

to function at its optimum capacity for each and every individual from intra-uterine life onwards.

A consideration of the goitre problem shows that our foods, however satisfactory they may be in other respects, are certainly deficient for our present needs in their iodine content, and this observation applies also to what are spoken of as "protective" foods. To ensure that every individual shall obtain no less than the optimal supply of iodine necessary for the maintenance of health is fortunately a very simple matter, and the supplement required is so very minute that no ill effects could possibly accrue to any individual.

I believe that steps taken to eliminate goitrous conditions would eventually have far-reaching results. I believe that thyroid disorders and related diseases would tend to disappear and the era of thyroidectomies become a memory only; that man's natural resistance to infections would be normalized and, furthermore, that disease in general would be brought under control. There are probably comparatively few people among us who enjoy the maximum degree of health, both physical and mental, of which we are inherently capable, and it stands to reason that health must be undermined in a community where Nature's signal is unheeded.

We are prone to search laboriously for the cause or causes of individual constitutional diseases, and we find it difficult to conceive that whatever may be the predisposing factors there may be some fundamental basic condition the ultimate effects of which are manifested in a multiplicity of directions.—I am, etc.,

Cardiff, May 25.

W. MITCHELL STEVENS.

Detection of Crepitus

SIR,—It is sometimes difficult, without the use of *x* rays, to differentiate between damage to the soft structures and a fracture of the shaft of the fibula some distance above the ankle-joint, where the bone is covered with muscle tissue, and one hesitates to put some patients to the expense of an *x*-ray examination without good reason. Where other signs of fracture may be missing, it has been my experience that fracture of the fibula can readily be diagnosed and also located by the use of the stethoscope. If the leg is firmly grasped just below the upper articulation of the fibula with the tibia and gently squeezed in a rhythmic manner, while at the same time listening over the shaft of the fibula, crepitus is plainly audible, though not discerned by the hand or by ordinary hearing. As only very gentle pressure is required it is not necessary to cause the patient any pain. The stethoscope is also of value in confirming the diagnosis of a fractured clavicle where there is little or no deformity.—I am, etc.,

T. G. RANKINE.

Menston-in-Wharfedale, May 22.

Chemotherapy of Cerebrospinal Fever

SIR,—In February and March of last year there was a severe outbreak of cerebrospinal fever in some parts of the Northern Provinces of Nigeria. The mortality is not known accurately, but thousands of deaths were reported, and during the worst part of the epidemic it was thought that the majority of cases were fatal.

A small series of cases (thirty-two) that came under our care may be of sufficient interest to record. Before the value of prontosil album and of proseptasine tablets was realized three cases were admitted, and all of the patients died. Nearly thirty cases were subsequently treated with prontosil album or with proseptasine, and out of this series—some of the

patients being extremely ill—there were only three deaths, in spite of the fact that most of these patients were treated in their own huts in the native city under very unfavourable conditions.

Owing to the lack of proper laboratory facilities and to the difficulties associated with the fact that most of the patients were treated in their own homes in widely scattered parts of the city, the diagnosis in all cases was clinical, and did not rest upon laboratory findings. Lumbar puncture was only possible in a few of the cases. For these reasons I felt that there were not sufficient scientific data to warrant publishing these cases. Several friends, however, have urged me to do so because the clinical results were so striking, and so I send you what details are available.

Epidemics of cerebrospinal fever have previously been untreatable, so far as the native population is concerned, owing to the prohibitive cost of anti-meningococcal serum and meningococcal antitoxin. With the advent of sulphanilamide and allied drugs it is obvious that we now possess a valuable, and much cheaper, means of combating this dreaded disease. The outstanding advantage, moreover, of this method of treatment is that it can be carried out in the patients' homes and in places where no hospital facilities are available. This is of the utmost importance in rural and conservative African populations, the majority of whom are often quite out of reach of the ordinary general hospital.

It would be interesting to know whether M & B 693 has been used in similar outbreaks.—I am, etc.,

A. B. COOK,

Medical Officer, C.M.S. Hospital,
Wusasa,
Zaria, N. Nigeria, April 28.

Vaccine Treatment of Whooping-cough

SIR,—I was greatly surprised at the statement published by one of the leading manufacturers of vaccines in this country that "there is no general agreement that whooping-cough vaccine is effective in treatment." In my opinion the vaccine treatment in the early stage of whooping-cough is one of the outstanding therapeutic achievements. I start vaccine treatment only in the catarrhal, and in the very first days of the whooping, stage. I use large doses, as recommended by the Danish State Serum Institute and employed with apparently good results by most Danish doctors. The vaccine is given in three injections—5,000, 7,500, and 10,000 million Bordet-Gengou bacilli at half-weekly intervals or, in urgent cases, every second day. I give smaller doses only to children under 2 years of age (decreasing to one-quarter of the doses mentioned). I never observed alarming reactions and had, therefore, no reason to change to smaller doses, generally recommended in this country. In families where two or more children are attacked the first case, if brought too late for vaccine treatment, served as a control; the control nearly invariably had a longer and more severe illness than the rest of the family receiving vaccine treatment as soon as the cough started.

My experience thus agrees with that of the Danish physicians, who, according to Th. Madsen, "are practically unanimous in claiming that treatment in the early stage will shorten the disease and render it much milder. . . . But as no control material of any value is available these reports cannot be statistically assessed." A large-scale investigation of the treatment—for example, under the auspices of the Therapeutic Trials Committee of the Medical Research Council—seems long overdue, and should establish the value of the treatment or otherwise. Such an investigation should in my opinion include a series treated with the large doses recommended by the Danish authors.—I am, etc.,

Harrow Weald, May 18.

A. LECHNER.