MEDICINE

26 Types of Germs

All the members of the group A streptococci family have been isolated from patients with scarlet fever. Most important factor in epidemic is number of carriers.

➤ MOST IMPORTANT factor in the making of a scarlet fever epidemic in any community is the condition of the environment and specifically the number of persons in the community carrying scarlet fever germs, Dr. Francis F. Schwentker and Dr. John H. Janney, of the Rockefeller Foundation, New York, declared at the meeting of the American Public Health Association in St. Louis.

Over the world all of the 26 serological types of germs belonging to the group A streptococci family have been isolated from patients with scarlet fever. In any single community, however, the sporadic cases are due to only a few types and epidemic cases to only one type, the scientists reported.

Strains capable of causing scarlet fever, called scarlatinogenic, are present sometimes in communities free from the disease, which raises the question, what causes an epidemic to start? The New York scientists answer the question as follows:

"For scarlet fever to occur in a community, a scarlatinogenic strain of streptococcus must be present or introduced. The number of cases of infection which follow depends on the distribution factor as measured by the carrier rate. Low carrier rates mean only sporadic cases; high rates accompany epidemics.

"A part of the population are never reached by the streptococcus. These naturally remain well. Of the others who become infected, some have antibacterial immunity; they either eliminate the organism immediately or become healthy carriers.

"Those without antibacterial immunity become ill; the kind of illness is determined by the antitoxic immunity. If immune, the patient develops streptococcic tonsillitis; if not, scarlet fever. Other diseases such as erysipelas and puerperal fever may result with portals of entry other than the throat."

Science News Letter, November 7, 1942

Venereal Disease Cause

➤ A PROBABLE new germ cause for a venereal disease with symptoms like those of gonorrhea was reported by Dr. Charles M. Carpenter of the University of Rochester School of Medicine and Dentistry.

In three out of 505 patients examined for evidence of gonorrhea the microorganism, *Neisseria flava,* was isolated but no gonococci (*Neisseria gonorrhoeae*) could be found, though the patients had symptoms similar to those caused by the gonococci.

Neisseria flava has not previously been classed as a disease-producing organism and is considered a part of the normal germ life of the nose and throat. Its presence in the part of the body generally affected by the gonococcus, Dr. Carpenter pointed out, "raises some interesting questions as to the source of the organism and its ability to produce disease."

Science News Letter, November 7, 1942

Predicts Decrease

➤ A DECREASE to one-twelfth the present number of typhoid fever carriers and consequent decrease in cases of this sickness by 1982 was predicted by Dr. Wendell R. Ames and Morton Robins, of the New York State Department of Health.

Their figures relate to New York State specifically but presumably are fairly characteristic of the nation as a whole. The typhoid picture, as their study shows it, is one in which water and milk supplies are becoming less important and healthy carriers of typhoid fever germs more important in the spread of this disease.

Typhoid patients over 30 years of age, they discovered from study of 3,750 cases in New York between 1930 and 1940, became chronic carriers nine times as frequently as did younger patients. Females became carriers nearly twice as often as did males.

Because of the advanced age of the carriers produced, however, the natural forces of mortality will tend to reduce this number rapidly. On this basis they estimated carrier prevalence in New York State, exclusive of New York City, to be on Jan. 1, 1940, approximately 2,500 carriers or 42 per 10,000 population. In 40 years they estimate the number of carriers will decrease to about 200.

Science News Letter, November 7, 1942

Fatal Attacks Rare

➤ FIGURES showing that even in severe epidemics poliomyelitis (infantile paralysis) rarely kills and rarely cripples its victims severely were announced by Dr. Morton Kramer, Dr. John A. Toomey, Dr. Harold J. Knapp and Dr. James Doull, of Cleveland.

The figures came from records at the time Cuyahoga County and Cleveland experienced their worst epidemic of polio and from examinations of the survivors four to six months after the attack. In this epidemic in 1941 polio cases ran about twice as high in Cleveland and Cuyahoga County as in the rest of Ohio and the entire United States.

"In the age group most affected by the disease (under 10 years of age) the chance of attack in which the sequel would be minimal or no paralysis was 1 in 2,600; moderate paralysis, 1 in 6,500; severe paralysis, 1 in 30,000; and death, 1 in 18,800," the doctors stated. "For those in the age group 20 years and over, they were for minimal or no paralysis, 1 in 173,300; moderate paralysis, 1 in 123,000; severe paralysis, 1 in 173,300; and death, 1 in 288,300. It should be realized that these probabilities are approximate only and will vary somewhat from epidemic to epidemic."

Science News Letter, November 7, 1942

DEPTH CHARGE — This is what happens when an American depth charge is dropped on an Axis submarine. It is an official U. S. Navy photograph.