

Key people

Men

Edwin Chadwick

Used statistics to prove the link between ill health and poverty. 1842 published *Report on the Sanitary Conditions of the Labouring Population*. In which he argued that improvements in public health would be essential to the continued growth of the economy.

Dr Barnardo

Appalled by east end poverty, he set up a 'Ragged School' to train boys and girls to help them find work when they left school.

John Snow

Epidemiologist who focussed on battling Cholera. He is most famous for his work on the Broad Street Pump.

Louis Pasteur

Discovered Germ Theory. In 1861. His work took time to reach its potential but when it did, his ideas replaced miasma theory and led to much development in sanitation and surgery.

James Simpson

Credited with the discover of anaesthetics. His work led to the use of Chloroform in surgery.

Joseph Lister

Credited with the discover of antiseptic surgery using carbolic acid to clean the operating area.

Women

Mary Seacole

British-Jamaican nurse who independently travelled and set up the "British Hotel" behind the lines during the Crimean War for sick and convalescent officers and servicemen. Historically, overshadowed by Florence Nightingale.

Florence Nightingale

British nurse who travelled to the Crimean War to provide care for wounded soldiers. She became a writer on medical issues and wrote two books. *Notes on Nursing* and *Notes on Hospitals*.

Elizabeth Garrett Anderson

Female medical pioneer. Faced adversity to become the first female medical doctor. Gained membership of the British Medical Association in 1873.

Sophia Jex-Blake

Managed to get in and train in Edinburgh as part of the 'Edinburgh Seven'. Marks a turning point in some male attitudes.

Key words

Anaesthetic

Drugs given to make someone unconscious

Antiseptic

Chemicals used to destroy bacteria and prevent infection

Aseptic surgery

prevent contamination from pathogens. strict rules to minimize the risk of infection

Bacillus

Bacteria that cause disease

Breakthrough

A scientific discovery that dramatically alters the way people understood disease – e.g. the discovery of bacteria. This then helps the problem to be solved.

Cholera

A bacterial infection caused by drinking water

Chloroform

A liquid whose vapour acts as an anaesthetic and produces unconsciousness

Contagion

The passing of disease from one person to another

Dispensary

A place where medicines are given out

Epidemic

A widespread outbreak of a disease

Germ Theory

The theory that germs cause disease rather than the prevalent belief that disease causes germs.

Industrial Revolution

A period of British history when industries (e.g. coal, steel) transformed society

Medical Officer

A person appointed to look after the public health of an area

Public Health

When the government takes measures to prevent diseases spreading and to help the population become healthier.

Sanitation

Providing disposal of human waste and dispensing clean water to improve public health

Serum

Part of the blood that can be separated out and used to provide immunity from a specific disease

Sterile

Totally clean; free from bacteria or other living organisms

Voluntary hospital

Hospitals supported by charitable donation

Workhouses

Accommodation for poor people who could not afford to pay for rent and food.

Key events

Causes of disease

This was a turning point for knowledge in this area. In 1861, Germ Theory was developed by Pasteur. This was slow to take off but ultimately replaced miasma theory and led to significant developments in the understanding of infection and consequently increased the safety of surgery. This work also led on to an understanding that individual microbes cause individual diseases. Koch and Ehrlich were instrumental in this work. Germ Theory was not accepted quickly. This did hold back progress, but the idea did eventually catch on.

Treatments

Although understanding of disease was developing, treatment was not as fast. Many every day treatments remained the same as in the previous period. Work was being done to identify disease but work to treat was several steps behind. Many Quack remedies continued to exist, and the availability of money continued to determine what standard of medical care you could access. Vaccinations did continue to develop, the smallpox vaccine was compulsory, and anthrax and rabies vaccines were developed.

Surgery

From 1840 onwards surgery turned a corner as a result of two key discoveries.

- Anaesthetics were developed. Largely due to the work of Simpson. His work led to the discovery of Chloroform. This was after several other substances had been tried, for example Nitrous Oxide. The discovery of Anaesthetic allowed more complex surgery and slower surgery, resulting in more accurate surgery.
- Antiseptics were also developed in this period. Lister's work on Carbolic Acid led to the eventual use of sterile operating environments. It also led to the development of Aseptic surgery, still in use today.

These two combined greatly reduced the death rate in surgery and increased the ability of medicine to intervene.

Public health

- 1848 was the first time a Public Health Act was passed. This provided for all sorts of improvement including the appointment of medical officers, however, it was not compulsory.
- In the 1860s Bazalgette started the creation of London's first organized sewage system. Parts of this system are still in use today.
- 1875 Second Public Health Act consolidated all that 1848 had attempted and made it compulsory. Councils were made to take responsibility for local issues.
- Outbreaks of Cholera dominated this period. The work of John Snow led to the connection of water to the disease. However, his work was pre-Germ Theory and as such his ideas centered around water miasma. Despite this, his methods of studying and tracking disease became much more popular. The Epidemiological society was formed as a result. His methods of mapping disease are still used today.

Communication

During this period there was wide reading of theories and ideas. Reports were published and used by subsequent physicians and researchers. For example, Jenner's work was read and used by others to develop further vaccinations. Pasteur's work was read and developed by many. For example, Lister read the work that Pasteur had published and used it to create antiseptic methods for surgery.

