

TYPHUS FEVER: THE SCOURGE OF TROUBLESOME TIMES

(Written for "The Listener" by DR. H. B. TURBOTT, Director of the Division of School Hygiene, Health Dept.)

FOR some time now the daily press has painted little pictures of the scourge of typhus fever following in the wake of the war. This typhus is an epidemic long-continued fever caused by something smaller than a germ — a rickettsia body — which is passed on from man to man by human lice. And now you can see why typhus follows armies, occurs in camps, in jails, and in times of famine and trouble.

It is a disease of very ancient vintage, the first written account coming from Italy in 1546 of a "pestilential fever" which swept the country in 1508 and 1528, followed on each occasion by a great famine. Since then Europe and the British Isles have had great epidemics of the disease. The name typhus came into use about 1800, and synonyms such as jail fever, famine fever, camp fever, etc., were dropped. At first it was thought to be due to a poison generated from time to time when human beings were herded together. The first attempt to solve the cause was the smearing of a cut lemon with the blood from a typhus patient in 1868—the fungus that grew was claimed as the cause. In 1909 Nicolle produced the disease in a chimpanzee by introducing blood from a patient, and transmitted the disease to monkeys by bites of lice which had fed on an infected chimpanzee. In 1910 Ricketts and Wilder described little organisms in the bodies of infected lice. Prowazek and others studied these organisms fully and since 1916 they have been known as *Rickettsia prowazeki*, the cause of epidemic typhus.

How Infection Occurs

Further research has shown that typhus fever is not spread by the bite of the louse, but by its faeces. In this early experimental work precautions were taken to avoid being bitten by infected lice; ignorance of the real source of infection led to many workers acquiring typhus, including those whose names are honoured in naming the causal organism, Ricketts and Von Prowazek.

The human louse gets infected with typhus rickettsial bodies by feeding on a person suffering from typhus fever. Head lice as well as body lice are capable of acquiring and transmitting infection, though usually the body louse is concerned in epidemics. The disease is passed on when the louse leaves one for another human being, by the insect's faeces, either through scratches or abrasions, or by inhalation of minute particles of dried excrement.

Epidemics occur when most of the people carry body lice, some being heavily infested. It therefore occurs among the destitute, those crowded in unhygienic places such as prisons and

concentration camps, and increases always during wars or famines, after earthquakes or any upheaval that makes it difficult to keep down the number of lice. The disease is a serious one — it

comes on suddenly with high fever, a characteristic rash appears on the fourth or fifth day, with delirium and mental upset. Often 30% to 60% of those attacked die. Doctors and nurses are naturally under great risk in following their profession. In the Serbian epidemic about 1915, in less than a year 36% of the Serbian medical men died of typhus.

Unlikely to Reach New Zealand

Control of the louse rapidly brings a typhus epidemic to an end. As the disease is rife in Europe now and in North Africa it is quite likely to reach

England through refugees or prisoners of war. It is unlikely to trouble us in New Zealand. We are by no means free of lice in this country—although we know better and it is a shame that we have people harbouring lice at all. But we are so far away from typhus centres that the disease would be apparent before it could reach us, and steps would be taken to prevent its entry.

This little story of typhus was written not because typhus will trouble us, but so that you can follow intelligently the spread of this scourge in the wake of our present world upheaval. (Next week: "Vegetable Water," by Dr. Muriel Bell.)

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