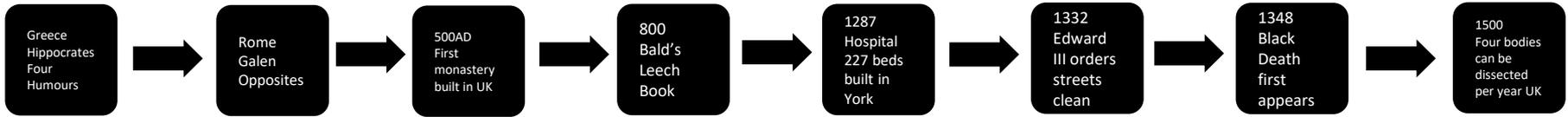


Medieval Medicine



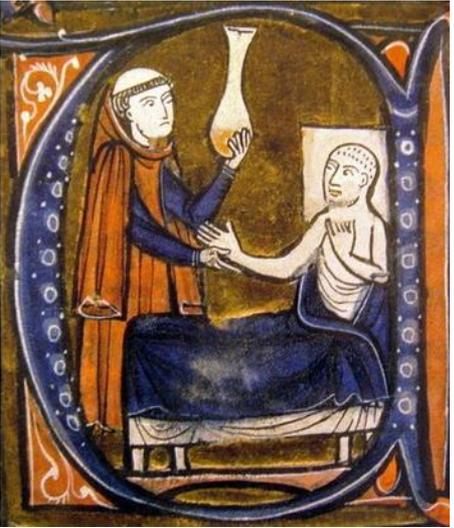
What do I need to know? BLACK DEATH

	The Black Death arrived in England in 1348 after travelling across Europe. It killed at least 1/3 of the population.
	People believed that illness was caused by the planets, God, outsiders, Miasma (bad air) or the Four Humours. However, we know today that it was caused by rat fleas.
	People tried to avoid catching the disease by praying and fasting. The Flagellants whipped themselves. People tried to clean the streets, carrying sweet smelling herbs and trying to keep the air moving by ringing bells
	People tried to treat the disease by praying, cutting open the buboes, holding bread against the buboes and eating cool things and taking cold baths.



What do I need to know? – THE CHURCH

	People believed that God was a cause of disease. That meant people believed that prayer and Holy objects could help to cure people or prevent disease.
	The Church was in control of education, both through universities and schools. This meant that people learnt what the Church wanted them to believe.
	The Church did not approve of dissection and banned it. This, combined with the fact that people believed that they understood the cause of disease, meant that there was little further investigation into medicine and health.
	The Church also taught that people should care for the sick. This meant that most monasteries had a medicinal garden as well as monks who were physicians.



What do I need to know? – CAUSES AND TREATMENTS

	One common explanation for disease was the Four Humours. This idea by Hippocrates was that your body was divided into four parts and you were ill when those parts were not balanced. Galen developed the Theory of Opposites which included things like bleeding.
	People who could treat the sick included Barber-Surgeons, who just carried out surgery, Physicians were qualified doctors and Apothecaries were chemists and provided medicines. However, most care was provided by mothers in the home many of whom had an extensive knowledge of herbs.
	Hospitals did exist, but they were only able to offer fairly basic care. They would not often accept people who had an infectious disease, unless it was especially established for that purpose. They focused on providing basic care and prayers to heal people.
	Most treatment was based on herbs. Some of these would have been effective like willow bark which would relieve pain. Some new ideas were brought back from the Crusades including medicines, but many treatments were ineffective.
	The most common treatment for any illness was purging, by making people vomit or by using laxatives or emetics. Bloodletting was also very common. The wealthy would use leeches as it was less painful. This was believed to rebalance the humours.

If you want to find out more check out the following links or scan the QR codes on your phone or tablet.

READ
<https://www.bl.uk/the-middle-ages/articles/medicine-diagnosis-and-treatment-in-the-middle-ages>



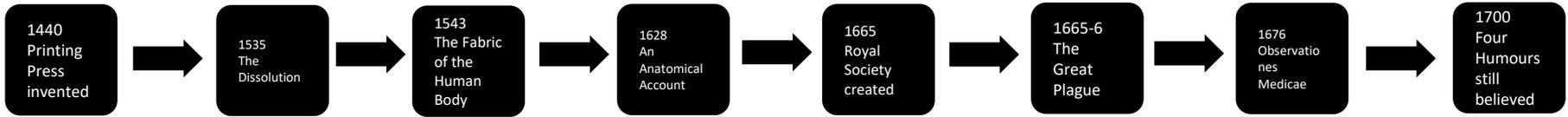
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Renaissance Medicine

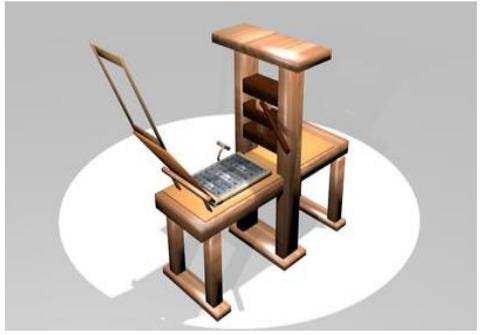


What do I need to know? SCIENCE

	Religion became less important due to the Reformation. People still prayed, but they also looked for rational explanations. Religion also played a smaller role in education.
	The printing press was developed after 1440. This allowed books to be mass produced and made them cheaper. This enabled ideas to be spread widely and it removed the control of the Church.
	In 1665 the Royal Society was established after being granted a charter by Charles II. It also published a journal <i>Philosophical Transactions</i> which enabled ideas to be shared.

What do I need to know? – CARE AND TREATMENT

	Although Religion was becoming less important as an explanation for disease, people still believed in miasma and the Four Humours.
	Although the Dissolution closed down many monasteries, hospitals in cities continued, based on donations. However, most people were treated by women at home.
	The training and knowledge available to doctors, apothecaries and surgeons did improve and there was more focus on miasma, but many ideas were slow to be accepted.
	The Great Plague returned in 1665/6. Causes and treatments remained very similar to earlier outbreaks but the government introduced the Lord Mayor’s Orders which closed down theatres and pubs and enforced a quarantine on any infected households.



What do I need to know? – INDIVIDUALS

	Thomas Sydenham was a doctor between the 1660s and 1670s. In 1676 he wrote <i>Observationes Medicae</i> . He observed and recorded his patient’s symptoms. He treated people based on their disease, not individual symptoms and not based on the nature of the person who was sick.
	Vesalius was interested in the human body. Originally he stole corpses and dissected them. He was able to map the human body and prove that Galen had made mistakes over things like the jawbone. He wrote several books including <i>The Fabric of the Human Body</i> 1543
	William Harvey proved that the heart is a pump and that it pumps blood around the body through arteries and veins. He disproved Galen’s idea that the blood was produced by the liver and burnt for fuel in the body. He wrote a book in 1628 called <i>An Anatomical Account of the Motion of the Heart and Blood in Humans and in Animals</i> . Although he had been a doctor to James I his ideas were not accepted for many years. Also neither Vesalius or Harvey could actually make people better.

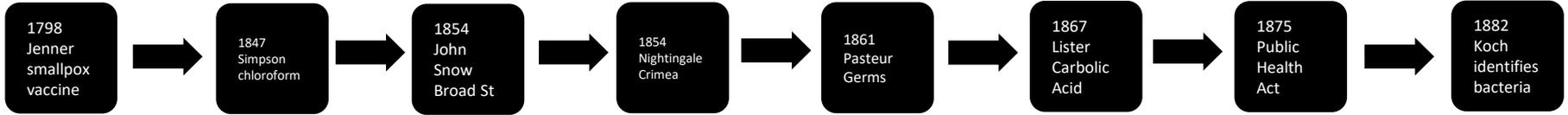
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READ
<https://www.museumoflondon.org.uk/application/files/5014/5434/6066/london-plagues-1348-1665.pdf>

WATCH
<https://m.youtube.com/watch?v=tRbI2JszKd4>

LISTEN
<https://play.acast.com/s/historystoryextra/survivingthegreatplague>

19th Century



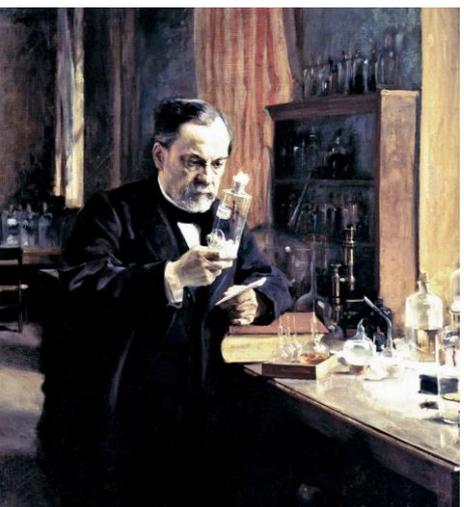
What do I need to know? GERM THEORY

	In 1861, whilst working for a brewery company, Pasteur realised that germs made beer go bad and could explain disease.
	Robert Koch used chemical dyes and microscopes to identify specific diseases like TB in 1882 and cholera in 1883.
	Louis Pasteur then used Koch's work to develop vaccines by weakening bacteria. He developed vaccines for anthrax, rabies and chicken cholera.
	Pasteur identified the cause of disease for the first time. They also inspired other scientists to investigate further.



What do I need to know? – HOSPITALS

	In 1854 Nightingale went to Scutari hospital. She cut the death rate from 42% to 2% by cleaning the hospital and providing good food. In 1861 she wrote a book called "Notes on Nursing"
	Alcohol and opium had been used to dull pain. In 1847 Simpson discovered chloroform. This enable operations to take place but led to the "black period" in surgery.
	In 1867 Lister proved that carbolic acid on wounds and instruments could prevent infection. It led to aseptic surgery.
	Hospitals improved. Although still reliant on charitable donations, there were more trained nurses and specialist hospitals were also established.



What do I need to know? – PUBLIC HEALTH

	In 1798 Edward Jenner published his findings that cow pox prevented smallpox. In 1852 the government made it compulsory and in 1979 smallpox was eradicated.
	In 1831 there was an outbreak of cholera which caused vomiting and diarrhoea. There were other outbreaks in 1848 and 1858. Thousands died. In 1848 the government passed a Public Health Act, but its suggestions were only optional.
	During the 1854 outbreak John Snow used scientific methods to prove that the outbreak was caused by the water pump on Broad Street. When he removed the pump, the outbreak was halted.
	This, combined with the discovery of germ theory in 1861, and the Great Stink, which happened in 1858, encouraged the government to take further action. They appointed Bazalgette to built a sewer network in London. By 1875 it was complete.
	The government also introduced a Public Health Act in 1875. It said that local authorities had to provide sewers, fresh water, paved street and drains. They also had to ensure housing was safe and that the quality of food for sale was adequate.

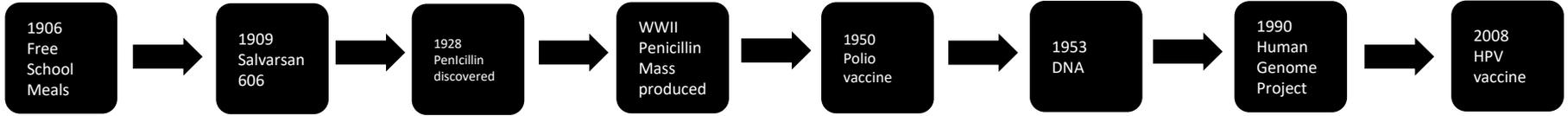
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READ
<http://www.vam.ac.uk/content/articles/h/health-and-medicine-in-the-19th-century/>

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<https://m.youtube.com/watch?v=MdNXDqCGv3M>

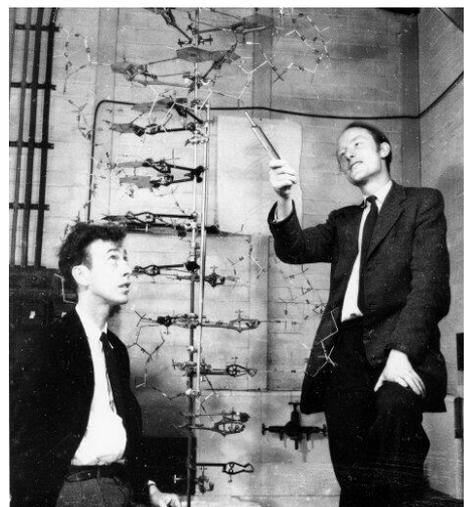
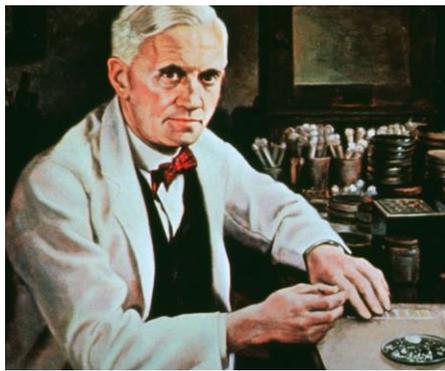
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20th Century



What do I need to know? KNOWLEDGE	
	The structure of DNA was discovered by Crick and Watson by using an X-Ray photograph by Franklin in 1953.
	This led to the Human Genome Project which started in 1990 and mapped human DNA.
	This means that it could be possible to prevent and treat genetic illnesses like Downs Syndrome and Cystic Fibrosis.
	It could also be possible to treat cancers with a more targeted treatment.

What do I need to know? – HOSPITALS	
	After 1906 the government began to show more of an interest in the health of ordinary people by providing Free School Meals and school nurses.
	After WWII the government introduced the NHS. This had been put forward in a white paper written by a man called William Beveridge and was introduced by the Minister for Health, Bevan, in 1948.
	The NHS provided free medical care from the cradle to the grave paid for by taxes. It was very popular right from the beginning
	It introduced a range of compulsory vaccination for diphtheria 1941, polio 1950, rubella 1970, MMR 1988 and HPV in 2008.



What do I need to know? – TREATMENTS	
	In 1909 Paul Ehrlich discovered the first “magic bullet” a chemical drug which treated disease. It was called Salvarsan 606 and treated syphilis. In 1932 Domagk discovered that Prontosil could treat blood poisoning
	In 1928 Fleming wrote about the potential of a mould called penicillin on infections. During WWII Florey and Chain, with the help of the USA government and drug companies discovered how to mass produce antibiotics.
	Here are many different high tech treatments that are now available including keyhole and microsurgery, as well as robotic surgery radiotherapy and chemotherapy, kidney dialysis, fitting pacemakers and organ transplants
	A wide range of technology has also be used in medicine including X-Rays, prosthetic limbs, MRI CT and ultrasound scans, endoscopes, pacemakers, dialysis, insulin pumps, blood pressure machines, hypodermic needles, microscopes and incubators.
	The government also tries to prevent disease by introducing legislation to improve the environment and reduce pollution, healthy lifestyle campaigns as well as targeting lung cancer through education, awareness and reducing the number of smokers.

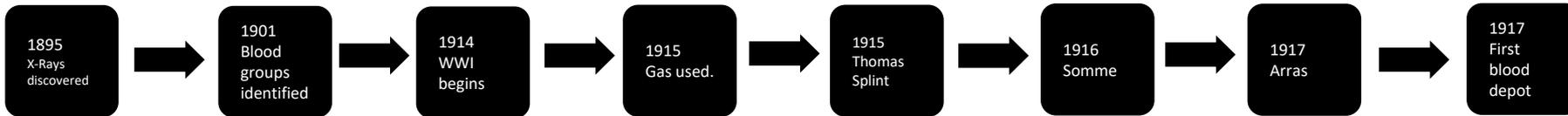
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READ
<https://www.theguardian.com/science/the-h-word/2013/jun/17/discover-new-antibiotics-historical-hints>

WATCH
<https://m.youtube.com/watch?v=my14ZuzjH5I>

LISTEN
<https://play.acast.com/s/historyextra/500yearsofmedicine>

The Historical Environment: The Western Front



What do I need to know? TRENCHES

	WWI began in August 1914. By the end of the year that fighting was largely restricted to Northern France & Flanders
	A lot of the war was fought in trenches. The first trenches were built quickly, but they later became very complicated. They were often very muddy due to water logging and explosions from shells
	Trenches from a zig-zag pattern and were made up of front line trenches, support trenches and reserves trenches. Dug outs were dug into the sides of the trenches
	Key battles were fought around Ypres in 191, 1915 and 1917. There was also significant fighting at the Somme in 1916 and Arras in 1917.



What do I need to know? – INJURIES, ILLNESSES AND CARERS

	Life in the trenches was risky. Trench fever spread through body lice. By 1918 troops were deloused. Trench foot could cause gangrene so soldiers were instructed to change their socks regularly and rub goose fat into their feet and legs.
	New weapons caused injuries. High explosive shells and machine gun bullets caused horrible wounds. Gas attacks were feared and many men suffered from shell shock.
	RAMC were army doctors. FANY were trained nurses. Some volunteers were also accepted. In Arras, at Thompson's Cave, an underground 700 bed hospital was established.
	The chain of evacuation was Regimental Aid post – Field Ambulance – Casualty Clearing Station - Base Hospitals



What do I need to know? – MEDICAL CARE AND IMPROVEMENTS

	X-Rays were developed in 1895 by William Roentgen. By 1914 there were X-Ray static machines in base hospitals. As mobile units were developed, they were also used in CCS.
	In 1901 Karl Landsteiner discovered blood groups, which enabled blood transfusions. In 1915 Lewiston added sodium citrate to stop blood clotting. In 1916 Rous and Turner added citrate glucose which enabled longer storage. By 1917 at the Battle of Cambrai the first blood depot, containing 22 units of blood, had been created
	Aseptic surgery had been developed during this period. This meant that operating theatres were thoroughly cleaned and surgeons and nurses wore sterilised clothes and masks and all instruments were sterilised. In 1878 Koch had developed a steam steriliser for instruments.
	However, the conditions on the Western Front meant that infections, like gas gangrene were common. The Carrel-Dakin method reduced infection by passing a sterilised salt solution through the wound using tubes and surgery was developed to remove all infected tissue, fragments of clothes and bullets.
	The Thomas Split (December 1915) also reduced to death rate from seriously broken legs from 80% to less than 20% as it kept the leg rigid which reduced blood loss. New surgical techniques were developed for brain injuries and Harold Gillies developed plastic surgery.

If you want to find out more check out the following links or scan the QR codes on your phone or tablet.

READ

<https://www.bl.uk/world-war-one/articles/medical-developments-in-world-war-one>

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<https://www.historyextra.com/period/first-world-war/dan-snow-shell-shock-world-war-one-ww1-bbc-documentary/>