

of rise of tissue temperature; this is determined partially by the local blood flow, which is influenced by many factors and may show large physiological variations; thus the rate of rise of tissue temperature may be expected to vary from one experiment to the next. Our results lead us to conclude that if an accurate estimate of "body temperature" is required the thermometer must remain in the chosen site until a constant reading is obtained. This may take more than 10 minutes in the mouth and as long as half an hour in the axilla. Rectal temperature, which is affected less by moderate environmental influences, may be recorded accurately in a much shorter time.

The Figure illustrates how difficult it may be to observe the slight changes which occur when a clinical thermometer is employed and inspected at half-minute intervals. It can be seen that during the sixth half-minute after insertion a rise of about 0.3° F. (0.15° C.) occurs, but during the thirteenth period a rise of less than 0.1° F. (0.05° C.) takes place; later the corresponding temperature change is further diminished and may not be noticed. It may be worth drawing attention to the difficulty of defining "body temperature": any record of temperature indicates only that of the site at which the thermometer is placed. Also normal variation in tissue temperature is so large that no average figure can be given in health.¹ The standard textbooks on clinical methods² and those on nursing technique which we have consulted do not, in our opinion, place due emphasis upon the possibilities of appreciable error which our results demonstrate.

It may be concluded that the significance which can be attached to clinical temperature measurements depends upon the observer's awareness of the slow thermal behaviour of the tissues and their normal temperature variations rather than upon the vagaries of the "half-minute" thermometer.—We are, etc.,

Manchester, 13.

F. B. BESWICK.
P. COLE.

REFERENCES

- ¹ Du Bois, E. F., *Fever and the Regulation of Body Temperature*, 1948, p. 3. C. C. Thomas, Springfield, U.S.A.

Physique of Children

SIR,—As Dr. J. N. Mills says (*Journal*, July 23, p. 265), relationships established between physique and intellectual performance would be of great interest and importance. Both for this reason and because research in constitutional anthropology has in the past suffered nearly to the point of discredit from claims and systems unsupported by exact scientific experiment, modern work in this field must be, as far as is humanly possible, above criticism, statistical or otherwise. I am accordingly grateful to Dr. Mills for drawing attention to a misuse of statistical methods by Dr. R. W. Parnell *et al.* (*Journal*, June 25, p. 1506) which must have been recognized by a number of readers of the *Journal*.

There is, however, a further criticism, more of principle than method, that I think must be met before Dr. Parnell's claims of a relationship between body build and intelligence test results in 11-year-old children can be regarded as established. A number of studies have shown that there is a significant though not a close relationship between intelligence test results and developmental age.¹ Thus girls of 11 who have begun their adolescent spurt in growth would be expected to score slightly higher than girls who had not. There is also a small relation between gross body size and test results at any age, which probably comes partly or wholly from the same cause. It is not clear how far the body build categories used by Dr. Parnell are independent of gross body size and of developmental age, and it seems to me that both these variables must be accounted for before any claims for a relationship with body build *per se* can be entertained.

Nevertheless, Dr. Parnell and his associates have put us greatly in their debt by amassing a very interesting series of data, which it is much to be hoped will be published in a more extended form, suitable for direct statistical treatment of the body measurements themselves. They are also to be congratulated on their admirably scientific restraint

in refusing to refer to somatotype components in dealing with 11-year-olds and recognizing explicitly that until we have followed a series of children up to maturity we lack the necessary criteria for somatotyping individuals below the age of 16 or 17.—I am, etc.,

London, W.14.

J. M. TANNER.

REFERENCE

- ¹ Tanner, J. M., *Growth at Adolescence*, 1955, p. 141. Blackwell Scientific Publications, Oxford.

Antibiotic-induced Staphylococcal Enterocolitis

SIR,—The letter from Dr. P. D. Hooper (*Journal*, July 9, p. 141) must be the most remarkable publication on this subject to date. Staphylococcal enteritis without staphylococci is Hamlet without the Prince indeed. Dr. Hooper admits that there was an "absence of direct evidence" on which to base his diagnosis. So far as I can see, there was not a shred of evidence of any kind. It is usually accepted that in such cases the stools are teeming with antibiotic-resistant staphylococci. Dr. Hooper found none, either before or after death. What he did find, according to his account, was an undiagnosed suppurative bronchopneumonia which surely may have had something to do with the rapid deterioration in the condition of his patient.

It seems a little strange to blame the chlortetracycline for what happened, since none had been given for four days before the collapse, and during this time the patient had remained well. Nor is it easy to accept the statement that the *Staphylococcus aureus* from the lung was "sensitive to all antibiotics except chlortetracycline," in view of the fact that there is known to be cross-resistance between the three members of the tetracycline group of antibiotics.

The case history is therefore against both the diagnosis of staphylococcal enteritis and the suggestion that the complications were a result of antibiotic therapy.—I am, etc.,

London, S.W.19.

JOHN R. WILSON.

Comforters

SIR,—I was interested to read Dr. Nigel Swallow's observations on thumb-sucking, associated with the simultaneous holding of a piece of fabric (*Journal*, July 23, p. 266).

My late partner, J. H. Badcock, published similar observations many years ago; he, however, claimed that the material was always of a woolly or fluffy nature, such as a blanket or woollen garment, and that the child tended to rub or "paw" it. He put forward the suggestion that it might be an evolutionary act deriving from a remote period when the dam had a hairy chest, and drawing the parallel of the kitten which massages its mother's breast when suckling. This is possibly a far-fetched conception but ingenious.—I am, etc.,

London, W.1.

N. J. AINSWORTH.

SIR,—As a doctor, over 20 years in practice with municipal infant welfare as a sideline, I would hesitate to be dogmatic on the subject of comforters; but as a father of five I feel peculiarly competent to express an opinion.

My first sucked his thumb and twirled his hair, and though now happily married he still threatens to revert to habit in moments of stress and is doubtless restrained by the thumb's deformity. My second inserted three fingers and rapidly developed dreadful adenoids and an absurd affection for a small satin-edged blanket along which she ran the fingers of her free hand backwards and forwards, and without which she would not go to sleep. My third was given a dummy whenever she showed the slightest tendency to suck any part of her anatomy, but never just to stop her crying. The dummy was removed as soon as she had gone to sleep, and within a month or so it was no longer necessary. The same method was adopted with the fourth and fifth with the same satisfactory result. None of them have any of the deformities or bad habits attributed to the use of the dummy, which will be no dirtier than the parents, and, if still needed after three months, suggests that something is very wrong either with them or the baby. I had similar good results with more intelligent patients and their infants.