By 1900 there had been a breakthrough in understanding the causes of infectious diseases, but no understanding of non infectious or genetic causes of diseases.

Some understanding that food, activity and family influenced health but no understanding of how.

Diagnosis of illness developed with the introduction of X-rays. Rontagen and the Curie’s in the early 20th Century identified lumps using Radium. However, there was no understanding of the genetic cause of cancer.

Factors helping this breakthrough included: Communication (Rontagen’s report on cathode rays); War (Curie employed to develop x-ray machines to id bullets); money (funding from university of Paris) the discovery of DNA in 1953 and the development of the Human Genome Project in 1990.

This was a period of great change. The growth of the British Empire led to sufficient wealth to spark the Industrial Revolution (a major change in how things were produced).

The industrial revolution had a profound effect on Health and Medicine both negative and positive; urbanization, the development of a chemistry industry, improved engineering and production techniques and transportation.

1861 Pasteur published his germ theory- that micro-organisms cause infection (+ therefore disease)

Although Pasteur was clearly an exceptionally intelligent and driven scientist a whole range of factors relating to the context of the time, contributed.

No one understood the true causes of disease. Germs were not known about yet. Ideas had remained the same since Roman and Medieval times.

Doctors’ understanding was based on the Four humours theory, developed by Hippocrates, blood, phlegm, black and yellow bile, and astrological (movement of the stars and planets) explanations.

Many ordinary people believed in other causes such as spiritual (God or the Devil).

There was some notion of natural causes, with bad smells or common sense causes, such as an awareness that illness cold spread from person to another, but no understanding of how this happened.

Development of understanding of human DNA as instructions in sets called genes- each with a different function. Miscommunication can cause disability or impairment (hereditary conditions)

In the 1953 Wilkins develop DNA strand photography. Watson and Crick identified double helix structure and role of DNA on blueprint of life.

Factors aiding the breakthrough- individuals, technology microscopes/ computers, geneticists and biochemists, lots of funding and research teams across the globe.

In 1990 the Human Genome Project started mapping the role of every gene. Factors- Research teams across nations, money from pharmaceutical companies, computerization- internet communication and data.

Also increased understanding of lifestyle disease: sun diet and exercise.

1900-2000 Impact on understanding diseases

Other individuals helped; Von Leuwenhoek and Lister, with their improvements to microscope design and Pasteur with his specific evidence of germs causing diseases in humans.

The effects of the Industrial Revolution improved production techniques e.g. glass dye industry, helping to improve microscopes.

The Industrial Revolution also led to the growth of business and industries, which were willing to finance research. (Silk worm, chicken farming, brewing).

The French and German governments both provided support research, through Education/Universities and Funding.

As wealth in the country increased, so could taxation, some of which was spent.

1750-1900 other factor and wider context

Even by 1500, doctors still followed the ideas of Galen and read his work. Little change occurred due to the dominance of the Church.

With the Medical Renaissance people began to question old ideas and to develop new ideas on the way the world and body worked like a machine.

This change was helped by individuals like Vesalius and Harvey who proved Galen was wrong about the human jaw bone and how the heart worked. Their work could be printed on the new presses, so ideas spread. Education in Europe improved.

The Scientific Revolution in from 1600-1750 led to more scientific approach to medical matters. Communication and Education improved, universities encouraged thinking and Education improved, universities encouraged thinking and organisations/sopcieties - were set up in different countries, through which people shared ideas.

1350-1750 Change and continuities

1900-2000- Break through in understanding bodily characteristics

1750-1900 A Major breakthrough in understanding contagious disease.

1350-1750 Pluralistic explanations

The causes of disease 1350-2000