

Eureka Moments!

Reliving the experience of critical moments of discovery in medical science that have changed the way we live

Edward Jenner - Story Outline

Edward Jenner was born in 1749 in Gloucestershire. At that time smallpox was still a very frightening disease. It continued to kill many people and those that lived were usually left with terrible scars on their faces. At that time, the only way to stop someone catching smallpox badly was to deliberately give them a mild form of the disease. This was still very dangerous and actually helped to spread smallpox even more. Dr Jenner was given this treatment himself when he was eight and it made him very ill. It took him a long time to recover and permanently damaged his hearing.

In 1772 Dr Jenner returned to the village where he was born to become a country doctor. Many of his patients told him about the folk tales that said that having had cowpox gave protection against smallpox. Milkmaids were very likely to catch cowpox, and there were popular rhymes at the time that commented on how milkmaids had such beautiful faces. Cowpox is a similar disease to smallpox but much milder, and Dr Jenner had been thinking about the connection between cowpox and smallpox since he was thirteen, and had been apprenticed to a local doctor. He was sure that there was a connection, but most of his medical colleagues thought he was wrong when he talked about the idea.

One day a dairymaid came to be treated for an infected hand and told him how the rash had developed. He noticed at the time that the dairymaid had said that the rash could not be smallpox, because she had already had cowpox. Dr Jenner was now convinced that there was a connection between cowpox and smallpox, and he set out to prove it.

First he studied how cowpox and smallpox developed and made detailed drawings of the scabs that they produced, and how they changed. Then he started to carry out experiments in which he tried to give smallpox to people who already had cowpox— and none of them caught smallpox.

On 14th May 1796 Dr Jenner made the crucial test. He took some of the cowpox scab from a dairymaid called Sarah Nelmes and put it into a scratch he made in the arm of a healthy eight year old boy called James Phipps. James became a little ill with cowpox and had headaches, but by 24th May he was well again.

Then on 1st July 1796 Dr Jenner put some scab from a smallpox scar into another scratch he made in James' arm. If Dr Jenner had been wrong then James might have become seriously ill and could have died. However James did not catch smallpox and remained well. Dr Jenner had found a way to stop people catching smallpox, *he had discovered vaccination!*

Dr Jenner was very excited by this and realized that it was an event of historic importance. He repeated his experiments with several more children and adults— and all of them became resistant to smallpox. He published his work in 1799 and became famous all around the world.

Dr Jenner was given large amounts of money by Parliament to continue with his work. Eventually his ideas spread around the world, and in 1980 the World Health Organisation announced that smallpox had been completely wiped out in every country.