

## Poliomyelitis Recognised as a World Wide Danger.

World Health Organisation Experts met in Rome to draft International Programme.

POLIOMYELITIS, A DISEASE which can neither be prevented nor cured, must now be recognised as "a threat of world-wide significance" which is not confined to the more highly developed countries according to a recent statistical survey published by the World Health Organisation.

This fact has led WHO to call, for the first time, an international group of experts to draft proposals for a world-wide programme of research on the polio viruses, and for the development and application of control measures.

The first session of the WHO Expert Committee on Poliomyelitis took place in Rome from September 14th to 19th and was attended by scientists from Canada, France, Great Britain, Israel, South Africa, Sweden and the U.S.A.

Scientists now distinguish three principal types of polio virus, but it is not impossible that new types may be discovered. The need for international research into their characteristics, their method of spread, and their consequences are very great. The WHO experts will discuss laboratory techniques for isolation and cultivation of the polio viruses, as well as typing methods. Their aim is to recommend procedures which will render polio research practicable to all countries who need it, and permit better comparison of studies carried out in various parts of the world.

Another task of the experts was to study the geographical distribution of the virus, and its distribution during epidemic periods and at times when there is little or no evidence of the disease. The influence of climate and environment, and social and economic factors were discussed during this session as well as the methods of spread of the virus.

The various forms of polio infection in man was another important item on the Committee's agenda. The most common result of infection is the form never identified by the public and rarely by the medical profession, since symptoms are absent.

In another form they are vague, easy to overlook and do not include paralysis. These mild cases help bring about immunity in the majority of the population. The more dramatic, but least common form of the disease is paralytic poliomyelitis. The experts discussed portals of entry and exit of the virus from the body, the distribution of virus within the body, the characteristics of the acute form of polio, and the factors which predispose to paralysis, or even precipitate its appearance. The problem of immunity, and the age at which immunity is acquired, were also discussed.

Finally, the experts recommended practical control measures, both to reduce the spread of infection, and to reduce the incidence of paralysis.

The WHO Committee took up in this connection the problem of immunisation. There is as yet no practicable vaccination against polio although experiments are in progress, but passive protection of short duration is obtainable from injections of gamma globulin, a blood fraction. The experts examined a report from a U.S. scientist indicating that gamma globulin "appeared to afford protection against the paralytic disease over a period of approximately five or six weeks" . . . "available evidence (still incomplete) suggests that gamma globulin in this quantity does not prevent infection, but only interferes with the invasion of the virus in the susceptible tissues of the central nervous system." . . . "It is not the final answer to the problem and its field of usefulness is extremely limited."

We wish the experts of World Health Organisation success in their campaign against Poliomyelitis.

Much good work is being done at the Western Hospital, Fulham, where courses of nursing of Poliomyelitis cases are being arranged.

## Advance in Fight Against Common Cold.

Virus grown in test tube.

IT WAS ANNOUNCED at the Sixth International Congress of Microbiology Session on September 8th, in Rome, that workers at the Common Cold Research Unit at Harvard Hospital, Salisbury, had succeeded in growing the common cold virus in tissue cultures of human embryonic lung.

These experiments were described in a Paper prepared by Dr. C. H. Andrewes (in Scientific charge of the Unit); Miss Donna M. Chaproniere and Mrs. Annette E. H. Gompels (both Scientists); Dr. H. G. Pereira, and Dr. A. T. Roden (Medical Officer in charge), all workers at the Research Unit. Mrs. Gompels comes from South Africa and Dr. Pereira from Brazil.

The significance of this announcement is explained in the following statement issued jointly by the Ministry of Health and the Medical Research Council:—

"This announcement means that after seven years of patience and perseverance we can record a step forward in trying to solve exactly how the common cold is caused and develops. Its main importance lies in this. At long last a means has been found of cultivating the virus and there are thus prospects of being able to study it in the laboratory. Up to now we have only been able to study its behaviour indirectly by inoculating human volunteers.

"This new advance does not mean, however, that our need for human volunteers is over. We have a long way to go yet before we can hope to dispense with their services. Indeed, we have now reached a crucial stage where success in attaining the next objective will very largely depend on an adequate flow of human volunteers being maintained for the researches at the Common Cold Unit at Harvard Hospital, Salisbury.

"The next step, not yet achieved, is to discover how to recognise the presence or growth of the virus in the cultures by some other way than inoculating volunteers. One method, for example, would be by 'visualising' it by the aid of the electron microscope.

"All that can be claimed at the moment is that a first step has been taken in the right direction. Nevertheless the prospects for further progress may be regarded as reasonably good.

"All these thousands of volunteers who have so far taken part in the experiments at Salisbury can justifiably claim a part of the credit for the progress so far achieved. We would like to take this opportunity of thanking them for their public-spirited action, and to express the hope that we can still count on their support as well as that of new volunteers so that research can go forward without let or hindrance.

"It has been found possible to produce a series of colds from material cultivated in tissue cultures of human embryonic lung. Serial cultures up to and including the tenth have produced colds. However, only about 10 per cent. of people—13 out of 130—inoculated with these cultures actually developed colds. This is a decidedly lower percentage than is achieved when filtrates of cold secretions are used. In these cases the percentage of colds produced has varied between 27 per cent. and 57 per cent. in different years. The smaller numbers of colds produced by the new cultures may possibly be accounted for by the virulence of the virus being lowered in the course of the cultivation."

Since the Unit began its work seven years ago 2,496 volunteers have taken part in the trials. Exactly half of these are women. Married couples total 274. As many as 563 volunteers have paid two visits to the Unit and 334 have taken part in three or more trials.

Volunteers are isolated usually in pairs, for periods of ten days, and trained medical and nursing facilities are available at all times. Fares to and from Salisbury up to a maximum of £3 are paid, and volunteers are given 3s. a day pocket money. Anyone wishing to volunteer should be between 18 and 45 years of age and should write to the Medical Officer, Harvard Hospital, Salisbury.

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