

History of Immunizations

Before the modern era of childhood immunizations, parents would have been surprised at the thought that future generations would be able to protect their children from many of the most serious childhood infectious diseases. After all, there was a time when [diphtheria](#) was one of the most feared childhood diseases, claiming more than 10,000 lives a year in the United States during the 1920s. In the 1940s and 1950s, polio paralyzed and even killed children by the thousands. At one point in time, the measles affected nearly a half-million US children every year. Almost everyone in the United States got it at some point during childhood—and it sometimes caused complications such as pneumonia and encephalitis. Fortunately, times have changed.

Today, most children in the United States lead much healthier lives and parents live with much less anxiety and worry over infections during childhood. Yet vaccines are a relatively recent development. Barely more than 200 years ago in the United Kingdom, Edward Jenner noticed that some dairymaids seemed protected from smallpox if they had already been infected by the much less dangerous virus that caused cowpox. In 1796, Jenner conducted an experiment, scratching the arm of an 8-year-old boy named James Phipps using material from a cowpox sore in one of these dairymaids. Then he repeated the same experiment, but this time added a small amount of smallpox into the same child. He hoped that the procedure would immunize the child against the deadly smallpox infection. In fact, it did. Jenner's experiment began the immunization age.

The next major advance occurred almost 100 years later when Louis Pasteur, MD, showed that disease could be prevented by infecting humans with weakened germs. In 1885, Dr. Pasteur used a vaccine to successfully prevent [rabies](#) in a boy named Joseph Meister who had been bitten by a rabid dog. By the mid-20th century, regular progress in immunizations was made. Jonas Salk, MD, and Albert Sabin, MD, made what are perhaps the bestknown advances—they developed the inactivated polio vaccine and live polio vaccine, respectively. Their discoveries have saved countless children worldwide from polio, a disease that often left youngsters dependent on wheelchairs or crutches for life.

Today, immunizations are one of the success stories of modern medicine. Smallpox was declared eradicated from the world in 1977. Polio was officially eliminated from the United States and the rest of the Western Hemisphere in 1991. Whereas 13,000 to 20,000 cases of polio were reported every year in the United States before the availability of the vaccine, *no* cases were reported in 2000! While there were 12,230 deaths from diphtheria in the United States in 1921 (long before the availability of a vaccine), there was only 1 case of diphtheria reported in 1998.

The list of serious diseases that have been eradicated, or whose numbers have been dramatically reduced by immunizations, continues to grow—from the mumps to the [measles](#), from [rubella](#) to [tetanus](#).

Source: [Immunizations & Infectious Diseases: An Informed Parent's Guide \(Copyright © 2006 American Academy of Pediatrics\)](#)