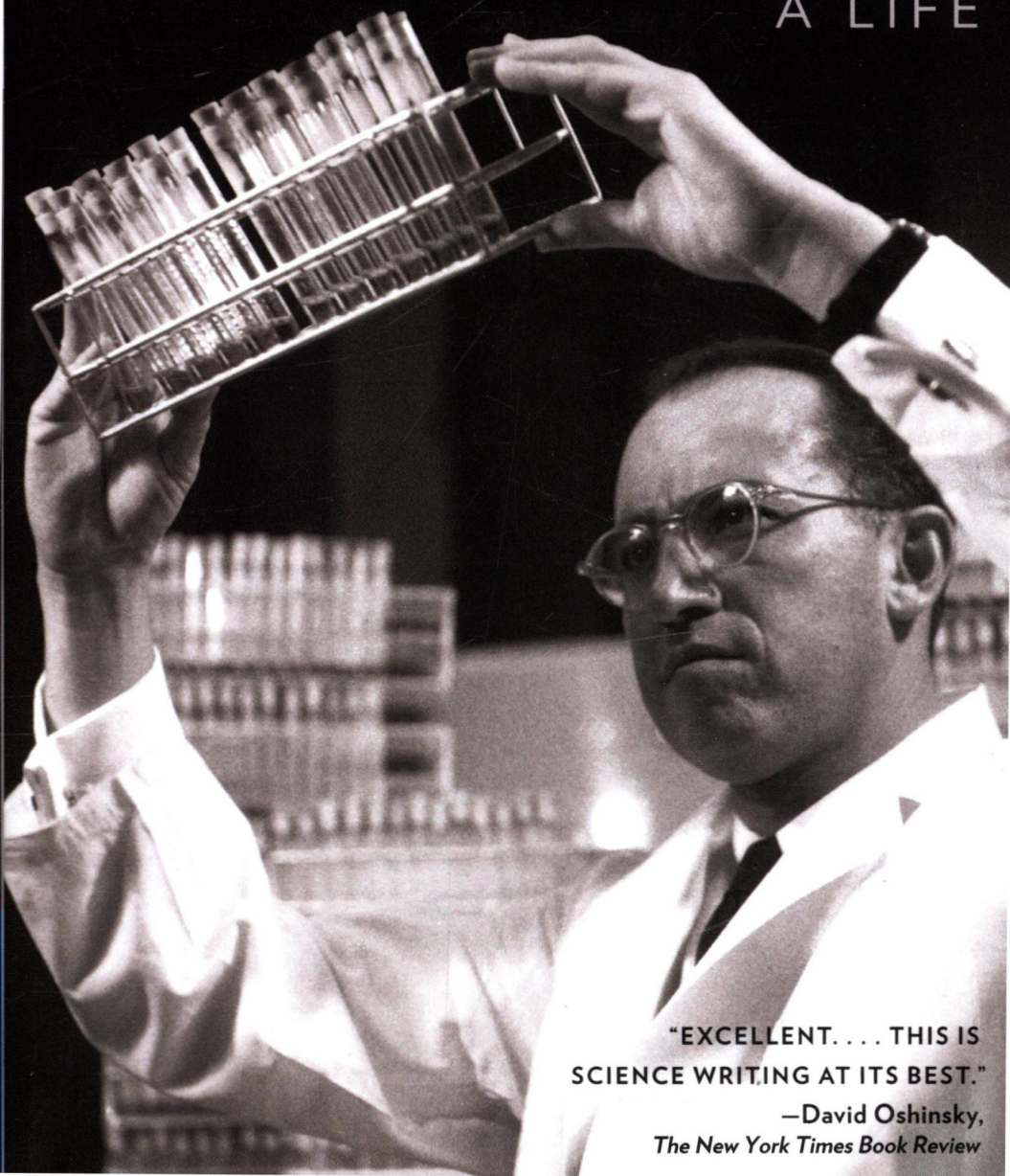


Charlotte DeCroes Jacobs

# JONAS SALK

A LIFE



"EXCELLENT. . . THIS IS  
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Chosen as a *New York Times* Notable Book of the Year  
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Jonas Salk had all the makings of a twentieth-century icon. Born in a New York tenement, he was driven from childhood by a desire to improve the world. Following the release of his vaccine against poliomyelitis, or infantile paralysis, he received a staggering number of awards, and for years his name ranked with Gandhi and Churchill on lists of the world's most revered people. Though adored by the public, Salk was ostracized by much of the scientific community whose esteem he most craved. Accused of failing to give proper credit to other researchers and crossing the line of academic decorum by soliciting media attention, Salk vacillated between embracing (and sometimes exploiting) his fame, and running from it.

In this definitive biography, Charlotte Jacobs combines hundreds of personal interviews with unprecedented access to Salk's sealed archives to produce the most complete portrait of one of the greatest and least understood figures of the twentieth century.

**Charlotte Jacobs** is Professor of Medicine Emerita of Stanford University. Her first biography, *Henry Kaplan and the Story of Hodgkin's Disease*, was listed as one of the "Best Five Books" on doctors' lives by the *Wall Street Journal*.

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## A Life



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Jonas Salk



*To my husband, Rod*





*Unless otherwise indicated, all quotations are taken from interviews conducted by the author between June 2004 and May 2013.*



Jonas Salk





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## PROLOGUE

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### Two Plagues

IN THE SUMMER of 1916, New York's playgrounds stood empty. No children splashed in public swimming pools; none sold lemonade on the sidewalks. No cats roamed the alleys, peering into garbage cans. Troops of sanitary workers in white uniforms hosed down the city streets. Fathers hurried home from work, fear imprinted on their faces, averting their glances from the tiny wooden caskets lined up outside the tenements. Policemen patrolled the streets. New York was a city under siege.<sup>1</sup>

Poliomyelitis had crept into Brooklyn while the public was busy watching the war unfold in Europe. It smoldered for a while between Henry Street and Seventh Avenue. Health officials barely paid attention, assuming it would soon die out. But it didn't. When the press began to attach names and faces to the disease, the community became alarmed. Helen Downing, paralyzed just before graduation from Public School no. 134, received her diploma in bed.<sup>2</sup> After five-year-old Frederick Chaplin made his kindergarten's honor roll, his brother took him to Coney Island. Five days later, he was dead.<sup>3</sup>

Before long, the names and faces gave way to numbers, and they kept escalating. On June 28, Health Commissioner Haven Emerson announced that Brooklyn might be experiencing an epidemic. Although



a scientist had identified the poliovirus eight years earlier, no one knew how it spread. Assuming it behaved like other contagious diseases, the commissioner ordered every family bearing a case quarantined. A placard was placed in the window; bed linens and clothing were disinfected; windows were screened to prevent flies from disseminating the disease. Street cleaners worked overtime to collect garbage and cleanse tenement halls and stairwells. Stray cats, suspected of harboring the virus, were rounded up and exterminated—seventy-two thousand by summer's end. The commissioner closed playgrounds and banned children from theaters. He instructed parents to keep food covered and to wash their youngsters' noses and throats with saltwater daily. But filth and flies and cats had nothing to do with the spread of poliomyelitis, and even with these precautions, more children contracted the disease.

The illness started innocently enough—a sore throat, a runny nose.<sup>4</sup> At the end of the day, the child spiked a fever, became restless. Then the pains began—electric shocks that darted through the back, legs, neck, and shoulders. Muscles twitched, and spasms twisted him into a peculiar posture, the shoulders pulled forward, hips rotated, toes pointing downward. All night, the child thrashed about in his bed, drenched in sweat; his face became pallid. When the fever broke, he appeared to be recovering—a deceitful interlude as poliovirus left the bloodstream and invaded the nervous system.

Within a day or two, paralysis struck as abruptly as the fever had, and no one could predict the nature of its onslaught—a weak leg which improved in a few days or an arm dangling useless forever. Poliomyelitis impaired motor control of either one muscle or a group of muscles, yet it left sensation intact. The puzzled child could feel his feet but not move them. Three-quarters of those afflicted survived, many condemned to life in a wheelchair, on crutches, or in bed. They joined a generation of cripples.

If the poliovirus attacked the nervous system higher up, in the base of the brain, death soon followed. Paralyzed throat muscles impeded swallowing. A sip of water streamed out the youngster's nose or drained into his windpipe, causing him to sputter and cough. Unable to swallow saliva, he foamed at the mouth. Breathing gave way to gurgling. As his mother wiped the blood-tinged froth from his lips,