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Chapter 1

Respected Scientist

In the first half of the 1900s, a disease called polio, or poliomyelitis, infected thousands of people in the United States. Polio, also known as infantile paralysis, mainly attacked children.

She woke up with a high fever and cramps. We need to get her to a doctor fast!

No, please! Not polio!

Polio attacked the spinal cord, sometimes killing its victims. Many who survived the disease were left paralyzed.

In severe cases, some victims were forced to rest in machines called "iron lungs" just to keep breathing.

More about

Jonas Salk and the Polio Vaccine

Jonas Salk was born October 28, 1914, in New York City. His parents were Russian-Jewish immigrants. Although they couldn't afford to send him to college, Salk won scholarships to pay for his education. He graduated from New York University medical school in 1939.

In 1916, when Salk was just a toddler, the worst polio epidemic in history hit the United States. That year 6,000 people were killed by the disease. Another 27,000 people were left paralyzed.

About 1,830,000 children participated in Salk's 1954 field study. But not all of these children received the vaccine. Some children were given a shot made of sugar water and others received no shot at all. These children were part of the control group. The control group allowed researchers to compare polio infection rates between children who got the vaccine and those who didn't.

In the final stages of his polio research, Salk trusted his vaccine so much that he gave it to himself, his wife, and his children.

Polio wasn't a problem in just the United States in the early-1900s. Many other countries were also suffering large polio epidemics. By 1959, more than 90 countries were using Salk's vaccine to fight polio.

By 1962, Albert Sabin's polio vaccine replaced Salk's vaccine in the United States. Although many scientists believed Sabin's live virus vaccine was more effective, it caused about eight cases of polio each year. In 2000, the United States went back to using the Salk vaccine because a killed virus vaccine is safer.

Sabin and Salk disagreed about whether a killed virus or a live virus vaccine was more effective. Their debate caused them to become bitter rivals. Sabin once went so far as to say, "Salk was strictly a kitchen chemist. He never had an original idea in his life."

Jonas Salk died on June 23, 1995. After his death, other researchers carried on his work to fight deadly diseases at the Salk Institute.



GLOSSARY

antibodies (AN-ti-bahd-eez)—proteins made by the body that weaken or destroy invading bacteria, viruses, and poisons

immune system (i-MYOON SISS-tuhm)—part of the body that protects it from diseases by producing antibodies

paralyzed (PAIR-uh-lized)—unable to move or feel

patent (PAT-uhnt)—a legal document that gives an inventor the right to make, use, or sell an invention for a set period of years

vaccine (vak-SEEN)—dead or weakened germs injected into a person or animal to help fight disease

virus (VYE-ruhss)—a tiny particle that infects living things and causes diseases

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