

PUBLIC HEALTH

January, the Month of March

January is the month of March of Dimes. Contributions to the National Foundation will be directed toward research not only in polio and viruses, but birth defects and arthritis.

By HELEN BUECHL

JANUARY BECAME the month of march 22 years ago.

For it was on Jan. 3, 1938, that the National Foundation for Infantile Paralysis was incorporated. Five months earlier, President Franklin D. Roosevelt, himself crippled by polio, had called for the creation of such an organization. Eddie Cantor suggested that the annual drive for funds be called the March of Dimes.

The President's birthday, which fell on Jan. 30, was chosen as the windup date for the annual March of Dimes campaign. The entire month of January has, ever since, been devoted to raising dimes and dollars that would eventually find their way into research laboratories and hospitals. Thus began the fight against polio.

On April 12, 1945, with World War II drawing to a close in Europe, Franklin D. Roosevelt died. Exactly ten years later, to the day, the Salk vaccine was pronounced safe, potent and effective after being tested in field trials on 1,830,000 school children.

By December of the following year, 1956, more than 45,000,000 persons had received one or more shots of vaccine; polio cases dropped 61% from the pre-vaccine average. Dimes and dollars from Mr. and Mrs. U.S.A. had polio on the run. Since then, the vaccine has been given to more than 80,000,000 persons.

Polio Statistics

Today, the organization that spurred the drive for polio funds is known simply as the National Foundation. A March of Dimes campaign is still conducted each January and a portion of this money is allocated to the care of those persons who are crippled.

More than 55,000 polio victims still get patient aid from the March of Dimes. Most of these were stricken in previous years.

Some 10,000 new patients were added in 1958 and 1959 as a result of the outbreaks in Des Moines, Kansas City, Detroit, Virginia, West Virginia, New Jersey and other areas.

Despite these statistics, more than one-half of the U. S. population, or 91,500,000 Americans, have had no Salk vaccine. One-fourth of all children under five, the hardest hit of all age groups, are completely unvaccinated. More than 11,000,000 youngsters under 20 are equally unprotected.

Another portion of the funds supports work in another area of polio . . . the live virus vaccine.

Dr. Salk's vaccine contains killed polio

viruses. It offers between 70% and 90% effectiveness. But many researchers believe that a vaccine containing live viruses will offer better protection.

One such researcher is Dr. Albert Sabin of the University of Cincinnati. His live polio vaccine has been fed with a perfect safety record to more than 6,000,000 Russians. Several groups are already interested in manufacturing such a vaccine for the public, but no live-virus polio vaccine has yet been licensed for use in the United States.

In addition to cleaning up the polio problem, the Foundation is now tackling two

other problems, birth defects and arthritis.

For instance, one out of every 16 babies born in the U. S. has one or more significant congenital malformations, defects that occurred before birth. This means that every year, 250,000 babies in this country have at least one deformity before they are born. Of these, 34,000 infants are stillborn or die in the first four weeks of life.

The causes of birth defects are mainly unknown. Some result from imperfect germ cells. Others, however, stem from injuries to the embryo within the mother's body, particularly within the first three months of growth. These can sometimes be prevented by knowledge and precautions.

These precautions include: avoidance of exposure to German measles during early pregnancy, extensive X-ray treatment, powerful drugs and medications during pregnancy, and abrupt altitude changes. It is



AN "OUCH" OF PROTECTION—A little girl from Arkansas, shown in this National Foundation photograph, gets her protective shot of polio vaccine, the result of many years of research and many dimes and dollars contributed in the annual campaign for funds.

also extremely important to develop what doctors call "good maternal soil" by maintaining a diet rich in proteins, vitamins and minerals.

Another portion of each dime contribution will be directed toward research in arthritis. As in birth defects, the causes of arthritis and the rheumatic diseases are mainly unknown. Targets of research in this area include development of techniques for earlier diagnosis so that corrective treatment may be started sooner; new methods of treatment and rehabilitation to prevent or correct deformities; new drugs for relieving pain and inflammation; basic research into causes of connective tissue diseases and a better understanding of the role played by the rheumatoid factor, found in the blood of arthritis patients.

Arthritis is a group of painful, disabling diseases, mainly affecting the joints. There are no known cures or preventives. This disease cripples more persons than any other chronic disease.

It is estimated that more than 11,000,000 persons are afflicted with arthritis and rheumatic diseases. This includes persons of all ages, including children and infants.

There are two major types of arthritis, rheumatoid and osteoarthritis. Rheumatoid arthritis is a severe form of the disease, manifested by inflammation, swelling, fever, loss of weight and limited joint movement. This type of arthritis strikes three times as many women as men.

More Research Needed

Osteoarthritis is a degenerative disease of the joint surfaces. Some 80% to 90% of all persons more than 60 have it in varying degrees. It results in pain, stiffness, and sometimes, deformities. It afflicts hands, arms, shoulders, back, hips and knees.

Therefore, it becomes apparent that there is yet much research to be done in the fields of birth deformities and arthritis in addition to polio. In 1958, the National Foundation (formerly "for Infantile Paralysis") expanded into research on arthritis and birth defects.

Extensive research is continuing in the field of polio and related viruses. At the close of 1959, the Foundation had these gains to report:

More than \$1,000,000 has been invested by the Foundation for research in birth defects and arthritis alone. There have also been some dividends in 1959 from past investments. For instance, two scientists, working separately, have turned up clues to what leads a virus to attack some cells but not others. The work paves the way for further study on how to defend cells from virus invasion.

Another Foundation grantee found that certain Coxsackie viruses cause pericarditis, inflammation of the heart's outer lining. This news indicates that some Coxsackie viruses may be of still more significance as a cause of damage to the heart and other vital organs.

In Chicago, a husband and wife team report that in some cases of common childhood diseases, such as measles, the brain may be damaged without showing immediate ill effects.

Science News Letter, January 9, 1960

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