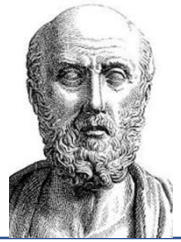
History Knowledge Organiser: Britain, Health and the People
Medieval Medicine (1000 – 1500)

Key Individuals
- Hippocrates
- Galen
- Rhazes
- Ibn – Sina (Avincenna)



Key Words
- Miasma
- Monk
- Cesspit
- Theory of Four Humors
- Theory of Opposites
- Islam
- Christianity
- Dissection
- Purging
- Barber Surgeon
- Flagellants

Christian Medicine
- Believed in looking after the sick.
- Believed God sent illness as a punishment
- Monks copied texts
- Prayers were the most important treatment
- Christians believed that paying for hospitals could help them get to heaven quicker.
- Sick were encouraged to visit holy places (shrines)
- Did not believed in surgery

Islamic Medicine
- Baghdad became the centre for translating Greek books (e.g. Galen and Hippocrates). Hundreds of books were stored in the House of Wisdom.
- Scientists encouraged to discover cures and new drugs
- Mental illness was treated with compassion
- Hospitals were for treating patients not just caring for them.

Key Event: Black Death 1348

Killed 50-66% of the population

Causes: God, Miasma, Four Humours, Movement of Planets, Jews poisoning the wells.

Preventions: Flagellants, prayer, mass, eating too much, taking baths

Treatments: Prayer, mass, pop the buboes, bleeding, attach a live chicken to the buboes to drive out disease

Impact on society: Peasants demanded higher wages and were less willing to be tied to the land. Led to the **Peasants Revolt 1381** (peasants challenged the king).

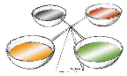
Disease

God – believed illness was caused by God as a punishment.

Miasma – Bad smells caused disease.

Wise Women – gave first aid, herbal remedies, supernatural cures with charms and spells based on tradition.

Theory of Four Humors - There are four liquids in the body; blood, black bile, yellow bile and phlegm. If they are not balanced then the person becomes ill. The doctors job was to restore the balance. Bleeding might be required



Theory of Opposites- Galen decided to build upon Hippocrates discovery of the Four Humors. If a person is to hot give them something cold.

Christians -believed in caring for the sick and started many hospitals over 700 were set up in England between 1000 and 1500.

Apothecary: Would provide herbal remedies

Physician: This was medieval doctor. There were few doctors in England at this time. They charged a fee for their services. Studied for 7 years at university.

Surgery

Limitations of surgery – operated without effective painkillers, had no idea that dirt carried disease, could not help patients with deep wounds to the body.

Medieval procedures – **bloodletting** (to balance the humors), **amputation** (cutting off a damaged part of the body, **trepanning** (drilling a hole into the skull) and **cauterisation** (burning a wound to stop the flow of blood using a heated iron.

Barber Surgeons – Would complete minor surgery such as pulling teeth whilst cutting hair.

John Arderne: Removed growths from inside patients anus. Survival rate 50%. He used pain relief such as hemlock. He treated fistulas (swelling inside the body).

Church – made it difficult for scholars to dissect human bodies. Most dissections were on animals to prove Galen's work. Both Islamic and Christian faiths did not allow people to cut open bodies.

War – improved knowledge of the human body. They were able to try out new techniques on different injuries.

Public Health

Towns: clean water was in short supply. Water came from the rivers/ streams but waste would leak into here.

Cesspits were near to wells. Animals on the streets

Monasteries – Gardens with herbs, clean water, attached to most hospitals. Privies (toilets) emptied into pits. Pipes delivered local well water to wash basins and filters removed dirt. Monks kept clean for God. Christian monasteries were near to rivers. They were isolated which meant disease did not spread as quickly.

Hospitals: help the poor. They provide shelter/ rest and food. They did not have many surgeons or physicians. They were funded by the church. Rich people used to give money to the church to help them get to Heaven.

Coventry
- Cleaning the streets – fining people for not doing this
- Collecting money for waste disposal
- Collecting waste
- Waste disposal areas

History Knowledge Organiser: Britain, Health and the People
Medieval Medicine (1000 – 1500)

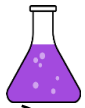
Who?	Discovery	Short Term Impact	Long Term Impact
Hippocrates	Created the Theory of Four Humours, Hippocratic Oath, Used careful observation	Bleeding was used to balance out the humours. It was the first natural theory (not just focusing on God).	Believed for 1000 years. Galen supported him and he was supported by the church. Oath used today.
Galen	Used the Four Humours to created the **Theory of Opposites** Practiced dissections on animals to have an idea about the human body.	If you are hot eat something cold to balance out the liquids. Supported Hippocrates. Believed by the church as he believed in the one creator.	Not challenged until the renaissance period. Brain controlled the body was correct.
Avicenna	Islamic Medicine. Wrote the Book Healing, Canon of Medicine	The Canon listed 760 different drugs	Printed in Europe at least 60 times in Renaissance period.
Ibn al - Nafis	Galen was wrong about how the heart worked as it did not go via the lungs.	Could not prove his ideas as Islam do not allow dissection. Books not read in the west	Europeans continued to accept Galen's mistake until the seventeenth century.
Rhazes	Islamic Medicine. Found the difference between smallpox and measles through careful observation	Followed Galen but was critical of one of his books. Scientific method used.	Wrote over 150 books
Abulcasis	Muslim Surgeon. Invented 26 new surgical instruments. Made cauterisation popular.	Made cauterisation popular. This was using a hot iron to burn blood vessels back together to stop bleeding.	Wrote a 30 volume medical book, 'Al Tasnif' to spread his ideas. Cauterisation used until renaissance.
Roger Bacon	Challenged the Catholic Church, spread anti Church views	Started to use scientific methods	Encouraged challenges to the church
John Arderne	First English Surgeon, removed growths from anus, treated fistulas (swellings inside the body) told doctors how to behave, used pain relief such as Hemlock	Surgery was used during war – improving techniques.	Wrote a book sharing his methods.

Religion

- Belief that God caused disease
- People did not challenge the church
- Church paid for hospitals
- Not allowed dissection
- Supported Galen as he believed in the One Creator

Science and Technology

- Bacon challenge the church. Believed in scientific methods and observation



War

- John Arderne worked on the battlefield
- Cauterisation of wounds
- Treated new injuries
- Amputations
- Improved knowledge

Summary: Religion was the most important factor in the medieval time period. God was believed to cause illness and prayer was used a treatment. Hippocrates and Galen were not challenged in their beliefs as they were supported by the church so were believed for over 1000 years. The dominance of the church meant that the cause of the Black Death was believed to be God and therefore treatments were ineffective as they did not know that germs caused disease. Medicine could not move forward.

History Knowledge Organiser: Britain, Health and the People
Medicine in the Renaissance (1500 – 1800)

Key Individuals
Sydenham
Vesalius
Pare
Harvey
Hunter
Jenner

Key Words
Miasma
Purging
Vaccination
Ligatures
Cauterisation
Aneurysm
Inoculation
Watchmen
Women Searcher

Key Event: Great Plague 1665

Cause: People believed that it was caused by Miasma or a Punishment from God

Preventions: People recognised the likely connection between dirt and disease; most deaths happened in the direst of areas. They used the following preventions:

- 'Women searchers' identified plague victims, noted the plague symptoms.
- Victims were locked up in their houses and guarded by watchmen.
- People were ordered to clean the streets

Treatments: Most common treatment was prayer/ mass. They also threw herbs into the air to clean it

Similarities to the Black Death 1348

- They both believed in the same causes as they were unable to find germs.
- Both tried to prevent the plague from spreading by cleaning up the streets. (This became more enforced by the Great Plague)
- Both used the same treatments to stop the plague
- Both had an impact on the population and led to change. The Black Death led to the Peasants revolt and the Great Plague forced the government to get more involved in Public Health

Disease

Sydenham: Still used bleeding methods for treatment. He also believed in the Four Humours – developed it by using **'cool therapy.'** This means that he would cool a patient if they were ill to balance out the humours.

Apothecaries: they had little/ no medical training, but sold medicines

Quacks: showy, travelling salesmen who sold all sorts of medicines and cure – alls.

Wise women: their treatments often relied on superstition. However, they often had extensive knowledge of plants and herbs.

Trained doctors: used a new and traditional knowledge including the Four Humours

Jenner heard that milkmaids who caught cowpox were still protected against smallpox. He decided to test his theory in 1796 on a boy (Phipps). He waited 6 weeks and then gave him smallpox. But Phipps never got smallpox. He called his technique a vaccination. He repeated the experiment on 16 different patients

Surgery

Vesalius: Made the 'Fabric of the human body' book (1543). It had pictures of the human body and made discovered such as the Jawbone is one not two.

Pare – In 1537 Pare ran out of hot oil so h used egg yoks and **turpentine** to treat gunshot wounds instead of hot oil. He used silk thread **(ligatures)** and tied them around blood vessels to stop bleeding. Instead of **cauterisation**

Harvey - Dissected cold-blooded animals (frogs) to see how blood flowed. He proved that blood moved one way around the body.

Hunter - Demanded careful observation in surgery. He experimented on himself in 1767 with gonorrhoea. He tried radical surgery; in 1785 he saved a man's leg with a throbbing lump (aneurysm) on his knee join, instead of removing the whole leg.

Barber surgeons: poorly trained people who would give you a haircut and perform a small operation

Public Health

Hospitals: Many new hospitals were built. Hospitals had specialised wards for different types of diseases and doctors were often trained. Treatment was free but still mainly based on the four humours (bleeding) Christians believed it was better to treat the sick rather than argue about beliefs. However, fewer people believed that illness was a punishment from God.

Great Plague: The Plague reappeared in 1665. People still believed in the same causes as the Black death (miasma and God punishing them for their sins). They were starting to realise that in the dirtiest of areas there was more disease but failed to discover germs

The preventions were improving however as 'Women searchers' identified plague victims, noted the plague symptoms. Victims were locked up in their houses and guarded by watchmen and People were ordered to clean the streets

History Knowledge Organiser: Britain, Health and the People
Medicine in the Renaissance (1500 – 1800)

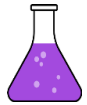
Who?	Discovery	Short Term Impact	Long Term Impact
Sydenham	• Believed in the Four Humours and careful observation • Hated dissections • **Cool Therapy** – cooling a patient to make them better	Four humours was believed for longer Church was not challenged	Bleeding was used as a treatment for longer Ideas were spread in books
Vesalius	• Discovered that the jawbone was one bone not two • Blood did not go through the heart • Breastbone has 3 parts not 7	• Did not make people better • Had accurate knowledge of the body • Proved Galen wrong	• People can challenge Galen • Helps improve surgery • Book spread knowledge
Pare	• Use egg yolk, turpentine, and rose oil to treat gunshot wounds • Ligatures used to stop bleeding • False limbs	• Less painful way to stop bleeding • Ligatures spread infections and took too long	• Wrote a book to spread his ideas • Ligatures encouraged surgeons to think of new methods
Harvey	• Discovered that blood followed one way around the body	• Proved Glen wrong • He did not make anyone better • His ideas were accurate • Did not find capillaries	• Helped people to challenge Galen • Helped to improved surgery in the future –helped with blood transfusions.
Hunter	• Discovered more about the circulation of blood – could get blood to move around a lump to reduce the need for amputations • Worked on cancer	• Proved the importance of experiments, observation and recording • Found out ways f preventing amputations	• Encouraged other surgeons to complete experiments to fid new information • Ideas spread through his books
Jenner	• Discovered that cowpox could be used to prevent people from getting smallpox – the first vaccination	• Used experiments to prove his work • Wrote a book with his findings • Could not explain his discovery	• Given government money to develop his research: £10,000 • Vaccination compulsory in 1853 • Pasteur proved how his ideas worked

Religion

- Pare, Harvey and Vesalius all challenged Galen.
- Religion was still accepted by most but this was the first time that religion was being challenged

Science and Technology

- All of the individuals above used scientific methods to prove their ideas.
- Apart from Sydenham all ideas were accurate



War

- Both Pare and Hunter worked on battlefields.
- When Pare needed to use ligatures on the battlefield to stop men from bleeding

Summary: Religion was starting to decline as surgeons were starting to complete more experiments to prove Galen wrong. Although this was a slow process this meant that new ideas could be made in the future. Science and technology was starting to become important in medicine. War had aided the new experiments to happen. In order to stop disease they needed to find the cause (germs) to provide an efficient as during the Great Plague they still used prayer.

History Knowledge Organiser: Britain, Health and the People
Medicine in the Age of Industrialisation (1800 – 1900)

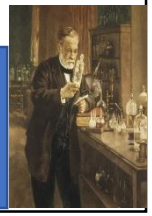
Key Individuals
- Louis Pasteur
- Robert Koch
- James Simpson
- Joseph Lister
- Edwin Chadwick
- Dr John Snow
- Florence Nightingale

Key Words
- Germ Theory
- Pasteurisation
- Vaccination
- Antiseptics
- Anaesthetics
- Chloroform
- Carbolic Acid
- Cholera
- Public Health Act

Key Event: Germ Theory 1861

Impact : disproved miasma theory and spontaneous generation helping us discover the true cause of disease. Influenced Koch who went on to identify the bacteria that caused specific diseases.
Influenced Lister who used Carbolic Acid to kill germs during surgery.

Factors: Communications, Science and Technology



Key Event: The Great Stink 1858

Extremely hot weather meant that the level of the River Thames was low and the smell of exposed sewage along its banks was so great that parliament could not meet. Joseph Bazalgette's plans for a new sewer system in London were approved - 1,300 miles of sewers, plus pumping stations and embankments besides the River Thames to house the stations.

Key Event: Cholera Epidemics

Causes: Miasma was believed to be the cause until John Snow
Key dates: Cholera outbreaks in 1832, 1848 (killed over 50,000 people) and 1854
Impact on society: Acceptance of a link between poor living conditions and disease – resulted in Public Health Acts of 1848 and 1875.
Working class men in towns and cities got the vote in 1867 and they used their vote to put pressure on government to improve their living conditions

Disease

Natural explanations rather than supernatural explanations were used to explain disease. Belief in religious causes of disease declined after The Germ Theory (1861).
Specific Bacteria were identified (Koch identified the bacteria that caused TB, Cholera and Typhoid)
Move towards preventing disease through vaccinations – Pasteur developed vaccinations for Chicken Cholera and Anthrax
This led to the first chemical cures for diseases – Salvarsan 606 was the first 'Magic Bullet' in 1909
Dr John Snow – proved Cholera was caused by contaminated water in 1851

Surgery

In the early 1800s surgery was limited– operated without effective an anesthetics, risk of infection (no understanding of germs) blood loss was still a cause of death
Experiments with anesthetics early 1800s – Ether and Nitrous Oxide were used as painkillers with some success.
James Simpson: Discovered that Chloroform could be used as an anaesthetic
Joseph Lister: Used Carbolic acid as an antiseptic to kill germs during surgery. Cleaned surgical equipment – developed A-Septic surgery.
By 1900 – Anaesthetics and antiseptics allowed surgeons to operate for longer and carry out more complex surgery deeper in the body with reduced risk of infection. However, the risk of blood loss still remained – not resolved until the development of blood transfusions in the 20th century.

Public Health

Living conditions in towns and cities: clean water was in short supply – water pumps. Slum housing – cramped, over-crowded, diseases like Cholera spread easily.
Key Individuals: Edwin Chadwick's report of 1842 highlighted poor living conditions and influenced the government to pass the 1848 Public Health Act
John Snow proved that Cholera was caused by contaminated water. Joseph Bazalgette designed a new sewage system for London

1848 Public Health Act: This set up a general board of health, with Chadwick as one of its three commissioners. Allowed towns to set up their own local board of health BUT it was voluntary
1875 Public Health Act: made local councils responsible for ensuring the following were provided: clean water, public toilets, rubbish removal, sewers and drains.

History Knowledge Organiser: Britain, Health and the People
Medicine in the Age of Industrialisation (1800 – 1900)

Who?	Discovery	Short Term Impact	Long Term Impact
Louis Pasteur	Pasteurisation, Germ Theory 1861. Developed vaccinations against Chicken Cholera and Anthrax	disproved miasma theory and spontaneous generation . Proved that germs caused disease. To begin with people did not accept the Germ Theory	Influenced Koch who went on to identify the bacteria that caused specific diseases. Influenced Lister who used Carbolic Acid to kill germs during surgery.
Robert Koch	Dyed bacteria so they could be seen and studied and developed techniques for growing bacteria. Identified the bacteria that caused TB, Cholera and Typhoid.	Koch revolutionised the study of Bacteriology. Previously it was believed most germs were the same His methods and findings allowed other scientists to locate specific germs that caused specific diseases in humans	Trained many young scientists to use his methods – one of his research team, Paul Ehrlich, went on to develop the first magic bullet.
James Simpson	Used Chloroform as an anaesthetic which did not have the negative effects of ether 1847	Some opposition before Queen Victoria used Chloroform during childbirth in 1853	Surgery was less painful and doctors could take more time, but it was not safer. Until the acceptance of Germ Theory in the 1860's, surgeons did not understand the problem of infection
Joseph Lister	Used Carbolic Acid as an antiseptic during surgery	Some opposition to Carbolic spray but death rate of his patients was reduced	A-Septic Surgery
Edwin Chadwick	Wrote a report into living conditions in 1842	Influenced the government to introduce the 1848 Public Health Act	raising awareness of poverty and its impact and changing attitudes toward poverty and the poor.
Dr John Snow	Water from a contaminated pump (Broad Street) was the cause of a cholera ,London 1851.	Broad Street pump was closed down. Proved the real cause of Cholera – led to government willingness to take action to improve public health	Influenced 1875 Public Health Act. Germ Theory proved Snow's work.
Florence Nightingale	Improved nursing during Crimean War. Improved hygiene in hospitals	Death rates in military hospitals declined	Training academy for nurses set up in England. Standards in nursing improved.

Chance
- Pasteur's vaccination against Chicken Cholera

Science and Technology
- Improved microscope allowed identification and study of bacteria
- Scientific methods used by Pasteur and Koch
- Sewage system in London

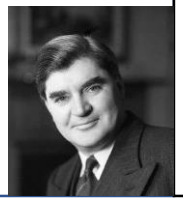
Government
- 1848 and 1875 Public Health Acts
- Government funded research – Pasteur and Koch

War
- Florence Nightingale improved conditions in army hospitals during Crimean War
- Rivalry between France and Germany encouraged government funding for Pasteur and Koch

Summary: Natural explanations for disease and the development of new technology and scientific methods meant a decline in supernatural explanations. Government began to play a greater role in medicine with direct intervention to improve public health. The Germ Theory was not universally accepted to begin with but once it was firmly established it led to vaccinations being developed, antiseptics being used in surgery and a clear link between living conditions and disease.

History Knowledge Organiser: Britain, Health and the People
Medicine in Modern Britain (1900 - Present)

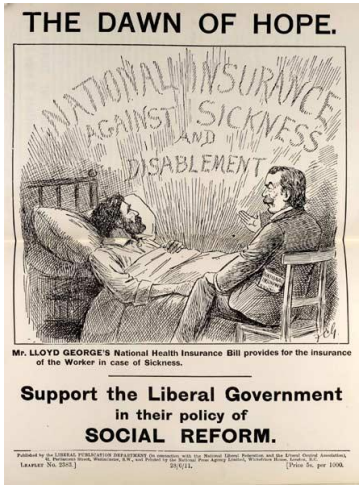
Key Individuals
Fleming
Florey and Chain
Landsteiner
Gillies
Booth
Rowntree
Bevan



Key Words
Penicillin
Antibiotics
Beveridge Report
National
Insurance
Pensions

Key Event: Creation of the NHS 1948

- Created in **1848 by Bevan**
- Provided free health care for everyone
- Was paid through taxes
- A weekly family allowance payment helped with childcare costs
- Very poor received financial help or 'benefits.'
- Faced opposition from doctors



Disease

Fleming – left a petri dish when he went n holiday. He when returned he noticed that penicillin had killed harmful bacteria in the dish. He wrote all of his ideas in a book but did not inject penicillin into an animal which would have shown that it could be used to kill infections. Penicillin was hard to make and expensive – Fleming did not do anything else with the discovery

Florey and Chain - Tested penicillin on 8 mice. Wanted to test it on humans, and over a period of months, they produced enough penicillin to use on a patient with a bad infection. When the patient was injected with penicillin, the infection began to clear up. However, the patient died when the penicillin ran out. The next step was to try to work out how to mass produce it.

During World War Two penicillin was need to treat soldiers with infected wounds. In June 1941,Florey met with the US government who agreed to pay several huge chemical companies to make millions of gallons of it

Surgery

X – rays - Discovered in 1895, hospitals used them to look at broken bones before WW1. During the war, proved their effectiveness on the battlefield when mobile x – ray machines were used, developed by Marie Curie.

Blood Transfusions - In 1900, **Landsteiner** discovered blood groups, which helped doctors work out that a transfusion only worked it the donor's blood type matched the receiver's. It was not possible to store blood for long until 1914 when Hustin discovered that sodium citrate stopped blood from clotting.

Keyhole surgery – to perform operations through small cuts and using cameras.

Radiation therapy – used to shrink tumours and kill cancer cells

Laser surgery – using lasers to treat skin conditions, remove tumours

Plastic Surgery - During the First World War, **Gillies** set up a special unit to graft skin and treat men suffering from severe facial wounds.

Public Health

Britain in 1900 ; Millions were still living in poverty, overcrowded and unsanitary housing was still common, and people worked long hours for low wages

Liberal Reforms: Government introduced the following changes to make improvements to people's conditions:

- Free school meals
- School Medical Service
- Old Age Pensions Act
- Labour Exchanges
- National Insurance

Beveridge Report

In 1942 a report was made that sold over 100,000 copies. It said that people had a right to be free from the 'five giants':

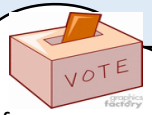
NHS - Created in **1848 by Bevan.**
It provided free health care for everyone and was paid through taxes

History Knowledge Organiser: Britain, Health and the People
Medicine in Modern Britain (1900 – Present)

Who?	Discovery	Short Term Impact	Long Term Impact
Fleming	• Discovered penicillin	• Wrote book • Was expensive and it needed large quantities to make people better	• Florey and Chain used his ideas • Pharmaceutical industries use penicillin as an antibiotic
Florey and Chain	• Used Fleming's discovery to experiment the use of penicillin as an antibiotic	• Proved that penicillin was effective • Got government funding to produce penicillin for soldiers during WW2	• Money after WW2 was given to pharmaceutical industries to mass produce penicillin • Other medicines can be mass produced
Rowntree	• Found that 28% of the population did not have the minimum amount of money to live on at some time of their life.	• Proved that too many people were living in poverty	• Together with the Boer War help convince the government to make changes – Liberal Reforms
Booth	• 30% of Londoners were so poor that they did not have enough money to eat properly despite having full – time jobs	• Proved that too many people were living in poverty	• Together with the Boer War help convince the government to make changes – Liberal Reforms
Landsteiner	• Discovered blood groups to help with blood transfusions	• Helped doctors to carry out blood transfusions	• Helped with surgery in the future
Gillies	• Used plastic surgery to give skin grafts for soldiers for WW1	• Helped to give plastic surgery for soldiers during the war. For example skin grafts could help soldiers to breathe	• Skin grafts have been developed to help people with burns and injuries since the war
Bevan	• Used the Beveridge Report to create the NHS	• Gave free health care to everyone. It was pad through taxes. • Doctors opposed	• Still in use today • More treatments are available • Longer life expectancy • Longer waiting hours

Government

- Started to take responsibility for health care through the Liberal Reforms and the creation of the NHS



Science and Technology

- Technology such as x --- rays, cameras for keyhole surgery have changed surgery so that it is more accurate and people are less likely to get infections

War

- Both wars meant that surgery needed to improve.
- WW2 led to the creation of the NHS

Summary: Wars meant that there needed to be an improvement in the health of the people in Britain. The Boer War forced the government to introduce the Liberal Reforms. The First World War led to significant improvements in science and technology with the introduction of x – rays and skin grafts. Finally WW2 led to the creation of the NHS system which changed medicine radically for Britain. The improvement relied not only on wars but on individuals' ideas and the governments willingness to support.