

PUBLIC HEALTH

Food-Borne Disease

► IN SPITE of the high standards of sanitation in the United States, food-borne and water-borne diseases are still common.

In the ten-year period ended in 1960, about 2,300 outbreaks were reported, which included almost 100,000 recorded cases. It is estimated conservatively, however, that unreported cases would raise the total as much as 20 times.

Dr. Carl C. Dauer, medical adviser at the U.S. Public Health Service's National Center for Health Statistics, reports in *Public Health Reports*, 76:915, 1961, that there is good reason to believe that food-borne, and to a lesser extent, water-borne diseases are still widely prevalent in this country.

Among four outbreaks of typhoid fever reported in 1960, Dr. Dauer said, were cases traced to a well contaminated by a septic tank. Infectious hepatitis outbreaks also were reported among school children who drank water from wells contaminated with sewage.

Custard-filled desserts, salad, poultry and meats accounted for hundreds of cases of food poisoning last year. A family outbreak of ten cases was caused by eating homemade ice cream containing raw milk and a cracked egg. Poultry or other meat accounted for more than half of the 1960 outbreaks.

A large outbreak with 954 cases of a type of streptococcus infection occurred on a military installation where a cook had a sore throat and had left unrefrigerated giblet gravy overnight.

Two families were felled by mushroom poisoning and one family became ill from eating portions of the tree tobacco plant, *Nicotiana glauca*, that had been mistaken for wild "greens."

Dr. Dauer discounts reports indicating that England and Wales have more food-borne and water-borne diseases than the U.S., although not one of the states in this country had an average annual rate equal to that reported in England and Wales as a whole during the past ten years, he points out.

"A more effective system of collecting information in England and Wales probably accounts for much of this wide difference," Dr. Dauer said.

It also cannot be assumed that states which reported the greater number of outbreaks had inferior sanitary conditions, Dr. Dauer points out. They probably encouraged a higher degree of reporting.

California, for example, reported 826 outbreaks in the ten-year period, whereas New York reported only 336 outbreaks. Many cities do not report local outbreaks to state health departments, and many family outbreaks never come to the attention of local authorities.

Dr. Dauer told SCIENCE SERVICE that although few fatalities could be estimated from food-borne and water-borne diseases, their widespread occurrence gives them a place of continued importance in the country's public health problems.

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MEDICINE

Artificial Heart Valve

► A PREVIOUSLY HOPELESS condition of the heart—a defective heart valve—can now be corrected by successful surgery, it was reported at the American Heart Association meeting in Miami Beach, Fla.

Many of the 500 gravely ill patients described by three teams of surgeons who did partial or total replacements of the aortic valve (located at the root of the aorta, the body's main artery) are still living, 10 to 18 months following surgery.

One of the teams reporting was made up of Drs. Charles A. Hufnagel and Peter W. Conrad of Georgetown University Medical Center, Washington, D.C.

Rheumatic heart disease accounted for most aortic insufficiency cases reported by the doctors.

A heart-lung machine was used in all the operations described, so that blood could be detoured from the heart, permitting the surgeon to work on a relatively dry and motionless organ. The heart was cooled to 50 degrees Fahrenheit to expose the valve safely for operation.

Another key factor reported was the development of synthetic materials such as Teflon, which can safely be implanted

within the body and which resists the formation of blood clots. The prosthetic devices with tough but flexible synthetics make good substitutes for the natural heart valve.

It was Dr. Hufnagel who first developed a "trapped ball" valve that he used in 1952 to prevent blood from backing up into the heart from the aorta through a defective aortic valve.

Since then, newer methods offer the possibility of total correction of the condition. Dr. Hufnagel's 1952 technique meant inserting the valve in the aorta at some distance from the heart.

Successful operations also were reported by Drs. J. W. Kirklin, F. H. Ellis and Dwight C. McGoon of the Mayo Clinic, Rochester, Minn., and by Drs. William H. Muller Jr., James B. Littlefield and J. Francis Dammann Jr., all of the University of Virginia, Charlottesville.

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Can Still Bear Children

► THE WOMAN who was born a "blue baby," the result of oxygen deficiency in

the blood, or who has some other congenital heart disease can still bear children in two out of three pregnancies.

Miscarriages and other pregnancy hazards are more likely among women with inborn heart defects, a Baltimore woman doctor told the American Heart Association meeting in Miami Beach, Fla., but a large percent have normal children.

Dr. Catherine A. Neill of Johns Hopkins Hospital reported the study, which was made with the help of Sheila Swanson. They surveyed former patients of the Harriet Lane Home Cardiac Clinic of Johns Hopkins Hospital, where the first "blue baby" operation was performed in 1945.

Dr. Neill said that 82 patients (or 167 of the total pregnancies) were in this blue baby group, and about three out of four had been operated on in the past.

In another report, Dr. Sidney Blumenthal, speaking for a team of physicians from Columbia University-Presbyterian Medical Center, New York, said a high proportion of babies dying during their first year of life from inborn heart defects could be saved.

In a study of 500 cases, Dr. Blumenthal reported that deaths from congenital heart disease are higher during the first year of life than at any comparable period. If an "aggressive approach" is taken toward diagnosis and treatment, he said, surgery can prevent many of these deaths.

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MEDICINE

Blood Test Tells Types of Arthritis

► THE DIFFERENCE between rheumatoid arthritis and psoriatic arthritis may be distinguished by a new blood test analysis of serum proteins.

The procedure was developed in a cooperative study involving the Medical School of the University of California, Los Angeles, the University of Southern California and the Veterans Administration Hospital in Long Beach. Drs. Charles L. Heiskell, Charles M. Carpenter, Henry E. Weimer, William B. Reed and William Becker conducted the study.

It was found that protein patterns in blood serum from patients with rheumatoid arthritis differed significantly from those with psoriatic arthritis. Thus, the laboratory procedure may be useful in distinguishing the two forms of arthritic disease.

The clinical importance of this observation is that the two types of arthritis may require different types of treatment.

The study also indicated that measurements of these serum proteins may also be useful in following the response to treatment of rheumatoid arthritis. There was, however, no significant relation between such measurements and the severity and duration of psoriasis.

It is hoped that such studies may give a clue to the causes of psoriasis and rheumatoid arthritis, which are unknown. So far, there is no indication of why levels of serum proteins change as these diseases progress.

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