

exertion such as digging or mowing a rough lawn with an old lawn-mower. The abdominal wall felt icy to the touch, and after such exertion I would have an acute attack as described. It could not be put down to icy water as we had no refrigerator and usually the water remained tepid after boiling. Stools were negative.

Apart from these acute attacks I normally had three or four loose stools daily during the hot weather. I eventually found that a "belly pad" consisting of about a square foot of woollen vest, lined on the inside with an old piece of "lock-knit" cotton material, tied round the neck and waist, was almost specific. The Chinese (Hakka) people dress their small children in a "belly pad" in the hot weather.—I am, etc.,

Leysburn, Yorks.

ALAN A. CROOK.

### Acid Drinks and Sulphonamide Therapy

SIR,—Dr. Petronella Potter (May 10, p. 654) raises a theoretical point on the effect of fruit-juice drinks on the urinary pH, but I don't think she can have taken the precaution of testing it in practice. The same point occurred to me when working with heavy doses of sulphadiazine in a country whose climate required a large fluid intake to maintain adequate urinary output. The intake was largely of fresh orange- and lemon-juice drinks. To test their effect on urinary pH, plain water was substituted for them in one group of patients. There was no significant difference in the urinary pH of the two groups as tested by universal indicator. There therefore seemed no practical justification for withholding the fruit drinks—a welcome conclusion, since the patients' general condition suffered on the water regime, which they did not enjoy taking and would avoid if possible.

As citric and tartaric acids and their salts are organic and liable to catabolism in the body, even Dr. Potter's theoretical arguments are in doubt.—I am, etc.,

Oxford.

C. W. M. WHITTY.

### Post-operative Pulmonary Atelectasis

SIR,—Dr. M. H. Armstrong Davison (May 17, p. 695) says that I am tilting at illusory windmills in emphasizing the importance of the routine use of simple postural coughing in the avoidance and treatment of post-operative atelectasis. I was not trying to instruct Dr. Davison himself; I think that would indeed be tilting at an illusory windmill because clearly we are in general agreement; but I am certain that we can all do a most important service by emphasizing the principles of simple prophylaxis and treatment which are not yet sufficiently known.

Bronchoscopic aspiration has many advantages in proper circumstances. The object of my letter was to protest against the fostering of the belief that when confronted with a post-operative atelectasis one should at once perform or ask for a bronchoscopy. It is true that anaesthetists should be able to perform bronchoscopic aspiration, but it is going to be a long time before there are enough anaesthetists up and down the country skilled enough to do so. In the meantime post-operative sputum retention is a very common occurrence in all hospitals, great and small. Its ill-effects can be avoided or overcome in the majority of cases by a simple drill available at once in every one. I find that there is very widespread ignorance of this fact and I think that all teachers have a duty to emphasize to house officers and nurses that an efficient remedy lies in their own powers and should be used. Bronchoscopic aspiration should be reserved for the small proportion of cases that fail to respond at once.—I am, etc.,

London, W.1.

R. C. BROCK.

### Use of Drugs in Asphyxia

SIR,—For the correct use of drugs in asphyxia it is at least desirable to know something of the physiology of respiration. Prof. Barcroft's recent researches into foetal respiration have shown us a whole new mechanism of respiration which is hardly hinted at in the normal physiology textbooks. They serve to emphasize the essentially reflex nature of respiration. So far as the brain is concerned normal ordered respiration involves a number of centres at various levels in and above the medulla—apnoea, "blackouts" (in flying, etc.)—these centre from above downwards; and in cases where the onset of respiration

is postponed, the possibilities lie in the establishment of a reflex gasp involving some cutaneous or other peripheral stimuli acting at the lowest level—i.e., low down in the medulla. When once respiration is properly established and the brain fully oxygenated, the respiration is thenceforward regulated by the well-known mechanism described by physiologists. Incidentally Prof. Barcroft shows that in the foetal sheep the earliest respiratory movements are elicited by touching the snout area alone, and this is, of course, the area on which the lamb normally drops when it is born, thus providing the maximum cutaneous stimulus to the most sensitive area.

In view of Barcroft's researches, the most effective way to combat asphyxia neonatorum would seem to be to apply a cutaneous stimulus—as in the traditional slapping or by directing a vigorous jet of oxygen on to the nose or into the mouth—or, if that failed, to give some drug which would enhance the sensitiveness of the nervous system so that it will respond to stimuli to which it otherwise would not—in other words, to give something in the nature of a convulsant. This justifies the old-fashioned recommendation of giving as much as 1/400 gr. (0.16 mg.) of strychnine (now, I think, never used, though I refer to this again later) and the more modern use, which I have described several times, of cardiazol-ephedrine. Cardiazol is a well-known convulsant, and in cases *in extremis* I have used it successfully in doses which, in a fully oxygenated baby, are certainly convulsant. (The largest dose I have used, and with complete success, was for a baby who failed to make any response for 15 minutes, but finally did so after receiving 0.5 ml. intramuscularly and then two doses of 0.5 ml. intracardially.)

This theoretical discussion, with its slight experimental demonstration, clears the way for a consideration of the possible bearing of Barcroft's work on the drug treatment of asphyxia in later life. We all know that asphyxia or high dosage of carbon dioxide depresses the sensitivity of the respiratory centre in the medulla, so that finally respiration ceases whatever the concentration of carbon dioxide may become. The question then becomes: Does the original basal or protopathic mechanism of respiration—i.e., responding to cutaneous stimuli instead of to asphyxia—still persist, or is it also abolished with the more normal pattern? I have already mentioned that Barcroft found that at a late stage in foetal life the cutaneous response persists in the foetus when the oxygen tension in the cerebral circulation is almost inconceivably low—i.e., when the response to asphyxia is practically abolished. There are various clinical observations which suggest that in adult life an early developed mechanism may be capable of functioning even though the normal later one is not—e.g., in insensibility due to cerebral haemorrhage, etc., the involuntary basal functioning of certain organs (bladder, etc.) shows itself even though it may have been suppressed in man for more than half a century, while in some types of heart disease the ventricle may reassume its own fundamental rhythm even though for 70 years or more it has followed quite a different one impressed by the auricle. If this is so, the logical way to treat a case of asphyxia would be to try to utilize the original but dormant cutaneous method of stimulation until the re-oxygenated brain reasserted its normal method of control.

I have described in the *B.M.J.* and repeated at the A.M.C. the case of a boy who was immersed in the river for about 15 minutes and who was responding hardly, if at all, to efficient artificial respiration. I injected 1.0 ml. of cardiazol-ephedrine and 1/30 gr. (2.1 mg.) strychnine sulphate, turned him over and gave him a few vigorous slaps, with the result that within a minute he was crying lustily and continued to do so for an hour or so. He finally made a complete recovery in spite of a raging pneumonia. This is only one case, but it does suggest that the injection of convulsants in cases of asphyxia may prove a most valuable and rapid method of treatment. I stress the importance of rapidity, for though cases have recovered after prolonged artificial respiration, all the evidence we have shows that the brain is extremely liable to damage from complete lack of oxygen, and if we can reduce the period of asphyxia we can—if it is not tautology to say so—hope for a much greater percentage of complete recoveries.

It is worth mentioning in this connexion that our fathers constantly used injections of strychnine as a respiratory stimulant, but this practice has fallen into desuetude since the physiologists proved that in the laboratory strychnine has no such

stimulating effect. Barcroft's work suggests that it may well be of the greatest value where the normal mechanism is failing and the organism possibly having to rely on a more primitive one. If this is so, it is but one more example of the clinical acumen of our forefathers which has been discredited not because it was wrong but because its mode of action was misunderstood, or because the conditions of the physiological experiment were such as to prevent its giving a correct answer. "The proper study of mankind is man," and though cats and dogs are useful, they can never replace the acid test of human experiment. I suggest that those with the requisite opportunities might try the application of Barcroft's work in the way I have indicated.—I am, etc.,

Winsford, Cheshire

W. N. LEAK.

### Artificial Insemination

SIR,—Dr. Eustace Chesser's letter (May 24, p. 738) is a valuable contribution towards a correct assessment of the problem of heterogeneous insemination. He admits having dealt with cases of homologous and heterogeneous insemination and now condemns the latter.

Recently in Newcastle we were addressed on the legal problems of this matter, which was dealt with from every aspect. We were informed that the donor should be a married man with one or two children and of proved health. I made, *inter alia*, the following remarks: "Artificial insemination of cattle is justifiable, as it involves no ethical problem. The majority of the males are castrated and it is only reasonable for commercial purposes that the remainder may distribute their favours, as after all we eat the progeny. I have never done homologous insemination, but I would consider it ethically correct to aid fertilization if, for example, coitus was impossible owing to vaginismus or some other abnormality. Heterogeneous insemination brings in a special factor which revolts one. What type of individual can the donor be who hawks his seminal fluid round the countryside at so much per c.c.?"

Judging by the way a large mixed audience received my remarks, from personal talks, letters, and phone messages, I am sure that the bulk of them felt as I did. Dr. Chesser's letter strikes me as being written by one with deep conviction.—I am, etc.,

Newcastle-upon-Tyne.

FARQUHAR MURRAY.

### Infant Deaths

SIR,—With reference to Dr. S. Waddy's letter on infant deaths (May 24, p. 737), in which he draws attention to the danger of too great a weight of blankets on an infant's cot, a recent necropsy which I performed may be of interest.

A healthy baby aged four weeks was found "panting for breath" one morning in its cot and died before the arrival of a doctor. A necropsy revealed all the signs of asphyxia in an otherwise normal infant. At the subsequent inquest the mother was asked about the clothing and bedclothes of the child. The disclosure that on the warmest night of this year the unfortunate babe was bedecked in (1) a woollen vest, (2) a woollen coat, (3) a woollen night-dress, and (4) woollen bootees, and had as covering four woollen blankets and an eiderdown—the blankets being "well tucked in"—left no doubt as to the cause of the asphyxia. Comment is unnecessary.—I am, etc.,

Northampton.

RUBY O. STERN.

### Keeping Mother and Baby Together

SIR,—We have read with much interest and pleasure the paper by Prof. J. C. Spence on "The Care of Children in Hospital" (Jan. 25, p. 125) and note that he approves of the method we have been using as much as possible for the last 20 years and exclusively for the past 6 years in a small special hospital—namely, encouraging every mother to nurse her own baby (*vide B.M.J.*, Feb. 3, 1945, p. 159, and Sept. 7, 1946, p. 337). Given the right conditions the system works well and gives excellent results. Babies want constant attention and "mothering"; to break the bond between mother and baby is to introduce an unnecessary hurdle into treatment which may spell the difference between success and failure. We have noted also the objections of Drs. W. E. Crosbie and J. Lorber (Feb. 15, p. 266) to the mother-and-baby system of nursing.

We in our work are of course frequently up against the same trouble of a mother finding it difficult to leave her home and family. But here is where grandma or auntie will nearly always step into the breach; someone can invariably be found to look after the home. The only insuperable difficulty is when the mother herself is ill and possibly in hospital. In such a case we get a "foster mother," if possible again an aunt or grandmother or other relative, and it is astonishing how soon the foster mother and baby get fond of each other; and it is this bond of fondness which is so valuable to the baby patient in its time of trial.

Again we would emphasize it is of no use putting a mother with her baby in a ward. They must have a little room to themselves which is their own private room, and under these conditions the classical description by Prof. Spence of a children's ward commencing "The room is vast" is never applicable. The simple fact is that there are not enough nurses and not enough time for baby patients to be given all the attention they require.—We are, etc.,

H. P. PICKERILL.  
CECILY PICKERILL.

Wellington, N.Z.

### Health of Children Attending Day Nurseries

SIR,—The observations made by Dr. Margaret E. McLaughlin as stated in her preamble (May 3, p. 591) cannot lead to definite conclusions, owing to the impossibility of assessing the relative effects of economic and environmental factors on such a survey, unless the obvious course is taken of studying these vital social factors simultaneously with the purely pathological one attempted. Out of many points which require further investigation that reading "The inference that there were no significant physical differences at the start of nursery life between day-nursery children and those living at home may reasonably be assumed to apply also to the present survey" requires more evidence than that afforded by examinations by a variety of observers on 290 children "scattered all over the country" and then statistically compared to the 4,297 children in the major groups studied.

From my experience of the basis of admission to day nurseries priority is invariably reserved for mothers forced to work; the reasons leading to this necessity operate before and after pregnancy; therefore their level of nutrition and take-up of extra rations and vitamin supplements (owing to lack of free time and financial stringency) is lower than that of the normal home-living mother. One would not expect the babies born to this group to have the optimum physique and resistance obtainable. Day nursery care would have to overcome this initial inferiority before any reasonable comparison could be made between them and other groups. If the statement I refer to can be scientifically proved I suggest the whole of our nutrition policy for expectant mothers must be based on a fallacy.

This report emphasizes the vital importance of good staffing and management and should reinforce the struggle to raise the standard of training in child welfare to a national university level, as advocated by the report issued in 1946 by the National Society of Children's Nurseries. These "extensions of the home" must and can be made safe in order that they may assist the solution of a multitude of acute social problems—to quote a few, the work of the Marriage Guidance Council—to enable the mother to meet the psychological needs of toddler, school-child, and adolescent, with the obvious bearing on the problems of juvenile delinquency, promiscuity, and venereal disease; and to enable the mother to obtain the maximum benefit from the provision of the National Health Service for treatment for herself and young family. For all of these I welcome the suggestion that the attendance of children "for two or three half days a week is a question worthy of investigation."—I am, etc.,

Farnham, Surrey.

NORA M. JOHNS.

### Food Poisoning

SIR,—I was much interested to read the paper in your number of April 5 (p. 442) about an epidemic of food poisoning traced to staphylococcal contamination of sandwiches. It recalled to me a case that was *clinically* typical Asiatic cholera that occurred in a country practice in the Orange Free State in the year 1922. I published it in the (since defunct) *South African*