

of Party members in both Germany and Italy who remain sleek and well-nourished while even their own compatriots are on strict war rations.

Even leaving obvious and gross inequities like this out of the discussion, Dr. Richter sees perhaps 60% of Europe's people having to subsist on three-fourths of their normal diets—remembering always that the “normal” diets of many millions of these people have been far from what dietitians would call normal for anybody.

What will our task be when Europe is cleared of its present nightmare and begins its terrific task of getting back on something like a normal basis?

First of all, Dr. Richter holds, we should think of helping European peo-

ples to help themselves. Supplies of seed and farm machinery, of draft animals and livestock, are the greatest benefits that can be offered. Some of the countries, most notably Denmark, have been permitted to keep a good nucleus of breeding animals; they will need mainly a resumption of shipments of oil-cake, grain and other feeds. Others may need help in getting destroyed dairy and stock industries rebuilt from the ground up.

But for immediate needs, especially in the sorest famine spots, prompt shipment of all kinds of foodstuffs will be imperative. These, as Dr. Richter sees it, will have to be given priority over livestock feedstuffs, into certain areas at least.

Science News Letter, June 12, 1943

are going close to the birthplace of cholera in the Ganges delta. There is a vaccine but the degree of protection afforded is not definitely known. The Japs have used cholera vaccine since 1904. In fact, the best strain is a Japanese strain. The disadvantage is that revaccination is necessary every three months.

Among the insect-borne diseases we find malaria, which is more frequent in the tropics. This disease is not conquered. We need a real prophylactic. We now have only a suppressive, and a person may carry malaria for years in his blood. The control of this disease will have to be through control of mosquitoes. But how can any one prevent them from breeding in the hills, for example, of the Owen Stanley Mountains, or in West Africa? The medical officer can only see that the men sleep under mosquito nets and charge the atmosphere of the tents with insecticidal spray.

Against yellow fever the army has a vaccine which gives 100% protection.

Bubonic plague is always a possibility. This scourge has played an important role in many previous wars. It is insect-borne but once started may be passed from man to man in the pneumonic form. Both a vaccine and sulfa drugs may help fight plague.

Typhus is an ever-present threat. The British found typhus in Egypt. It is apt to be in any country where the population is louse-infested.

“Some believe this can be handled by vaccination,” Prof. Meyer said, “but I have yet to be convinced.”

In New Guinea, Sumatra, Burma, and Thailand there are mites that transmit a type of spotted fever similar to the swamp fever of Japan. In North Africa troops will probably experience similar diseases carried by ticks. In Central Africa we find sleeping sickness. To combat this we have a prophylactic, Bayer 205, which gives protection for three months.

There are also many other medical problems in a global war. In desert warfare heat-stroke must be dealt with, and sinus infections that tend to flare up. In the swampy battlegrounds there are liver flukes. In our army of eleven or twelve million men we shall find only the particularly fit individuals can be sent into certain regions. A great many who have been sent will have to be returned and replaced by others.

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The *population* of the world has increased from an estimated 500,000,000 in 1740 to 2,000,000,000 in 1940.

MEDICINE

War Disease Problems

Deaths from wounds likely to be many fewer than the deaths from war diseases, bacteriologist points out. Malaria an important problem.

► DISEASE AND INFECTION present gigantic problems to our armies fighting a global war, Prof. K. F. Meyer, head of the department of bacteriology at the University of California, told the Western Section of the American Chemical Society meeting in San Francisco. In wars, Prof. Meyer pointed out, there has often been a much higher mortality rate from disease than from wounds. In the Crimean war, for example, there were 50 deaths from wounds to 192 from disease, while in the 1914-1918 World War the relation was 138 due to wounds and 115 from disease.

Not only is there the question of the health of the troops during the war, but of contacts among the home population when peace comes. When all these men come back, Prof. Meyer said, we shall have carriers of all sorts of diseases. We must be prepared in civilian set-ups for possible eventualities. We remember that 1000 people died of cholera in one month in Sacramento, Calif., during the '49 gold rush. The Army and Navy Medical Corps, working in conjunction with committees of the National Research Council, are developing every possible means of reducing the impact of these diseases to a minimum.

In the offices of the Division of Medical Intelligence there are on the walls maps of the world showing last minute

data on the location of the various communicable diseases. Extensive outlines of the diseases likely to be met are prepared and given to medical officers before embarkation to the battle front.

In North Africa, diphtheria appears in the form of skin ulcers which do not heal. In the caves of Tobruk there were sandflies and ticks that transmit fever. In Trinidad there are vampire bats. About 4% of these bats carry the rabies virus in their saliva. They bite the peoples' toes at night and the rabies appears as an ascending paralysis that looks in many ways like infantile paralysis. It was necessary that the bat population be reduced. This campaign and one against the mosquitoes in that region were planned by the Medical Intelligence.

“Among the so-called ‘filth’ diseases, typhoid is licked since all troops get immunization,” Prof. Meyer said. “But when our boys come home they may bring back dysentery in various forms.”

Dysentery vaccines are being studied but they are still in an experimental state. Sulfaguanidine has revolutionized the treatment. This disease will have to be controlled by environment, such as suppression of flies and proper disposal of excreta. This means continual vigilance.

We shall also have contact with cholera, Prof. Meyer pointed out, since we