scientific investigation to determine, with reasonable accuracy, the effects of using frozen semen over a sufficiently long period of time to produce statistically significant results proving or disproving the harmlessness of this method. In my view the demand for A.I.D. is insufficient to warrant the use of frozen semen, with all the hazards that this may entail.

Semen Banks.—It is difficult to see how anyone with personal experience of A.I.D. could suggest the setting up of semen banks. How could one confirm, in some way similar to the cross-matching of blood before transfusion, that the semen in tube XYZ was in fact the semen from a fair-haired white man (or dark-haired black man) before using it for insemination? As one cannot confirm whose semen is in the tube, whose responsibility will it be if a white-skinned mother gives birth to a black baby or a West Indian mother to a white baby?

Confidentiality.—What can happen in an N.H.S. hospital concerning confidentiality is illustrated by the experience of an unmarried woman of my acquaintance who was admitted for termination of pregnancy. She was assured by the gynaecologist that the abortion would be conducted under completely confidential conditions but when her mother arrived at reception and inquired which ward her daughter was in, she was told by the porter, "You'll find your lass in the abortion ward, darling."

Public Attitudes to A.I.D.—If the "climate of opinion" has changed towards A.I.D., then the extent of the change may be less than the panel is aware. Last year the editor of the *Daily Telegraph* would not allow my advertisement for a suitable Hindu-Sikh donor to be placed in the personal column. This month the editor of the *Jewish Chronicle* has refused a similar advertisement for a Jewish donor.

To summarize, it would appear that the panel was very poorly informed as to the problems associated with A.I.D.—I am, etc.,

JOHN SLOME

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Achilles Tendon Reflex in Hypothermia and Myxoedema

SIR,—During the relaxation phase of a tendon reflex the muscle is electrically silent. "Brisk relaxation" of a muscle therefore cannot be caused by a lesion of the central nervous system as suggested by Dr. D. Maclean and others (14 April, p. 87). A more reasonable conclusion would be that hypothermia and hypothyroidism do not invariably delay muscle relaxation.—I am, etc.,

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Malignant Hyperpyrexia

SIR,—It is interesting to see in the letter from Dr. M. A. Denborough and others (24 March, p. 738) that their earliest recorded case of death from malignant hyperpyrexia occurred in 1921. Britt and Kalow mentioned another fatal case of malignant hyperpyrexia occurring in 1922. Both cases, of course, occurred well before the introduction of succinylcholine and halothane. These agents cannot therefore be specifically incriminated, as suggested by Dr. C. Langton Hewer (24 March, p. 738). Ether, cyclopropane, trichloroethylene, and methoxyflurane have probably also been responsible for inducing the syndrome,¹ though it is rarely possible to be absolutely sure of this because of the multiplicity of drugs commonly used during anaesthetic procedures. Ether may well be less potent in this respect than halothane; it is less potent in uncoupling oxidative phosphorylation in liver mitochondria, the relative potencies being related to the partition coefficient of the agents between lipids and water.²

Dr. Hewer is, I am sure, quite correct in maintaining the separation of malignant hyperpyrexia from the syndrome of late ether convulsions. In fact he made an early contribution to the discussion of the aetiology of ether convulsions.³ It is, however, unlikely that ether convulsions had a single cause. The earlier literature on operative and post-operative hyperpyrexia and fits contained much uncertainty about the possible roles of pre-existing hyperpyrexia, hot operating theatres, excessive draping of the patient, and atropine premedication. Agents other than ether were at times responsible for identical convulsions and hyperpyrexia.⁴

The major contribution of Dr. Denborough and his colleagues⁵ was the recognition of a family of patients developing fatal hyperpyrexia with anaesthesia.⁵ Sporadic cases, however, do occur,⁶ and I agree with the suggestion that some of the cases recorded in the earlier literature as late ether convulsions may well have been suffering from malignant hyperpyrexia. If ether is a less potent agent, which induces malignant hyperpyrexia less quickly than halothane and succinylcholine, then one may perhaps accept the six cases reported by Guedel⁷ as coming into the category of malignant hyperpyrexia. Certainly it is not easy to see from what they suffered if not malignant hyperpyrexia, and Britt and Kalow,¹ who have extensively reviewed the literature, accepted these as cases of malignant hyperpyrexia. Nevertheless, I agree that it is impossible to be certain of the diagnosis without the confirmation of a positive family history.

More important than this discussion, however, is the elucidation of the mechanism underlying the malignant hyperpyrexia reaction. As mentioned previously,^{8,9} contrary to the findings of Ellis *et al.*¹⁰ and of Dr. Denborough and his colleagues (3 February, p. 272), we found no histological abnormality in muscle biopsy specimens from six individuals, all of whom had raised serum creatine kinase levels and were relatives of patients who had suffered from malignant hyperpyrexia. In particular "moth-eaten fibres," cores, and pseudo-cores were not present. We did not find that halothane and succinylcholine invariably induced contraction in vitro in susceptible muscle, which again differed from the findings of Ellis *et al.*¹⁰ Our physiological⁸ and biochemical¹¹ studies failed to elucidate the underlying pathogenetic mechanism. Further studies of the muscle biochemistry and of the part played by thyroid hormones¹² are therefore awaited with great interest.—I am, etc.,

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Treatment of Depression in General Practice

SIR,—The paper by Dr. D. A. W. Johnson (7 April, p. 18) requires comment because it shows two serious deficiencies. In the first place the validity of many of his data is questionable owing to inadequacies of method. In the second place, even if accepted at face value, his results fail to justify his harsh criticism of his general practitioner colleagues.

Dr. Johnson fails to emphasize the accuracy of the G.P.'s diagnosis of depression. That 73 patients out of 91 interviewed by him satisfied his criteria is remarkable in view of the frequently repeated assertion that the G.P. does not recognize depression.

Dr. Johnson then criticized G.P. treatment in terms of drug therapy, psychotherapy, and the involvement of the social agencies. Seven days after the initial interview with the G.P. 72% of the patients were on the right drug in the right dosage, and of the remaining 28% the vast majority were on the right drug in what he considered to be inadequate dosage. Dr. Johnson's criticism is that this is not the best treatment, but he has no controls and cannot demonstrate better treatment apart from an assumption that he could provide it. Drug defaulting is a major problem, but in the absence of controls we would suggest that it could be an even larger

one for him. The problem of follow-up must be considered in similar fashion, as he has failed to show us with a control series that the figures he presents are capable of improvement. Even so one wonders how many patients failed to see their G.P. again because they knew they were seeing a psychiatrist. (Dr. Johnson saw each patient himself over a considerable period of time.)

We would challenge Dr. Johnson's belief that the doctor-patient relationship in general practice is dependent on whether the patient thinks he is known to the doctor and point to the importance of such factors as reputation in one's own community, management of a next-door neighbour's illness, approachability, access to records, continuing responsibility, and the hundred and one other factors that contribute to first-class primary medical care. We utterly reject the belief that the value of such a complex relationship can be assessed in retrospect by a few simple questions about whether the doctor's attitude had been helpful. Despite this we note that only 8% expressed dissatisfaction.

Dr. Johnson states that the resolution of stress factors had a statistically significant positive correlation with improvement in the patient's condition and criticizes G.P.s for not removing stress through the social agencies. If only it were so simple! Even assuming that stress can be removed in this way, he has no right to assume that this would necessarily help the depression. Cure the depression and the patient can often handle his own problems.

We conclude that Dr. Johnson's opinions are unsupported and do not carry sufficient weight to justify widespread criticism of general practice.—We are, etc.,

A. D. CLIFT
DAVID BROOKS
J. A. MAUDAR

Manchester

Efficacy of Measles Vaccination

SIR,—It may be sheer luck that deprived Dr. S. S. Sanders (21 April, p. 175) of the chance to see measles among the vaccinated children in his practice. We have been notified of such cases sporadically over the years, and this year I have bagged 14 so far in this borough as a whole.

I believe that live attenuated measles vaccine (Mevilin-L) is expected to immunize only 85% of the susceptible children. An immunization rate of over 90% of the susceptibles would be needed to establish herd immunity adequate to keep the wild virus at bay. It is unkind of a public health doctor to destroy beautiful illusions about the immunization procedures. But Dr. Sander's dream of a measles-free practice could still come true—if the 90% immunization rate is achieved. Perhaps we need another massive campaign.—I am, etc.,

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Advertising of Antibiotics

SIR,—It is with great interest that I read the letter by Drs. J. D. Williams and A. M. Geddes (14 April, p. 116) concerning the

advertising of antibiotics. Unfortunately the examples they cite are by no means the only ones a doctor is exposed to, and it is often difficult to view objectively the claims thus made in the absence of readily accessible and unbiased comments in the journals, the personal experience of any one doctor being generally too limited.

In my view any attempt to "curb the enthusiasm of commercial colleagues" is doomed to failure by the forces of a competitive market and freedom of speech. Surely it is better to attempt to educate and enlighten, perhaps in the Medical Practice section of the *B.M.J.*, by an on-going series of general articles on chemotherapy by recognized clinical pharmacologists, similar to the lectures one received as a medical student. Such a series, while in no way attempting to dictate patterns of treatment, might at least provide some guide lines on the indications for and the effectiveness, cost, and risks of, otherwise extensively and exuberantly advertised preparations, and would no doubt stimulate much useful discussion in these columns.—I am, etc.,

F. J. BORCHARDT

Pershore, Worcs

** Several such articles on the principles of chemotherapy and the use of individual agents have appeared in the Today's Drugs series in the *B.M.J.*, and a new series entitled "Therapeutics Today" is scheduled to start in the autumn.—ED., *B.M.J.*

SIR,—In their letter about current pharmaceutical advertising Drs. J. D. Williams and A. M. Geddes (14 April, p. 116) identify specific flaws which could be hazardous for individual patients. But wider issues are raised by their properly critical advice:

For example, I would suggest that (1)—no broad-spectrum antibiotic should be used for throat infections (for example, the tetracyclines are often ineffective and can occasion oropharyngeal moniliasis and tongue soreness); (2)—no systemic antibiotic should be used for staphylococcal infections limited to the skin and unaccompanied by fever or malaise (resistant strains may emerge, hypersensitivity may result, and the clinical benefit is uncertain); and (3)—no antibiotic or chemotherapeutic agent should be used for non-invasive bowel infections—except perhaps when a shigella or enteropathic coliform organism is responsible (oral therapy is clinically irrational, and when other specific pathogens are isolated they are usually unaffected by antimicrobial treatment).

A decade ago I drew attention¹ to the questionable practice of publishing advertisements which encouraged the use of sulphonamides in gastrointestinal infections. Nevertheless, elegant promotional variants still appear regularly in the pages of the medical press. Our colleagues in commercial pharmaceutical practice might (paradoxically) encourage financial as well as ethical advantage for their companies by a tacit acknowledgement of the above facts.—I am, etc.,

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¹ Anderson, J. P., *Lancet*, 1963, 1, 1104.

Prescribing Mandrax

SIR,—It is regrettable that Dr. C. G. Brown (7 April, p. 54) is so "nauseated" by "ivory tower boffins" of the Department of Health and Social Security who politely draw his attention to his prescribing of methaqualone and diphenhydramine (Mandrax). There can be no doubt that monitoring of prescribing by family doctors is desirable; it becomes essential when a drug such as Mandrax, scheduled under the Drugs Prevention of Misuse Act, continues to be prescribed to the extent of two million prescriptions by family doctors in England and Wales each year.

The so-called boffins are wise to draw attention to the prescribing of Mandrax which, Dr. Brown writes, is misused by "a small minority." A small minority can mean almost anything, but Mandrax in certain towns is the most popular drug for misuse. The voluntary ban on the prescribing of amphetamines has resulted in the absence of amphetamines available for theft from chemists' premises; similarly a ban on Mandrax prescribing could have a favourable effect. Methaqualone is a drug with strong addictive potential, a fact not mentioned by Dr. Brown, who prescribes it for "just over 1% of the patients on [his] list."

Dr. Brown is "very pleased to report that [he has] yet to have a suicide from Mandrax" and contrasts this with his previous experience with barbiturates. Statistically, he is very likely to encounter such an event from Mandrax, for I am informed by the Department of Health and Social Security that prescriptions in England and Wales written by family doctors for barbiturates have fallen from 17 million in 1965 to 12 million in 1971; those for Mandrax have risen from 45,000 in 1965 to two million in 1971. In Edinburgh the number of admissions to hospital for "attempted suicide" by Mandrax has risen from zero in 1965 to 10% of all adult self-poisonings in 1972. The corresponding figures for barbiturates show a fall from 60% in 1965 to 18% in 1972.

Dr. Brown avoids prescribing barbiturate hypnotics. I would heartily endorse such a practice but would advocate that methaqualone, either alone or in combination with another drug, also be not prescribed. A suitable alternative exists—namely, nitrazepam (Mogadon). It is not subject to misuse and not addictive, and no authenticated death from it has yet been reported.—I am, etc.,

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"The No Touching Epidemic"

SIR,—The "Personal View" by Dr. P. N. K. Heylings (14 April, p. 111) prompts me to a reaction of grateful delight as to both the topic and its approach. No doubt the manifestations of the "no touching disease" are more clear-cut in your country than elsewhere in Europe, but, nevertheless, this condition is to be found all over the place in Germany, too, and particularly among the medical profession. And in my opinion, the problem here is even more difficult and I should like to say threatening, as in many cases of this disease diagnosis can't be established until irreversible damage is done. The