50th Anniversary *of the* Polio Vaccine

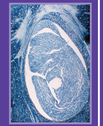
COMMEMORATIVE TIMELINE

Centers for Disease Control and Prevention
March of Dimes · Rotary International
Salk Institute for Biological Studies
University of Michigan · University of Pittsburgh

1800–1919

1800s

Paralytic poliomyelitis (polio) takes its toll worldwide, affecting mostly children, the disease is known as infantile paralysis.



Photomicrograph of degenerative changes due to Polio Type III

1894

First known polio epidemic in the United States occurs in Vermont.

1908

Dr. Karl Landsteiner discovers that the cause of infantile paralysis is a virus.

1916

The first major epidemic of polio documented in the United States strikes, paralyzing young children and horrifying the nation. Increasing numbers of outbreaks occur each year in the U.S.

1920s

1921

Franklin D. Roosevelt is diagnosed with polio.

1927

Roosevelt organizes the Georgia Warm Springs Foundation for polio sufferers.

FDR at Warm Springs

1928

The first iron lung is used to preserve breathing function in patients with acute polio.

Child in iron lung

1930s

Grace Kelly at March of Dimes event

1932

Franklin D. Roosevelt is elected President of the United States.

1938–58

March of Dimes recruits celebrities to help raise funds and awareness in its efforts to fight polio.

1938

President Roosevelt founds the National Foundation for Infantile Paralysis (NFIP, known today as the March of Dimes).

Polio-stricken children getting physical therapy

1940s

Iron lung ward

1945

President Roosevelt dies on April 12.

1942

Dr. Jonas Salk arrives at the University of Michigan School of Public Health. Techniques earned there with influenza are used later to develop the polio vaccine.

1947

Salk is recruited by the University of Pittsburgh to develop a virus research program.

Dr. Jonas Salk

1948–49

Scientists from four universities confirm there are only three strains of poliovirus.

1950s

1952

The worst recorded polio epidemic in United States history occurs with 57,628 reported cases.

1954

Dr. Salk and associates develop a potentially safe injectable vaccine against polio, (IPV) given to nearly 15,000 Pittsburgh-area subjects (most are children) in pilot trials, 1952–1954.

Nobel Prize in Medicine is awarded to John F. Enders, Thomas H. Weller, and Fredrick C. Robbins for their discovery of the ability of poliomyelitis viruses to grow in tissue cultures.

Dr. Thomas Francis Jr., University of Michigan, directs field trials of Salk vaccine sponsored by NFIP. The trials are the largest in U.S. history involving 1.8 million children and use the now standard double-blind process for the first time.

1955

On April 12 at the University of Michigan, Dr. Francis announces field trial results: Salk vaccine is "safe, effective and potent." Dr. Francis' Vaccine Evaluation Center becomes the model for future vaccine trials.

1955–57

Once vaccine becomes available, incidence of polio in the United States falls by 85-90%.

1960s

1961

Oral polio vaccine, developed by Dr. Albert Sabin is licensed for use in the United States.

Polio vaccination campaign in the '60s, United States

1963

Congress establishes the Immunization Grant Program; polio incidence plummets to only 396 reported cases in the United States.

Girl getting a polio vaccination

1970s

Polio taking its toll on children globally

1979

Last United States case of polio caused by wild poliovirus.

Fighting polio worldwide

Dr. Albert Sabin

1980s

1985

Rotary International establishes its PolioPlus program which holds two fund-raising events. Rotary has contributed over $500 million to fight polio worldwide.

Rotary International workers

CDC worker, Brazil

1988

Global Polio Eradication Initiative is launched as global burden of polio impacts 350,000 in 125 countries annually. Spearheading partners include the World Health Organization, Rotary International, U.S. Centers for Disease Control and Prevention and UNICEF.

1990s

1994

The last wild poliovirus case in the Americas

The Americas are certified polio-free.

1999

The U.S. Public Health Service recommends that the oral vaccine be discontinued in the United States, and a modified IPV becomes the preferred vaccine.

Marked fingers show that these Ethiopian girls have been vaccinated

Rotarian polio vaccination volunteers

2000s

2000

The Western Pacific Region is certified polio-free.

Global Polio Eradication Campaign

Rotary International in India

2002

The European Region is certified polio-free.

Rotary International launches a second fund-raising campaign to eradicate polio.

2005

April 12, 2005 marks the 50th anniversary of the Salk vaccine. Efforts to eradicate polio worldwide remain necessary, with just over 1,200 cases globally.

Background on Polio Vaccine

April 12, 1955, was a unique moment in our contemporary culture. That date culminated more than 17 years of research that led to the licensure of the first poliovirus vaccine. The vaccine breakthrough was driven by Jonas Salk and his team of scientists at the University of Pittsburgh and the pioneering field trials led by Thomas Francis Jr. at the University of Michigan. The research was funded by the National Foundation for Infantile Paralysis, today known as the March of Dimes.

The fight against polio brought together communities in a national collaboration that at that time was the largest human cooperative effort in history. In the days leading up to the vaccine's approval, children in communities across the United States participated in the field trials as America's "Polio Pioneers." The University of Michigan analyzed the results of the field trials to help ascertain the safety, effectiveness, and potency of the vaccine. Thousands of health-care workers and lay people volunteered their time to assist with the vaccine field trials, the largest ever in United States history. Millions of Americans participated by raising funds in their communities to support the larger research effort and a single goal: victory over polio.

Although polio was eliminated from the Americas in 1994, the disease still circulates in Asia and Africa, paralyzing the world's most vulnerable children. In a continually shrinking world, polio and other vaccine-preventable diseases remain only a plane ride away. The Global Polio Eradication Initiative, spearheaded by the World Health Organization, Rotary International, the CDC and UNICEF, was begun in 1988. That year, an estimated 350,000 children were paralyzed with polio worldwide; in 2004, polio cases had fallen to just over 1,200 cases globally. The Initiative's success will be a triumph of international co-operation, attesting to our ability to unite across borders and differences to conquer global afflictions.

April 12, 2005, marks the 50th anniversary of the first polio vaccine. Since the introduction of the vaccine, great strides have been made in significantly reducing the health impact of vaccine-preventable diseases on children and adults worldwide. Polio was eliminated in the U.S. because protecting the public's health was perceived as a simple necessity, and every effort was made to see that the vaccine would be freely distributed and polio would be eradicated. Since this effort 50 years ago, we can now protect children from more than 12 vaccine preventable diseases and disease rates have been reduced by 99% in the U.S. Yet, without diligent efforts to maintain immunization programs here and strengthen them worldwide, the diseases seen 50 years ago remain a threat to our children.