

But a conclusive decision as regards the results of anti-typhoid inoculations cannot yet be arrived at, and must await later publications in connection with the valuable material which is now being collected in South Africa. But one conclusion can already be drawn from the information received, namely, that those who have been inoculated against enteric fever, even although they may not acquire complete and lasting immunity against infection, have a decided advantage over the non-inoculated should they contract the disease; and this in proportion to the number of times they have been inoculated. The toxin effects are considerably diminished, the complications less frequent, relapses are far fewer, and the case-mortality is reduced to more than half, almost to one-third.

Special stress should certainly be laid on the fact that the inoculated must live for at least three weeks after the second inoculation in surroundings free from enteric fever; that is to say, that the second inoculation should take place before starting on the voyage to South-west Africa, so far as the conditions in the Protected Territory are concerned.

After such favourable results refusal to undergo anti-typhoid inoculation on principle can no longer be justified. Still more is it to be recommended in connection with military operations in a country, such as South-west Africa, where the carrying out of the measures which are elsewhere efficacious in preventing disease is faced with the greatest difficulties.

W. G. M.

Correspondence.

THE SOLDIER'S HEART, AND THE CIVILIAN'S.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

DEAR SIR,—As Major F. Smith's interesting article on the above subject in the January issue of the Corps Journal, 1907, upholds our present military position and Army gymnastic training—well-recognised causes of soldier's heart—the brief notice of the causation of the rapid pulse in the civilians examined by Major Smith may not be uninteresting to the readers of our Journal.

Major Smith apparently takes no account of the fact that nearly all men who come before a recruiting medical officer "chuck a chest," an art into the mysteries of which they have been initiated by the recruiting sergeant prior to their—the recruits'—appearance before the doctor. Now, when it is borne in mind that the various mechanisms of the body work together in unison, it will be readily perceived that disorganisation of the respiratory mechanism, which is the inevitable consequence of holding the body in a more or less rigid, or unnatural, position disturbs the heart's action, for the adequate activity of the respiratory pump is essential to that organ's well-being, as it furthers not only the return of venous blood but also the pulmonary circulation. A normal chest

poise is essential for the due performance of the respiratory act. The more expanded the chest is held the nearer are the circumferential attachments of the diaphragm to the level of the central tendon, *i.e.*, the flatter is the diaphragm and the less is its inspiratory and expiratory power. It is worthy of note that when the back is flat and the spine is kept as extended as possible, the chest will naturally assume its proper position. It is perhaps needless to remark that proper or physiological breathing means neither more nor less than *silent, controlled, nasal respiration*; and as long as the breath is taken noiselessly through the nose it is immaterial whether the mechanism employed is that of the lower costal type or abdominal type. With no other types of respiration is it possible for inspiration and expiration to be complete, full and regular.

With regard to Major Smith's opinion that our Army gymnastic training is not harmful in any way, I can prove by spirometric tests that the gymnastic training in the Army makes chiefly for thoracic rigidity. It should be noted, however, that the Army system does not stand alone in this respect, for all illogical systems bring about the same result.

Le Pont,
Switzerland,
January 18th, 1907.

I am, &c.,
R. F. E. AUSTIN,
Major, R.A.M.C.

THE PREVENTION OF MALARIA IN INDIAN CANTONMENTS.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

DEAR SIR,—The means of preventing malaria in India at present in use may be said to be all directed to the treatment of the breeding places of mosquitoes. The success of this method depends upon the absolute elimination of Anopheles. This result is so difficult to obtain that a really marked and constant diminution in the incidence of malaria has never been obtained, either in India or elsewhere, when this method alone has been depended upon. This method of preventing malaria has the disadvantage of being very expensive if carried out with thoroughness. On the other hand, the protection of the individual and the segregation of persons known to be affected with malaria is infinitely more efficacious, and very much cheaper.

When it is remembered that a forgotten flower-pot or a single pocket of rock may form the breeding place for sufficient Anopheles to infect a regiment, it will be obvious that the most elaborate anti-malarial measures will be liable to be rendered useless through an oversight so trivial that it will be almost impossible to guard against it. When thirty or more men sleep in one room, it is not surprising that infection takes place from one to another, and an enormous malarial incidence is the result. The comparatively small malarial incidence among officers brings us to the appalling conclusion that the modern barrack-room is one of the most dangerous places in which a man can be compelled to sleep.