hysteria or to altered medical perception in the community. Their erroneous conclusions about this illness may impair future investigations of similar outbreaks.

It is apparent that the authors failed to do their homework, and demonstrated a surprising lack of information about the principles of epidemiology and of psychiatry. Had they reviewed the literature on the subject, they would have discovered that Albrecht, Oliver, and Poskanzer¹ investigated an outbreak of this illness in New York and pointed out that an easily recognized laboratory abnormality occurs in this illness. There is a considerable increase in creatinuria and an increase in the creatine/creatinine ratio, suggesting an abnormality of muscle. On recovery from the symptoms the creatinuria disappeared. Drs. McEvedy and Beard also failed to point out that the epidemic curve, in at least one outbreak,² was consistent with person to person spread, and that radial spread over time was demonstrated from the centre of the community to the more rural areas.

The question of mass hysteria has been considered by the authors of most papers relating to this disease and in each instance has been discarded for a number of reasons—namely, (1) cases occurring within the same household are varied in their features and course; (2) separate illnesses appear at random intervals instead of simultaneously; (3) epidemiologically, the consistency of course and similarity of symptoms despite the variety of people and communities that were affected make hysteria unlikely. The disease is consistent from outbreak to outbreak in different countries, different years and different peoples. (4) The mental symptoms of depression, emotional lability, impaired memory and difficulty concentrating are consistent with organic disease as compared with the shallowness and indifference of hysteria. (5) Muscle pain is a striking feature of most outbreaks. It is clear that sporadic cases of this disease cannot be readily identified. It is only in the epidemic form that the distinctive epidemiological features allow characterization.

Instead of ascribing benign myalgic encephalomyelitis to mass hysteria or psychoneurosis, may I suggest that the authors consider the possibility that all psychoneurosis is residual deficit from epidemic or sporadic cases of benign myalgic encephalomyelitis?—I am, etc.,

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Onions and Blood Fibrinolysis

SIR,—Recently my colleagues and I² demonstrated that raw, fried, or boiled onions increased the blood fibrinolytic activity but had no effect on serum cholesterol levels, re-calcified clotting times, thrombotests, and fibrinogen levels. The study reported below is a follow-up of our previous study, and was undertaken to discover if the property in the onion which causes

this increase in fibrinolysis was present in commercially available dried onions and in lyophilized onions.

The dried onions used in this study (supplied by Gentry Corporation, California, U.S.A.) are granulated, minced, and chopped and in weight one part is equivalent to ten parts of raw peeled onions. The dried onions were reconstituted before use by soaking in cold water in the ratio 1:3. A lyophilized sample of onion (supplied by Kabi Pharmaceuticals, Stockholm, Sweden) was prepared from 1 kg. of onions, which was homogenized, the mixture centrifuged and the precipitate discarded. The sample ready for use weighed 40g.

Subjects	Day 1		Day 2		Day 3		Day 4		Day 5		Day 6	
	Breakfast only		Breakfast + dried granulated onions		Breakfast + dried minced onions		Breakfast + dried chopped onions		Breakfast + lyophilized onions		Breakfast + lyophilized onions	
	9 a.m.	11.30 a.m.	9 a.m.	11.30 a.m.	9 a.m.	11.30 a.m.	9 a.m.	11.30 a.m.	9 a.m.	11.30 a.m.	9 a.m.	11.30 a.m.
1	26.3	25.0	25.0	142.8	24.3	55.5	23.5	47.6	25.6	33.3	23.8	37.0
2	25.6	24.3	26.3	45.4	23.8	166.6	24.6	38.4	22.7	27.7	21.7	38.4
3	71.4	52.6	58.8	111.1	66.6	133.3	60.6	142.8	58.8	105.2	76.9	105.2
4	33.3	29.8	37.0	55.5	32.2	74.0	33.3	100.0	34.4	66.6	32.2	52.6
5	38.4	31.2	36.9	52.6	34.4	66.6	40.0	66.6	37.0	62.5	34.4	58.8
6	31.2	26.3	41.6	52.6	30.3	50.0	32.7	45.4	34.4	41.6	30.3	50.0

TABLE.—Euglobulin Lysis Times (in units) of Volunteers

Six volunteers were included in the study. On day one, after fasting, samples of blood were collected for the estimation of the euglobulin lysis time (E.L.T.) by the method described by von Kaulla,³ slightly modified and using an E.L.T. recorder.⁴ The lysis times obtained were expressed in units by multiplying the reciprocal of them in minutes by 10,000. After withdrawal of the blood samples mentioned the volunteers were given a breakfast at 9 a.m. containing a total of 39.8g. of fat and new samples of blood were collected after two and a half hours. On day two the procedure was repeated but this time 7½g. of granulated dry onions were added to the meal. On day three the method was almost identical with that outlined above, the only difference being that this time 7½g. of minced dry onions were added to the meal. On day four the meal was augmented by 7½g. of chopped dry onions. On days five and six, 3g. of lyophilized onion was added to the breakfast. The volunteers were made to rest throughout the experiment, since a previous study had

dies^{1,2} established that the factor is heat-stable and also not water-soluble.—I am, etc.,

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New Bronchodilator Aerosol Preparations

SIR,—Your readers will no doubt have seen in the *British Medical Journal* and elsewhere several advertisements for Medihaler-duo (Riker Laboratories), a combined aerosol of isoprenaline and phenylephrine supplied in pressurised dispensers for inhalation. A recent *B.M.J.* advertisement (14 March, p. XV) is headed "When it comes to safety, only one inhaler has been shown to improve the natural function of gas exchange in most patients—Medihaler-duo." Other advertising pamphlets contain statements such as "Medihaler-duo improves oxygenation of the blood . . . encourages elimination of carbon dioxide, and provides the physiological benefits associated with improved gas exchange," and "Medihaler-duo offers the prospect of greater safety in bronchodilator therapy." These statements carry the implication that the value of isoprenaline plus phenylephrine has been fully substantiated, but this is in fact not the case.

The only published studies I have so far been able to trace are reported in two short

letters to the *British Medical Journal* by Dr. T. T. Chapman (29 November 1969, p. 557) and Dr. K. M. Hume (17 January, p. 173). Both were clearly intended to be preliminary communications, and the authors' conclusions were couched in suitably cautious terms. Dr. Hume, for example, merely stated that his results supported Dr. Chapman's suggestion that "these findings may require to be considered in the future manufacture and prescription of bronchodilators." Nevertheless, some of his results, presented in tabular form, were reproduced in one of the advertisements for Medihaler-duo, and scientifically unwarranted conclusions, such as those quoted above, were drawn from them.

It is not the purpose of this letter to criticize the studies reported by Dr. Chapman and Dr. Hume, and the following comments are intended merely to draw attention to the way in which they have been exploited by the manufacturers of Medihaler-duo.

In Dr. Chapman's letter the pre-treatment levels of arterial oxygen tension (PaO₂) were

not given, and there was no indication that these figures were comparable for each of the six treatments administered, which included isoprenaline plus phenylephrine. In Dr. Hume's letter this information was available, but it indicated (a) that the mean PaO_2 before isoprenaline plus phenylephrine (66 mm.Hg) was considerably lower than that before salbutamol (74 mm.Hg), and (b) that the mean change in PaO_2 after drug administration was only +1.7 mm.Hg in the case of isoprenaline plus phenylephrine, and -3.7 mm.Hg in the case of salbutamol. The difference in favour of isoprenaline plus phenylephrine between these mean changes in PaO_2 might have been significant if the figures for PaO_2 before the two treatments had been comparable, but as the difference between the mean pre-treatment PaO_2 (8 mm.Hg) considerably exceeded the mean change recorded after either treatment, it would be improper to draw any such conclusion from the data available.

The combination of a rise in PaO_2 and a fall in PaCO_2 , as observed by Dr. Hume after isoprenaline plus phenylephrine, might merely have been due to hyperventilation caused by either or both of these drugs, and does not necessarily imply that this form of treatment corrects the disturbed ventilation-perfusion relationship, which is the main cause of hypoxaemia in bronchial asthma. Dr. Hume refers only very briefly to the possible effects of hyperventilation on the arterial gas tensions, but implies, by using the phrase "recorded to be hyperventilating" in respect of two of his patients, that his study included measurements of pulmonary ventilation. If that was in fact the case, I would suggest that he publish these data, which might help to show whether the changes in PaO_2 and PaCO_2 after isoprenaline plus phenylephrine were or were not associated with hyperventilation.

Dr. Chapman's patients had "chronic airways obstruction which excludes asthma," and Dr. Hume's had "emphysema with slight reversibility of airway obstruction." Nevertheless, in the advertisement for Medihaler-duo published in the *British Medical Journal* specific reference is made to the advantages of this form of treatment in the "seriously ill asthmatic patient."

In describing the methods he used to compare the effects of isoprenaline plus phenylephrine and salbutamol Dr. Hume stated that he measured the pulse rate and blood pressure, but there is no mention of the results he obtained. This omission is unfortunate, as it is generally acknowledged that the cardiovascular side effects of isoprenaline contributed to the increased death rate from bronchial asthma between 1960 and 1965.

Despite the claims of rival pharmaceutical firms there is as yet no evidence that any sympathomimetic bronchodilator drug administered to a hypoxic asthmatic is completely safe, particularly where there is a risk of overdosage. Orciprenaline and salbutamol are certainly less liable than isoprenaline to increase the heart rate and blood pressure, and the use of phenylephrine in conjunction with isoprenaline may conceivably reduce the tendency of isoprenaline to lower the PaO_2 , but it would be quite wrong to conclude that either of these observations carries the implication that the drug concerned is necessarily less dangerous.

In the present state of knowledge no pharmaceutical firm is in a position to claim a greater degree of safety for one particular bronchodilator aerosol preparation, and active steps should be taken to discourage the publication of the type of advertisement to which this letter refers.—I am, etc.,

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Abortion and Rubella

SIR,—In their valuable contribution (2 May, p. 264) Mr. K. M. Thompson and Dr. J. O'H. Tobin omitted to make a practical observation of considerable potential importance. If the rubella virus can be isolated from the fetus and even from the amniotic fluid, it constitutes a threat to the nursing staff handling theatre specimens and to ancillary staff responsible for cleansing apparatus and preparing it for re-sterilization. As many of those concerned are young women, some of whom will be pregnant, practical implications of spreading infection should not be overlooked.—I am, etc.,

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Undescended Testis

SIR,—I have been interested in this condition for some years and would like to add a few comments to your leading article (2 May, p. 248).

Existing statistics are not very valuable because they include ill-advised or inadequate surgery. A good many unnecessary operations are done, especially on very young children, and some of these lead to atrophy of a testis that would have descended spontaneously given time. Any operation that needs tension to hold the testis in the scrotum will fail, and this includes most of the textbook procedures. Essential surgery is usually quite a major affair, with scrupulous attention to the course of the vessels and the vasa, sometimes in their entire length, and it can easily occupy two hours for a single side. I now find it possible to get an anatomically normal testis in nearly 90% of cases, but of course function is very difficult to assess short of sperm counts following bilateral surgery. We have no statistics on fertility here because adequate surgery has only been conducted in our unit for the last three years.

It is not true to say that once a high testis has entered the scrotum all is well. It can retract again as the boy grows and surgery may be needed later. Continual observation is necessary until well after puberty where the slightest doubt exists. To give hormones in unilateral cases is irrational and harmful. In bilateral cases hormones are only indicated when proved deficiency exists, after consultation with an endocrinologist. There is no place for hormone therapy in general practice.

Indications for surgery are by no means easy to assess, and if undescended testis is diagnosed or even suspected the boy should be referred to a surgeon specializing in this condition without delay.—I am, etc.,

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Prescribing Drugs of Addiction

SIR,—At a recent meeting of physicians from hospital drug dependence clinics a review of the present situation confirmed

the following areas of major concern and anxiety.

The increasing numbers of methadone (Physeptone) addicts, a proportion of whom are receiving their supplies of methadone from general practitioners.

The increasing tendency of young drug users to obtain barbiturates and other sedatives, which they inject intravenously with considerable danger to their lives and the risk of abscess formation and other complications.

The ease with which many young persons are still obtaining from doctors preparations containing such drugs as amphetamines, barbiturates, opiates, and other sedatives and stimulants of the central nervous system.

The physicians at the meeting considered unanimously that the medical profession should be alerted to the above dangers, and that doctors should be urged to be particularly careful about prescribing habit-forming sedative or stimulant drugs of any kind to young people, and to warn adult patients with youngsters in the house to keep such drugs carefully locked away. It was suggested furthermore that prescriptions for habit-forming drugs should not be given to temporary residents without a letter of introduction from their previous practitioner (which should be retained) or other appropriate confirmation.—We are, etc.,

P. H. CONNELL. K. H. M. LOTTINGA.

H. DALE BECKETT. JOHN W. MACK.

PHILIP BOYD. J. L. MCCLURE.

G. CHRISTIE. G. B. OPPENHEIM.

S. DAS GUPTA. JOHN OWENS.

JOHN DENHAM. M. H. RATHOD.

J. GUY EDWARDS. JOHN L. REED.

F. P. HALDANE. G. SEDMAN.

H. HASSALL. R. F. TREDGOLD.

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Cost of Anaesthetic Agents

SIR,—Criticism of my article on anaesthetic costs (21 February, p. 488) has been largely directed at me for not going far enough in my suggestions for economy. Users of the totally closed-circuit method of anaesthesia undoubtedly feel offended that I was advocating something less economical than that which they have been using for years. However, if there were many of them, my article need never have been written. My figures showed that the average gas flow rate used was nowhere near the 250 ml./min. they employ, nor the 2 l./min. I suggest, but in fact was 6 l. or above.

The totally closed circuit with a halothane vaporizer inside it, which they advocate, is I am sure safe in experienced hands. However, it has never gained popularity in this country because it has dangers for the unwary. A lethal overdose can be adminis-