

Jenner & smallpox

Smallpox is a highly contagious disease that kills about 30 percent of those infected. For centuries, it killed millions of people around the world. In just the 20th century, an estimated 300 million died from smallpox before it was finally halted in 1977.

Two centuries before that last outbreak, the physician and scientist Edward Jenner (1749 – 1823) was born in Gloucestershire, England. His interest in the protective effects of cowpox began during his apprenticeship with George Harwicke in the 1760s. But it was not until 1796 that he made the first step in the long process whereby smallpox, the scourge of mankind, would be totally eradicated.

For many years, he had heard the tales that dairymaids were protected from smallpox naturally after having suffered from cowpox. Pondering this, Jenner concluded that cowpox not only protected against smallpox but also could be transmitted from one person to another as a deliberate mechanism of protection. In May 1796, Edward Jenner found a young dairymaid, Sarah Nelms, who had fresh cowpox lesions on her hands and arms. On May 14, 1796, he took matter from Nelms's lesions and inserted it into an incision on the arm of an 8-year-old boy, James Phipps. Subsequently, the boy developed mild fever and discomfort in the armpit. Nine days after the procedure, he felt cold and had lost his appetite, but on the next day he was much better. In July 1796, Jenner infected the boy again, this time with matter from a fresh smallpox lesion. No disease developed, and Jenner concluded that the protection was complete.