

# Britain, Health and the People

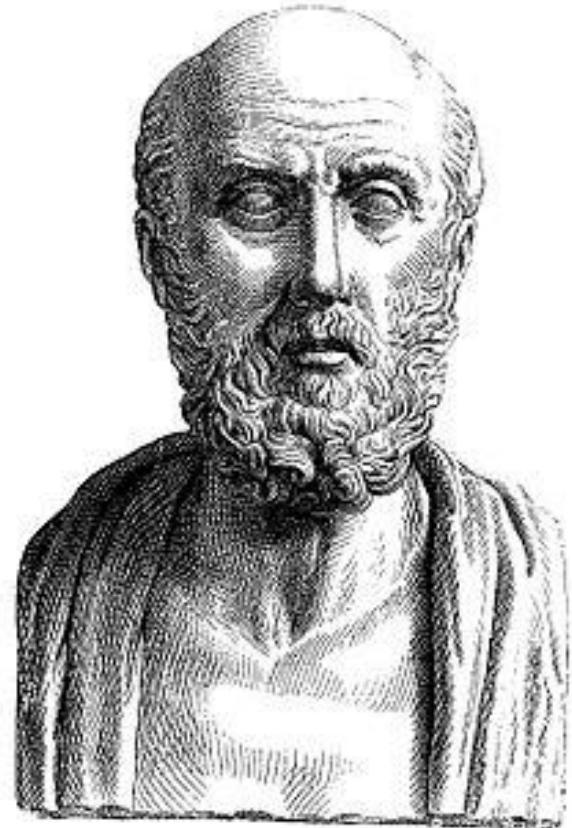


Exam Paper 2 - Revision Cards

**Revision Cards could be on:**

- 1. Medieval Medicine Approaches  
Hippocratic and Galenic methods and treatments**
- 2. The medieval doctor, training and beliefs about causes of illness**
- 3. The contribution of Christianity to medical progress and treatment;**
- 4. Church Hospitals and Treatments**
- 5. The nature and importance of Islamic medicine and surgery;**
- 6. Surgery, ideas and techniques**
- 7. Public Health- Towns and monasteries;**
- 8. The Black Death in Britain, beliefs about causes, treatments and prevention**

Topic - Medicine  
Stands Still - Revision  
Focus Areas



Topic - The beginnings  
of change - Revision  
Focus Areas

Revision Cards could be on:

9. The Impact of the Renaissance on Britain

10. The work of Vesalius, Paré, Harvey

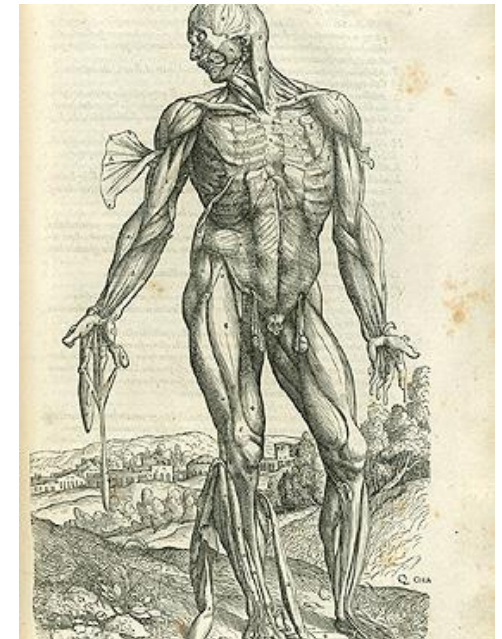
11. Traditional and new methods of treatments; quackery

12. Public Health and Great Plague

13. The growth of hospitals and changes to Surgeons

14. The work of John Hunter

15. Inoculation, Edward Jenner, Vaccination and opposition



Topic - A revolution in  
medicine - Revision  
Focus Areas

**Revision Cards could be on:**

**16. Germs - Pasteur and Koch**

**17. Pasteur and vaccination**

**18. Factors behind success of Pasteur and Koch**

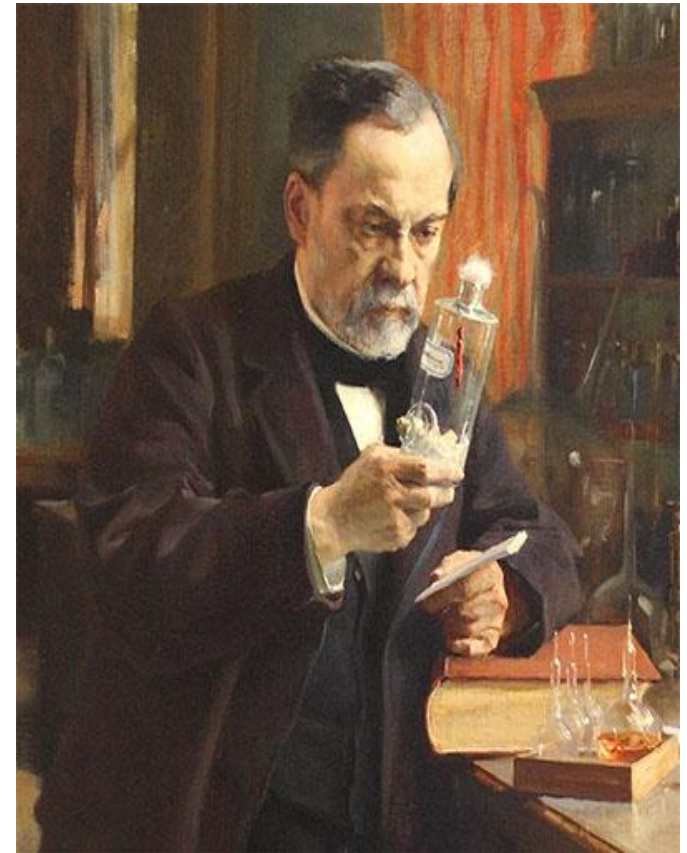
**19. Improving Surgery - New Anaesthetics and Chloroform**

**20. Improving Surgery - New Antiseptic Surgery Techniques and Lister**

**21. Public health problems in industrial Britain; cholera**

**22. How and Why Public Health Improved**

**23. Government Public Health Reforms**





Topic - Modern  
Medicine - Revision  
Focus Areas

Revision Cards could be on:

24. Penicillin and its discovery by Fleming

25. Factors involved in Penicillin

26. Impact of War on surgery

27. The importance of Booth, Rowntree and the Boer War;

28. The Liberal social reforms;

29. The impact of two world wars on public health, poverty and housing;

30. The Welfare State and NHS.



DOTHEBOYS HALL

"It still tastes awful."



# Medicine Card 1

Medieval Medicine  
Approaches (Hippocrates  
and Galen)

Medical ideas in Medieval times were heavily influenced by ancient Greek and Roman medicine.

**1. Hippocrates** - From Greece, known as the 'Father of Medicine', key ideas included:

- **Four Humours** - the idea that the body is made up of four humours (liquids) - blood, black bile, yellow bile and phlegm. When people were ill, it was thought that it meant that there was an imbalance of the liquids.
- **Hippocratic Oath** - Doctors swear to protect life

**2. Galen** - From Rome, wrote many books and did dissections on animals, proved brain controlled the body, important as taught by the Christian Church, key ideas included:

- **Treatment of the Opposites** - to cure a person of a problem you first identified what was wrong with the 4 Humours and then you restored the balance e.g, If you had a cold you were treated with something hot



# Medicine Card 2

## Medieval Doctors and Treatments

Most medieval treatments didn't work. Some treatments were:

- 4 Humours and treatment of the Opposites
- Bloodletting (linked to the above - helps remove excess liquid from body)
- Using naturals herbs/plants
- Amputation (cutting off parts of the body)
- Praying, pilgrimage to holy sites and superstitions (spells)

**Medieval Doctors** - trained at Church run universities, trained for 7 years, learnt treatments of Galen or books based on his ideas such as Gilbert Eagle's 'Compendium Medicine', never practiced on any actual patients, would have to pay to go visit.

Other places of Help - for those who couldn't afford a Doctor

- **Barber Surgeons** - no qualifications or proper medical training, learnt from other barber surgeons, did blood lettings and amputations
- Local Wise Woman - experience of using natural remedies with honey
- Apothecary - people who made up potions using herbs

# Medicine Card 3

The Christian Church and  
medieval medicine

The Christian Church was a very powerful organization in medieval times. It also had a big impact of medicine.

## 1. Ideas about disease

- Punishment - taught that diseases was often a punishment from God
- Mentally ill patients - often thought to be possessed by demons
- St Bernard - In the 12<sup>th</sup> century St Bernard said 'to buy drugs or consult with physicians doesn't fit with religion'

## 2. How the Church helped medical knowledge to progress

- Universities - set up many universities to teach Doctors, medicine was usually the second most taught subject after religion

## 3. How the Church hindered and may have stopped progress

- Limited New Research/Learning - People were taught not to challenge Galen, 13<sup>th</sup> Century monk Roger Bacon was put in prison for saying Doctors should do original research, dissections were banned

# Medicine Card 4

## The Christian Church and Hospitals

The Christian Church believed in following the example of Jesus who often cared for and healed the Sick.

## •Good things about medieval church hospitals

1. Creation - many hospitals were created as the church tried to follow Jesus' example, Monasteries often had infirmaries (small dormitory wards) where the sick and poor could be looked after.
2. Lazar Houses - special houses set up to help people with leprosy, very contagious, set up outside towns, linked to religious orders like Knights Templar as many crusaders caught this disease

## •Examples where women saw little change

1. Size - Some hospitals only had room for 12 patients (the number of Jesus' disciples), Few Large hospitals
2. No attempts to treat people - many hospitals didn't have Doctors, focus was on rest and prayer, herbs used but no attempt at operations etc

# Medicine Card 5

The affect of Islam on  
Medieval Medicine and  
Surgery



Islam's Golden Age of medical scholarship (learning) was from c.AD750-1050. They followed Greek/Roman ideas but also developed new ideas.

They were encouraged by Prophet Muhammad to 'seek knowledge even as far as China'. He said 'For every disease, Allah has given a cure', and physicians were encouraged to find those cures.

## 1. How Islam helped medical knowledge to progress

- Learning - Many Islamic rulers were interested in Science. E.g. The House of Wisdom, was set up in Baghdad by Caliph al-Mamun in AD1004.
- Key People - Al-Razi, wrote over 150 books and stressed the need for careful observation of patients, Ibn Sina (Avicenna), wrote 'Canon of Medicine', listed medical properties of over 760 drugs, later became important book in Europe too
- Hospitals - focussed on treatment and not just care, also teaching hospitals set up
- Surgery - Abulcasis, the 'father of modern surgery', invented 26 new surgical tools, wrote books, described many surgical procedures including ligatures

## 2. How Islam hindered and may have stopped progress

- Dissections - Like the Christian Church these were banned

Medicine Card 6

Medieval Surgery

**Barber surgeons** - people who had the tools to attempt things like tooth extraction, amputations and blood letting.

## •Big Problems with Medieval Surgery

1. Shock - no safe way to put people to sleep or provide pain relief, made operations dangerous, tried natural substances like mandrake, also tried alcohol but dangerous as it causes the blood to pump faster
2. Blood Loss - if artery cut a person can die in minutes, cauterization (burned wound shut with oil/hot iron) was used but very painful
3. Infection - no knowledge of germs, dirty operation areas, barber surgeons didn't wash before operations or have clean clothes, some people thought puss was good and encouraged it on wounds

## •Evidence of the beginning of improvements

1. Books - new books including those by Muslim surgeons were translated into Latin and read by educated and religious men in Europe and Britain
2. Key People - Frugardi (Italian) wrote 'The Practice of Surgery' which warned against trepanning, Hugh and Theodoric of Lucca (Italians) used wine on wounds to stop infections but not popular at time as went against Church ideas, John of Ardene (English) wrote surgical manual called 'Practica' used opium to dull pain

Medicine Card 7

Medieval Public Health

**Public Health** - refers to the health and well being of the population as a whole, how people lived and worked etc

## •Public Health in the Towns (Bad)

1. Living conditions - towns built near rivers but these often used to remove sewage and waste, no sanitation - sometimes toilet waste was thrown in street, privies (toilets in sheds) had cesspits underneath which could overflow into street too if not emptied enough by gong (poo) farmers.
2. Town Councils -didn't want to increase taxes, people also had little knowledge of germs and blamed bad air 'miasma'.
3. First improvements - later medieval period saw some new laws (e.g. In 1388 Parliament passed a law fining people £20 for throwing 'dung garbage and entrails' into rivers) but it was hard to enforce these

## •Public Health in the Monasteries (Better as very wealthy)

1. Buildings - had inside washrooms called Lavatoriums and used piped to bring and filter (clean) water into building.
2. Routines - Monks had to have regular baths as cleanliness was a sign of dedication to God, clothes were washed regularly, heads, hands and feet were washed in religious ceremonies

# Medicine Card 8

## Black Death in Medieval Times

The Black Death first came to Britain in 1348.

## •Explanations at the time (remember they didn't know about germs)

1. Punishment - God punishing people for sins, Flagellants even walked through the streets whipping themselves to beg for God's forgiveness
2. Supernatural - some blamed it on witches, demons, cats and dogs
3. Other ideas - imbalance in 4 Humours, foreigners, Jewish people

## •Some attempts at cures at time

1. Religious/Superstitious - prayers, Flagellants, pilgrimage, eating magic spells
2. Natural Remedies - strapping dead animals to buboes, drinking mercury/vindegear

## •Some Consequences on British Society

1. Death - lots killed very quickly, up to 50% of population in first outbreak of 1348-1350, could die quickly in a couple of days from symptoms like buboes and fever
2. Food Shortages - fields went unploughed, villages could be abandoned, survivors faced starvation, Some Medieval Lords changed to sheep farming as it needed less workers
3. Political Changes and New Laws - Surviving peasants took the opportunity to improve their lifestyle and demand higher wages, led to new laws like Statute of Labourers in 1351 trying to stop peasants leaving villages to look for better pay



Medicine Card 9

The Renaissance Period

**Renaissance** - Means 'rebirth' and refers to a period in time after the medieval period and before the Industrial Revolution. This was a time of new learning and people started to question old ideas and through Science and experiments look for new ideas.

It took longer for improvements in medicine to happen as the Church continued to be powerful things which helped medical knowledge and procedures to improve were:

1. Invention of Printing Press - allowed more books to be made and ideas to spread to more people
2. Gunpowder - new invention which caused new wounds on the battlefield and meant Surgeons had to find new ways treatments
3. The Scientific Method - acceptance of the importance of experimentation and repeat observation in order to learn new things and prove new ideas

# Medicine Card 10

Vesalius, Pare and Hare -  
Key People that improved  
medicine in the Renaissance

## 1. Vesalius (improved knowledge of anatomy and the body)

- 16<sup>th</sup> century University professor at Padua, Performed illegal dissections
- Wrote key book - 'On Fabric of Human Body' which had 100s of illustrations
- Mapped every bone, muscle, organ etc, Identified over 200 errors made by Galen

IMPORTANT - COPIES OF BOOK CAME TO ENGLAND AND INSPIRED SURGEONS, SHOWED PEOPLE HOW TO DO PROPER DISSECTIONS

## 2. Pare (improved knowledge of surgery)

- 16<sup>th</sup> century Barber Surgeon in French-Italian Wars upset by cauterising wounds
- Ran out of oil so improvised using turpentine ointment to soothe wounds - worked
- Invented Crows Beak clamp to hold arteries and reintroduced ligatures to tie up

IMPORTANT - WROTE 'WORK ON SURGERY' WHICH TRANSLATED VESALIUS' WRITINGS INTO FRENCH AND HELPED IMPROVE SURGEONS KNOWLEDGE.

NOT IMPORTANT - BARBER SURGEONS CONTINUED TO USE CAUTERISATION

## 3. Harvey (improved knowledge of anatomy and the body)

- 17<sup>th</sup> century English Surgeon, later personal surgeon to King Charles II
- Through observation showed blood circulated the body and heart was the pump

IMPORTANT - WORK HELPED FURTHER DISCOVERIES LIKE BLOOD GROUPS

NOT IMPORTANT - CRITICISED BY MANY AS A 'QUACK' AND MAD, TOOK 50 YEARS FOR IDEAS TO BE TAUGHT AT UNIVERSITIES AND ACCEPTED

# Medicine Card 11

Traditional Methods of  
Treatment during the  
Renaissance

Although some Doctors and Surgeons engaged with the Renaissance approach and tested new ideas (Pare/Harvey etc) many did not and continued with medieval treatments.

## •Carrying on from Medieval Times

1. Treatments - most treated still based around 4 Humours and using natural remedies, blood letting to restore a body's 'balance', examining urine, cauterisation for wounds, herbal remedies, in 17<sup>th</sup> century 30,000 people a year visited London hoping to be cured by the 'King's touch', prayer
2. People to see if ill - people could still go to Barber Surgeons, Apothecaries, Wise Women. A new person (but still using old ideas) was a Quack - a travelling salesman selling medicines and 'cure-alls'
3. Infection - still no knowledge of germs or need for clean operating areas

## •New Treatments

1. Explorers - brought to Britain new natural medicines like quinine (used to treat malaria now) and Opium (from Turkey)
2. Tobacco - from Americas, wrongly said to cure things like toothache and plague

# Medicine Card 12

Public Health and Great  
Plague of London



The Great Plague of London happened in 1665. It was the last great outbreak of the Plague in England.

## •Similar to Medieval Black Death

1. Causes - Many people still felt God was punishing people for sins or blamed 'miasma' and bad smells, still no knowledge of real causes of diseases and germs
2. Treatments - Continued to use Medieval approaches like prayer and natural remedies such as strapping dead animals to body and drinking vinegar

## •Changes from Medieval Times

1. Death - less people killed (still 100,000) and mostly just affected London
2. Public Health - first links were being made between dirt and disease, Bills of Mortality (death records) showed people that most deaths occurred in poorest and dirtiest parts of London
3. Actions - Unlike in medieval times the authorities led by the Lord Mayor of London tried new approaches to contain the disease. Plague victims were quarantined and guarded by Watchmen, no one could leave London without permission, bodies were only brought out at nights, all the cats and dogs were killed.

# Medicine Card 13

Changes to hospitals and  
training of Surgeons during  
the Renaissance period

During Medieval Changes most hospitals were run by the Christian Catholic Church who also universities and what Doctors were taught. This changed during the 16<sup>th</sup> century as the Catholic Church lost its power following Henry VIII's dissolution of the monasteries (closing them down) and setting up of the new Church of England.

Some Key Changes were:

**1. Who ran hospitals** - Now set up banks and private individuals such as Guy's Hospital in London - set up by the merchant Thomas Guy. Boom in amount of these - in 1800 London's hospitals could handle 20,000 patients a year.

**2. What hospitals were for** - Medieval hospitals were focused on rest and prayer, new hospitals looked at treatments (but these were still based on 4 Humours), new specialist hospitals were set up such as Maternity Hospitals (British Hospital for Mothers and Babies in 1749) and hospitals for venereal (sexual) diseases. Later hospitals also had dispensaries to give out free medicines to poor.

**3. Training and Status of Doctors** - Many new hospitals had medical schools to help train doctors, Company of Surgeons set up in 1745 (later Royal College of Surgeons) to oversee Surgeon's training.

# Medicine Card 14

John Hunter

John Hunter started out as an army surgeon before becoming a surgeon at St George's hospital in London and Surgeon to King George III. He made many important contributions to people's knowledge of anatomy (the body) and also the knowledge and training of Surgeons.

Some **IMPORTANT** contributions were:

1. Scientific Method - One of the first surgeons in England to promote the importance of repeat observation, first experimenting on animals and then humans. He even injected himself with STDs as part of his research.

2. Anatomy - He used his anatomical knowledge from dissection to try new approaches to treat things like aneurysms. In 1785 he saved a man's leg when he refused to amputate and restricted the blood supply above a tumour helping new blood vessels to develop and bypass the damaged area.

3. Knowledge - Books such as 'On Venereal Diseases' and 'Blood inflammation and gunshot wounds' that led to better operations and helped later discoveries.

4. Surgeons Training - Trained hundreds of other surgeons at the College of Surgeons. He also trained Edward Jenner.

# Medicine Card 15

## Edward Jenner and Vaccination

Jenner was 18<sup>th</sup> century country doctor wrote a key book on Vaccination.

## 1. Ideas before Jenner

- Inoculation - idea of using weakened and live germs (often scrapping scabs/puss of an infected person onto healthy skin) of a disease to build up a person's immunity.
- Smallpox inoculation - first happened in England in 1721 after Lady Mary Wortley Montagu had her children inoculated in Turkey. Became more common despite cost.

## 2. Jenner's discovery of Vaccination (using a dead disease or a similar less deadly disease to build up immunity)

- Milk Maids - He noticed they got the less deadly cowpox and never smallpox.
- 1<sup>st</sup> Experiment - Inserted cowpox into 8 year old boy and 6 weeks later gave the boy smallpox. It worked - he didn't catch smallpox. Named discovery Vaccination.

## 3. Importance of Vaccination

- NOT IMPORTANT AT TIME - lots of opposition at time from Doctors who wanted to continue with inoculations they made money from.
- IMPORTANT LATER - Attitudes changed and by 1853 smallpox vaccination was made compulsory in England. Now smallpox eradicated. Now lots of vaccinations.

# Medicine Card 16

Louis Pasteur and Robert Koch - Key people in discovery of germs



Before the Industrial Revolution (1860s) people had knowledge of germs had the role they played in disease and infection. People believe in Miasma and Spontaneous Generation - that infection was caused by a chemical reaction from the body and germs grew from the disease.

## 1. Louis Pasteur and Germ Theory

- 19<sup>th</sup> century scientist who published his Germ Theory in 1861
- Had been investigating why wine went sour
- Used a swan necked flask to show germs were in the air

NOT IMPORTANT AT START - TO START WITH MOST SURGEONS CONTINUED TO BELIEVE IN SPONTANEOUS GENERATION AND CARRY ON AS BEFORE.

IMPORTANTANCE - ACCEPTANCE OF GERM THEORY SURGEONS LIKE LISTER IMPROVED SURGERIES.

## 2. Robert Koch

- 19<sup>TH</sup> century scientist who identified the specific germ causing anthrax
- Came up with 4 Postulates methods - using the scientific method of repeat experimentation and observation, Stages were identifying a germ, growing it in a special agar plate, staining the germ and then photographing to track it.

IMPORTANT - 4 POSTULATES APPROACH MEANT OTHER SCIENTISTS COULD SEARCH FOR DIFFERENT GERMS. MANY NEW VACCINATIONS FOLLOWED.

# Medicine Card 17

## Pasteur and Vaccination

Before the Industrial Revolution (1860s) Jenner had found a smallpox vaccination but it had taken until 1853 for it to be compulsory. No other vaccinations had been found.

## **Louis Pasteur and Chicken Cholera**

- 19<sup>th</sup> century scientist who published Germ Theory, then looked into chicken disease
- Assistant Charles Chamberland luckily accidentally injected an old and weakened sample of the disease into a test chicken
- The chicken survived and then survived another injection of fresh germs.
- Pasteur realised that injecting weakened germs helped build up immunity.
- Named the discovery 'Vaccination' in honour of Jenner's early work.

IMPORTANTANCE - OVER NEXT 20 YEARS MANY OTHER VACCINATIONS WERE DISCOVERED FROM DEADLY HUMAN DISEASES LIKE RABIES, TB AND CHOLERA.

# Medicine Card 18

Factors influencing the  
successes of Koch and  
Pasteur

Pasteur and Koch made some really important medical breakthroughs during the Industrial Revolution. These were helped by the following factors.

## 1. War

- The countries they were both from - France and Germany - fought a war in 1861
- A rivalry between the countries created a rivalry between the 2 men
- The governments of both countries supported each man's research
- Koch's discovery of the anthrax germ in 1876 spurred Pasteur and his team on to identify other germs

## 2. Luck

- Pasteur only discovered his vaccination for chicken cholera when his assistant made a mistake and accidentally injected an old sample of germs into a chicken

## 3. Individuals

- Both Pasteur and Koch were determined individuals
- Pasteur had overcome a stroke and losing his daughter to typhoid
- Koch was also strong minded and determined to beat other scientists

# Medicine Card 19

Improving surgery during  
the Industrial Revolution -  
New Anesthetics and  
Chloroform

**Medieval and Renaissance Times** - Originally in medieval surgeries were done by Barber Surgeons. Training improved in the later Renaissance with the College of Surgeons. But problems of shock, poor pain relief and infection remained.

### •New Anesthetics - Chloroform and Simpson

1. Pain relief - Surgeons had been using natural substances like mandrake or alcohol. At the end of the Renaissance some tried nitrous oxide (laughing gas). Ether was also later tried but it was very flammable and caused vomiting.
2. Chloroform- Discovered by luck after a bottle was knocked over by accident by James Simpson. Bringing dinner Simpson's wife found him asleep.

IMPORTANCE - SIMPSON REALISED THIS COULD HELP IMPROVE OPERATIONS, PEOPLE WOULD BE 'ASLEEP' SO LONGER AND MORE DIFFICULT OPERATIONS COULD BE DONE.

NOT IMPORTANT - AT FIRST LOTS OF OPPOSITION, HARD TO FIND CORRECT DOSEAGE, HANNAH GREENER DIED DURING AN OPERATION TO REMOVE A TOENAIL. BUT QUEEN VICTORIA HELPED WHEN USING IT FOR CHILDBIRTH.

# Medicine Card 20

Improving surgery during  
the Industrial Revolution -  
Antiseptic and Aseptic  
techniques



**Medieval and Renaissance Times** - Originally in medieval surgeries were done by Barber Surgeons. Training improved in the later Renaissance with the College of Surgeons. But problems of shock, poor pain relief and infection remained.

## •Antiseptic Surgery and Joseph Lister

1. Germ Theory - Lister was a 19<sup>th</sup> century surgeon who read the work of Louis Pasteur
2. Carbolic Acid - Lister asked a friend at the University of Glasgow to find him a chemical that could kill bacteria. He got carbolic acid and mixed it with water to make a 5% solution.
3. Operations and Success - Lister first used it on a compound fracture of a small boy. He washed his hands and instruments in carbolic acid, sprayed it in the air and soaked bandages in it. The boy recovered. Lister's operation success went from 46% deaths to only 15%. He published his findings.

NOT IMPORTANT - OPPOSITION AT FIRST, MANY PEOPLE STILL DIDN'T ACCEPT GERM THEORY SO DIDN'T WANT TO CHANGE, CARBOLIC ACID IRRATED THE LUNGS AND AFFECTED HANDS OF DOCTORS SO THEY WOULDN'T USE IT. LISTER ALSO STILL OPERATED IN STREET CLOTHES

IMPORTANT LATER - AS PEOPLE ACCEPTED GERM THEORY THEY ACCEPTED THE NEED TO EXCLUDE GERMS FROM OPERATIONS. 30 YEARS AFTER LISTER WE HAD ASEPTIC SURGERY WHICH ELIMINATED GERMS COMPLETELY, SURGEONS WORE MASKS, GLOVES AND STERILISED EQUIPMENT

# Medicine Card 21

Public health in industrial  
revolution and cholera

Public health (how people lived and worked) had barely improved from medieval times as rapid urbanization and new towns following on from the creation of new factories

## 1. Evidence of Poor Public Health in new times

- Life expectancy fell from 35 to 20 in first half of 19<sup>th</sup> century
- Back to back housing led to overcrowding where disease spread easily
- Still used privies (outside toilets) and still no sanitation (sewers)

## 2. Cholera - similarities to Black Death

- New nasty disease of period, killed tens of thousands very quickly, first outbreak in 1831 killed 50,000 people. Like plague kept returning.
- People at first didn't know what was causing this as they still had no knowledge of germs and 30 years before Pasteur's work. People still blamed 'Miasma'

## 3. Cholera - how tackled

- Dr John Snow used a scientific approach to prove it was caused by dirty water
- Mapped cases in Soho - made connection to Broad Street Pump and leaking privy
- When handle of the pump broken off the cholera cases stopped

# Medicine Card 22

How and why Public Health improved - Key People and Government Reforms

**Public Health** - refers to the health and well being of the population as a whole. It was still bad in the Industrial Revolution because of the poor conditions in new towns.

## •Key People - Chadwick's Report

•Outbreaks of Cholera led the government to investigate the living conditions of the poor. Chadwick's report shocked people and showed many poor people weren't to blame for being poor -it was the poor housing.

IMPORTANT - 1000S OF COPIES SOLD, MADE THE CASE FOR MEDICAL OFFICIERS TO BE APPOINTED IN TOWNS AND FOR CLEAN WATER SUPPLY

NOT IMPORTANT - STILL BELIEVED IN MIASAM, GOVERNMENT DIDN'T DO ANTHING OR PASS MANY OF HIS SUGGESTED REFORMS, CHOLERA CAME BACK

## •EVENT - Great Stink

•The summer of 1858 was so hot that the River Thames got very smelly from all the waste in it and Parliament had to shut down due to the smell.

IMPORTANT - FINALLY CONVINCED THE GOVERNMENT TO TAKE ACTION, RECRUITED JOSEPH BAZELGETTE TO BUILD LONDON AN UNDERGROUND SEWAR SYSTEM, COST £3 MILLION AND TOOK 8 YEARS

# Medicine Card 23

Public Health improved  
reforms during the  
Industrial Revolution

**Public Health** - refers to the health and well being of the population as a whole. It was still bad in the Industrial Revolution because of the poor conditions in new towns but the work of Chadwick, events like the Great Stink and some working men getting the vote in 1867 made governments start to act.

## •Key Actions

**1.Laissez Faire** - the Government ended the old idea of not getting involved in public health and started to take responsibility for people's health and living conditions.

**2.Public Health Act 1848** - Set up a 'Board of Health' in London and gave towns the right to appoint a Medical Officer to inspect rental houses and food. NOT IMPORTANT - TOWNS DIDN'T WANT TO DO THIS THEY DIDN'T HAVE TO.

**3.Public Health Act 1875** - The government forced local councils to now appoint a Medical Officer and ordered them to cover up sewers, supply fresh water, collect rubbish and provide street lighting. IMPORTANT - NOW COMPULSOTY. SOME AREAS LIKE BIRMINGHAM MADE GREAT IMPROVEMENTS.

# Medicine Card 24

## Penicillin and Antibiotics



Many improvements had been made to medicine and surgery during the Industrial Revolution. There were new vaccinations and cleaner operations.

### 1. Magic Bullets

- Next Step after vaccinations. Chemicals that could kill specific germs inside the body. The first was discovered for syphilis in 1909.

### 2. Staphylococcus

- Germ that no magic bullet could defeat, killed soldiers WW1 who caught infections

### 3. Fleming and discovery of Penicillin

- Scientist saw horrors of WW1, researched Staphylococcus for 10 years, no success
- In 1928 got lucky when left a dish of the germ out by accident uncovered
- Mould from lab downstairs floated in and landed in dish, killing the germ
- Fleming noticed this and wrote a paper

NOT IMPORTANT AT TIME - DIDN'T FOLLOW UP WITH TESTS ON ANIMALS

### 4. Florey, Chain and Development of Penicillin

- Scientists who found Fleming's papers, started experiments on mice
- Did first human test on policeman infected by rose bush - died as ran out
- Needed money to grow Penicillin but UK government only gave £25
- Florey travelled to America in WW2 and convinced US government to fund it

NOT IMPORTANT AT TIME - SOON 250,000 SOLDIERS BEING TREATED, FIRST ANTIBIOTIC, REDUCES RISK OF INFECTION FROM SURGERY, NOW MANY OTHER ANTIBIOTICS (THOUGH SOME GERMS ARE BECOMING RESISTANT TO THESE AND SOME PEOPLE TODAY ARE USING ALTERNATIVE MEDICINES LIKE HOMEOPATHY)

# Medicine Card 25

Factors influencing the  
discovery and development  
of Penicillin

Penicillin was an important modern medicine breakthrough - it helps to prevent infections from surgeries, reducing deaths and increasing life expectancy. These were helped by the following factors.

## 1. War

- Fleming was inspired to research Staphylococcus because of what he had seen in WW1 and all the soldiers who died from infections
- The start of WW2 and increase in injured soldiers not able to fight was used by Florey to convince the US government to invest lots of money into getting pharmaceutical (drug companies) to grow lots of penicillin

## 2. Luck

- Fleming only discovered Penicillin by accident when a spore of mould luckily landed in a dish of the staphylococcus germ he had left out uncovered by mistake

## 3. Individuals

- Fleming spent 10 years investigating Staphylococcus, he didn't give up
- Florey and Chain realized important of Fleming's work and restarted experiments, also didn't give up after set-backs and lack of UK government help

# Medicine Card 26

## Impact of War on Modern Medicine

War have often been linked to medical and surgical developments. Deaths and new weapons have forced Surgeons (like Pare in the Renaissance) to try new techniques and experiment. Wars have also pushed governments to invest more in medicine to get an edge on the battlefield and get soldiers back into the fighting.

## 1. Penicillin

- Fleming focussed on the Staphylococcus germ due to what he saw in WW1
- WW2 gave US government a reason to invest in Penicillin production as they wanted to get injured soldiers back to the battlefield

## 2. Plastic Surgery

- Machine guns and shrapnel from bombs in WW1 led to an increase in facial injuries
- British Surgeon Harold Gillies decided to focus on surgery to help injured soldiers
- Treated over 5000 soldiers using new methods of skin grafts and attaching skin to affected areas in tubes

## 3. Blood transfusions

- In WW1 Albert Hustin found glucose and Sodium Citrate stopped blood clotting when came into contact with air - helped blood to be stored for longer and led to blood donations and blood banks today

# Medicine Card 27

Importance of the early 20<sup>th</sup>  
century Social Investigators

At the start of the 20<sup>th</sup> century many people still believed that poor people were responsible for their own poverty and that they should help themselves out of poverty. This was helped to be changed by:

### 1. Seebohm Rowntree

- Investigated poverty in York, found 27% of people lived in poverty
- Said often due to factors outside their control like seasonal employment

### 2. Charles Booth

- Investigated poverty in London, found 30% of people live in poverty
- Said people knew more about African countries than what life was really like for poor

### 3. Boer War

- Took place between Britain and South African farmers in 1899-1902
- Embarrassing to Britain that it lasted so long
- Many recruits to army found to be in poor health - worried people about how Britain could stay at important world power

### 4. Politics

- More working men could vote and political parties realised they could get their support by promising public health reforms

# Medicine Card 28

Liberal Welfare Reforms of  
early 20<sup>th</sup> century



The Liberal Government of 1906-1914 introduced lots of new reforms which showed that governments would now take more responsibility for the health of people.

## 1. Why they did this

- Work of people like Rowntree and Booth showed just how bad poverty was
- Wanted to get votes and support of new working class male votes
- Worried about future strength of Britain as a country if lots of people poor

## 2. Key Reforms

- School Meals (1906) gave local authorities the power to give free school meals.
- School Medical Service (1907) gave local authorities the power to provide free medical checks in school.
- National Insurance Act 1911 protected poor people's finances if they lost their jobs due to illness. All contributed - workers, employers and the Government - to this sick pay
- Banning of the new building of back to back housing and then finally massive slum clearance (1930s)

# Medicine Card 29

## Impact of World Wars on Public Health

**Public Health** - refers to the health and well being of the population as a whole. It was still bad in the Industrial Revolution because of the poor conditions in new towns but the work of Chadwick, events like the Great Stink and some working men getting the vote in 1867 made governments start to act with new Public Health Acts.

## •Key Improvements linked to later 20<sup>th</sup> century World Wars

**1. Diets of Poor** - During WW2, the shortages of some foods meant that the government encouraged people to grow their own food. This improved people's diets because the food they encouraged people to grow were very healthy e.g. fresh vegetables.

**2. Posters and Campaigns** - During WW2, posters were produced to encourage people to keep healthy. They warned people against poor hygiene. This was in a bid to keep Britain 'fighting fit'.

**3. Evacuation** - Many working class children from the cities were moved to live in the countryside. Their poor health was exposed to new people and led to calls for more improvements to public health after WW2.

**4. Beveridge Report of 1942** - When WW2 broke out the British government increased its involvement in medical care. In 1942 a civil servant, Beveridge proposed a free National Health Service (NHS) and when WW2 ended the NHS was born.

Medicine Card 30

The NHS and Welfare State

**Welfare State** - a system where the state (government) take responsibility for protecting the health and welfare of its people. It does this by providing services and benefits (e.g. NHS, Pensions).

## KEY EVENTS

- **Beveridge Report of 1942** - When WW2 broke out the British government increased its involvement in medical care. In 1942 a civil servant, Beveridge proposed a free National Health Service (NHS) and more welfare support for people to end things like poverty and disease.
- **NHS created in 1948** - Health Minister Aneurin Bevan set this up. Important - For the first time, hospitals, doctors, nurses, pharmacists, opticians and dentists were brought together under one organisation to provide services that were free to all users. Before WW2 it was estimated 8 million poor people had never seen a doctor.
- **Early Problems** - Many Doctors didn't like the NHS at first, they worried about losing out on money as people used to pay to see them. In the end the Government had to allow them to continue with private work alongside NHS work to get their support.