**Smallpox in the Ancient and New World**

The smallpox scars on the mummified features of pharaoh Ramses V testify to our long relationship with this disease, a disease unique to humans and one that has killed millions. Spread through contact with living sufferers or the bodies of the dead, it was especially cruel on previously unexposed populations - at least one-third of all Aztecs died after Spanish colonizers brought smallpox to the New World in 1518.

**Smallpox and the Elizabethans**

Survivors carried the legacies of smallpox for life. Some were left blind; virtually all were disfigured by scars. From the 1500s onwards the disease reached most parts of the world and ravaged pock-marked faces were a familiar sight. Some wealthier survivors used shaped beauty patches to camouflage the damage or coated their faces with white lead powder. The ghostly pale face of Elizabeth I was as much a sign of her brush with smallpox as it was a fashion statement.

**Combating the smallpox epidemic**

Although damaged by smallpox, survivors gained an advantage over those left untouched - lifelong immunity. However, as immunity was not inherited, a city decimated by smallpox was ripe for another attack a generation later. The idea of pre-empting such epidemics by inducing immunity was first exploited in China. There a form of inoculation existed as early as the tenth century CE. Immunity was gained by provoking a mild form of the disease in healthy people, for example by blowing powdered smallpox scabs up their noses.

**Preventing disease**

This local knowledge was probably passed on by itinerant practitioners and simple word of mouth. By the early 1700s smallpox inoculation, known as variolation, had spread to parts of Africa, India and the Ottoman Empire. It was in the latter that Lady Mary Wortley Montagu encountered it in 1717, when she witnessed local peasant women performing inoculations at seasonal ‘smallpox parties’. On returning to Britain, she had her children inoculated during an outbreak in 1721.

**Mather, Onesimus and the epidemic in Boston**

An account of smallpox inoculation in New England, 1726.Credits:Wellcome Library, London.That same year, across the Atlantic, Boston was also struck by smallpox. Cotton Mather, a leading churchman, had previously been told about inoculation by Onesimus - his enslaved African worker - who had received the treatment as a child. The inoculation procedure was already practiced in Africa. Inspired by Onesimus’s knowledge, Mather campaigned for inoculation in the face of the growing epidemic, a call that met with some success and much hostility. But the actions of Lady Montagu, Onesimus and Cotton Mather ultimately hastened this knowledge transfer to the West.

**Jenner and vaccination**

Drawings showing smallpox inoculation and cowpox inoculation, 1802. Credits:Wellcome Library, London. Edward Jenner, an English country doctor and keen inoculator, later adapted the practice, developing a safer, more effective technique he called vaccination. Having noted that local people who caught cowpox gained immunity from the far more dangerous smallpox, he successfully induced such immunity in an experiment on a local boy, James Phipps, in 1796.

**The slow decline of smallpox**

Jenner’s adaptation of an ancient technique was the early herald for a series of other vaccines developed in the following two centuries. Made compulsory in 1853, smallpox vaccination anticipated the culture of intensive vaccination we now see in the developed world. But missing from today’s vaccine cocktail is smallpox itself. The historical head start with inoculation and its very human-centred nature long made it a candidate for eradication. A focused Global Smallpox Eradication Programme achieved that aim in 1979