

Affect on health due to the industrial revolution.

- Many people left the countryside due to the introduction and use of machinery in agriculture that could work more quickly and efficiently than manual workers. This meant that many flocked to cities, causing them to rapidly grow; this meant that many people lived in a small amount of space which meant that living conditions were cramped, as more than one family lived in a house and that diseases could spread far more quickly, due to the very close proximity of the people.
- Sewers often connected to places where people got their 'clean water'.
- Factories had poor working conditions and often lead to ill health, e.g poor ventilation caused breathing problems. The aforementioned illness was sometimes was caused by poor ventilation in houses.

Ideas about cause of disease c1750-c1900:

People were less likely to blame illness on unbalanced humours or on supernatural causes due to Renaissance affecting people's ideas about the causes of disease.

The search for a new explanation of illness based on natural causes developed into two main theories:

- Miasma: disease was caused by bad air that was filled with poisonous fumes from rotting matter.
- Spontaneous generation: disease was caused by germs that were produced by flesh and vegetables as they rotted.

The fight against smallpox:

Inoculation:

- A method of giving someone a mild version of the specified disease, which they then proceed to survive through and gain an immunity to the disease in the future.

Inoculation became very popular in Britain, people would have smallpox parties where they'd be inoculated together; doctors were paid for this. However, inoculation didn't solve the problem of smallpox due to the fact that not everyone could afford to have it done, furthermore, it wasn't always effective or safe.

Vaccination:

Developed by Edward Jenner. (John Hunter's student, Hunter was known for his scientific approach...)

He couldn't explain why it worked, or why it didn't work for other diseases but that didn't stop him from publishing his experiments and results.

He conducted a series of tests in a scientific manner to gain these results prior to publishing it. (Important, Renaissance stuff, proof of scientific mindset from the time.)

If you think anything is missing put a comment in, I'll try to add it in later.

Development of germ theory and vaccination:

Germ theory:

- In the 1850s Louis Pasteur investigated the problem of liquids turning sour in the brewing and vinegar industries.
- Pasteur could observe the growth of unwanted small organisms in liquids due to the recent availability of more powerful microscopes.
- He discovered that heat killed the bacteria & stopped the liquid from going sour.
- In 1861 Pasteur published germ theory, showing that spontaneous generation was incorrect. He did this by showing that microbes causing decay weren't produced from the matter itself, but were in the air around it.
- In 1875, Robert Koch, a German doctor who'd read Pasteur's work, decided to investigate whether bacteria were linked to disease. Koch identified specific microbes that caused the disease anthrax in sheep.
- In 1879, Pasteur's research team was studying chicken cholera microbes and injecting chickens with the disease. A culture of bacteria was accidentally left on one side and when it was used, a couple of week later, it had become a weakened version, which didn't harm the chickens. Pasteur realised that this could be used to create immunity from that disease for chickens. He called it 'vaccination' in tribute of Jenner's work.
- In 1882, Koch identified the microbes causing TB in 1882 and those causing cholera in 1883.
- Koch found that chemical dyes could be used to stain specific bacteria so they could be studied more easily under the microscope.

Significance of germ theory:

Pasteur's germ theory was an important breakthrough in scientific understanding. It disproved the theory of spontaneous generation and lead koch to identify the specific microbes that caused some individual diseases. This meant that understanding of the causes of diseases improved. This also meant that scientists could find ways of curing diseases; however, it'd be time consuming as they'd first need to identify the microbes responsible for each separate disease.

Impact of germ theory:

It had a limited impact of medicine at the time because each disease had to be researched individually. Progress in prevention and treatment of diseases was, therefore, slow.

Improvements in medical training:

Doctor's qualifications:

In the 18th century doctors had to be accepted by the Royal College of Surgeons, the Royal College of Physicians or the Society of Apothecaries. In 1815, doctors now had to be examined before they were awarded a certificate. (This doesn't include the Royal College of Physicians.) In the 1858 the General Medical Act said that a General Medical Council had to set up and all doctors had to be registered.

Practical experience:

Once qualified, doctors could apply for a position at a hospital, working under the supervision of an experienced doctor, but they might also volunteer to work at charity hospitals where they would be able to gain more experience.

Dissections:

Many medical students recognised the value of dissection and studied the human anatomy personally. As a result, body snatchers operated in the 18th and early 19th centuries, seizing the bodies of hanged criminals or digging up newly buried corpses to provide for students. The government tried to end this with the Anatomy Act of 1832, which allowed licensed anatomists to take the corpse of anyone dying in the workhouse, who wasn't claimed by a relative.

Florence Nightingale:

Her work:

She led a team of nurses at the military hospital in Scutari during the Crimean War (1854-1856). Nightingale believed that disease was caused by miasma. She organised care and supplies, emphasising cleanliness and fresh air. The death rate fell from 42% to 2%, although the exact cause is unclear.

Significance of Florence Nightingale:

- Influential in establishing a training school for midwives at King's College Hospital, London in 1861.
 - She wrote over 2000 books about hospital design and organisation.
 - She published 'Notes on Nursing' about practical care and high standards.
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Hospitals & the care of the sick:

Where were people treated:

- The middle and upper classes, who could afford to pay a doctor's fees, would usually be treated at home.
- Some doctors set up sick clubs, where people could pay a small amount into a fund weekly to cover any costs of treatment from the doctor.
- The working classes couldn't pay for a doctor & might attend the dispensary or the out-patients department of a hospital.
- Many sick, old or disabled people who couldn't support themselves had to enter local workhouses, which had been set up by the 1834 Poor Law Amendment Act.

Public concern about care for the poor:

- In the 1860s there was a lot of publicity about the level of care offered to poor people. Out of 28,550 places in London, only 3000 of the people in workhouses were actually able-bodied unemployed; due to this the Workhouse Visiting Society was established which campaigned for workhouse reform and a improved standard of nursing in the workhouse.

Publicity, pressure and change:

- This public concern joined with emphasis in new hospital designs on space and ventilation to put increasing pressure on local public authorities such as the poor law unions to improve the provision of hospital care for the poor.

Government Action:

It was ordered that Poor Law Unions should join together to build infirmaries that were separate from the workhouses and that had a full time doctor appointed to them. This was in 1867.

However, these hospitals didn't totally solve the problem, there was still 1500 old people in a workhouse in Birmingham despite a hospital with 1,100 beds being built three years earlier.

Other factors in the development of hospital care:

- Nightingale's work in regulating the training of nurses was a significant factor.
- Pasteur's work on germs also had an impact on hospitals. Joseph Lister began to use carbolic acid to create antiseptic condition during operations. By 1900 most hospitals accepted the need for antiseptic conditions and equipment in the wards.

The trigger for public health action? Cholera, Chadwick and Snow.

Treating Cholera:

- praying
- burning the clothes and bedding of the dead person
- smoking cigars
- lucky charms
- burning barrels of tar or vinegar to create smoke in the streets
- making special mixtures of liquids or pills that were supposed to cure all ills

Chadwick's role in improving public health:

- He suggested it would be cheaper if local taxes were used to improve housing and hygiene rather than paying for sick people to be supported in workhouses.
- He also suggested improvements in providing access to clean water and the removal of sewage and rubbish.

Another cholera epidemic in 1848 caused the Government to try out some of Chadwick's ideas.

Dr. John Snow investigated the cholera outbreak in 1854, using it to test his theory that it was spread through infected water. He had the handle of the water pump on broad street removed so water couldn't be pumped and the number of deaths fell dramatically.

Public Health 1750-1900: Government action:

The public health act, 1848.

Set up a general board of health. It allowed towns to:

- set up their own local board of health
- appoint a local medical officer
- organise the removal of rubbish
- build a sewer system

However, this was optional for the town council UNLESS the local death rate had passed 23 per thousand living. However, very few town councils actually appointed a local medical officer and only a third made a board of health. The General Board of Health was abolished in 1858.

The public health act (Version Two) 1875.

- The 1866 sanitary act forced all towns to appoint inspectors to check water supplies and drainage.
- The 1875 artisans dwelling act gave local authorities the power to buy and demolish slum housing.
- these led to the 1875 public health act - which made local councils that clean water; public toilets; rubbish removal and sewers & drains were provided.

In the years after 1875, local councils also became responsible for:

- checking the quality of food in shops
 - ensuring that the quality of new housing was improved
 - enforcing a new law against polluting water supplies such as rivers and streams
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