

on the subject is, I understand, Professor Haldane's disproof of physiological acidosis occurring at high altitudes. As I stated, my account of the newer developments was based on Dr. E. P. Poulton's Goulstonian lectures, which were published in your columns about June, 1918, and Dr. Poulton is himself an original investigator on the subject. It is true that hypotheses concerning acidosis follow one another almost as swiftly as the editions of an evening newspaper, but I think it is of doubtful utility to burden the general practitioner with theories which are still in the controversial stage and which have not received general acceptance even among laboratory workers on the subject.

I am, Sir, yours faithfully,

W. LANGDON BROWN.

Clarendon-square, W., Feb. 5th, 1920.

* * Dr. Langdon Brown's letter raises questions which can only be satisfactorily settled by physician and physiologist in conference at the bedside. The evidence that in hyperpiesis the lymph spaces contain toxins seems to us to be at present very incomplete. The realisation that a diminished alkaline reserve in the blood may mean either too much or too little acid in the body, and that the condition of the blood in this respect is no criterion of the condition of the body, further seems to us to alter the whole conception of acidosis. But these plastic considerations have hardly hardened sufficiently for the written word. Physiological principles must needs change in advance of the therapeutic measures based upon them, and it is Dr. Langdon Brown's special merit that the latter do not lag unduly in his book.—ED. L.

THE SEX-INCIDENCE OF PERNICIOUS ANÆMIA.

To the Editor of THE LANCET.

SIR,—In your report (THE LANCET, Jan. 31st) of the meeting of the Edinburgh Medico-Chirurgical Society held on Jan. 21st, to which I communicated the results of "An Inquiry Regarding the Age- and Sex-Incidence of Pernicious Anæmia," I am stated to have shown that the incidence of the disease "was distinctly more common in females than in males." My conclusions, eight in number, were read from the paper, and only one deals with this point. It is in the following terms: "Until the age of 50 the rate of incidence inclines to be higher in the female than in the male. Thereafter the rate is definitely higher in males than in females."

I made no statement regarding the mean rate for all periods of life in which a comparison was made between female and male rates.

I am, Sir, yours faithfully.

Feb. 7th, 1920.

J. EASON, M.D.

THE INFECTIVITY OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—Some points in Dr. H. Batty Shaw's address on tuberculosis (THE LANCET, Jan. 24th) have already been criticised in your last issue. Emphasis has been laid on the infectivity of the disease, and as this is the crux of the whole problem it seems clear that a national scheme for prevention should now have our serious attention.

All will agree that so long as our tuberculosis schemes are based on the sanatorium they are bound to fail in controlling the disease. One might go further and claim that any scheme for the treatment of tuberculosis of the lungs is foredoomed to failure because death will be the inevitable result in the great majority of cases in which the disease has advanced so far as to be evident on examination of the chest. In a recent report to the London Insurance Committee Dr. N. D. Bardswell shows that there is no appreciable prolongation of life in the majority of the applicants for sanatorium benefit in the London area, and our records in Portsmouth show the same failure. Our present methods, then, are useless: when their cost is borne in

mind they are worse than useless: and with a view to getting them altered tuberculosis officers everywhere ought to emphasise their poor results.

In the article referred to Dr. Shaw suggests that experimental work be done in the direction of (1) giving tuberculin to children before they are infected with tuberculosis; (2) vaccination against catarrhal infections in cases of tuberculosis. Is it his considered opinion that the adoption of these methods will be likely to lower the tuberculosis death-rate, especially when there is so little ground for the hope that tuberculin given to children before they have tuberculosis will substantially increase their resistance to the disease? In emphasising his theory that the immediate cause of the manifestations of tuberculosis in later life is auto-infection he seems to forget that infection originally is the cause of the disease, and if infection is stopped the subsequent auto-infection would be impossible. It is splitting hairs to draw fine distinctions as to when the infection may possibly take place. Let us emphasise rather that all tuberculosis is an infection, and that the logical means of controlling the disease is to try to prevent the further spread of this infection. In the present state of our knowledge prevention is the obvious line of advance, and not the elaboration of still further methods of treatment of doubtful value, methods which, after all, are based on his theory. Prevention is what the country is paying for, and it has never really been tried.

The tubercle bacillus gains access to man from two main sources: (1) through milk; and (2) from human infection.

(1) *Milk*.—It is generally accepted that the importance of milk in causing tuberculosis has been overrated, but it still remains a probable source in some cases. Ten per cent. of our milk contains the tubercle bacillus. The tuberculin test enables us to find the infected cows, and it should be an easy matter to clean up our herds, but we go on swallowing this infected milk and giving it to our children.

(2) *Human infection*.—Until segregation in large districts is adopted for all infective cases we are not attempting to deal with this source of the disease. Sooner or later this must be done, and if not done by us the next generation will do it. Dr. Shaw insists that there shall be no interference with the liberty of these infective cases unless generous treatment be provided. But if the community does all it can for them they ought to do something for the community; and if their presence in the community causes 140 deaths every day in England, in addition to an almost incalculable sickness-rate, the community can reasonably demand the removal of this danger, especially if it combines measures for its own protection with the best possible conditions for the prolongation of the lives of the victims. These conditions cannot be given in our midst where the struggle for existence is such that those with damaged lives cannot survive: they can be given only in districts specially set apart for the accommodation of tuberculous persons. The sanatoriums, hospitals, colonies, and other treatment centres could be collected together into, say, half a dozen large districts in the country, and encouragement given to all infective cases to settle in these districts. Free land, buildings, fuel, and a monetary grant per head could be given. Families could be admitted conditionally. The whole internal administration of the district should be managed by the patients themselves, including their marriage laws, manufactures, trade-unions, medical treatment, &c. Production would be carried on, though the district could not be entirely self-supporting. With such a scheme many difficulties would solve themselves, such as that of obtaining suitable employment after sanatorium treatment, and so heavily is the tuberculosis subject handicapped in getting suitable work that this reason alone would popularise such a scheme. There need be no fear that it would lead to concealment of disease provided reasonably generous conditions were given to these within the districts, as the outlook then for the patient would surely be preferable to being driven to the Poor-law infirmary in the last stages of his disease and his financial resources.