Medieval
1000-1500

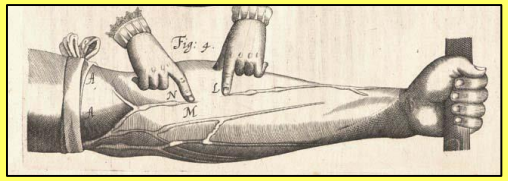
Renaissance/Early Modern
1500-1800

19th Century
1800's

Modern
1900-today

Key knowledge

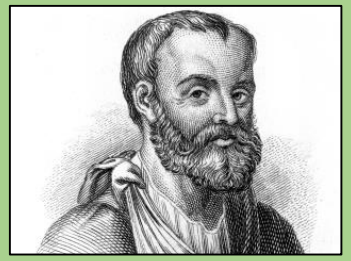
Key knowledge



Key knowledge

Key knowledge

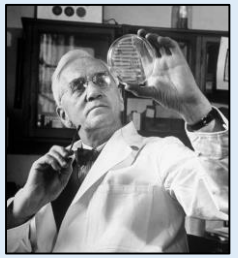
Key people



Key people

Key people

Key people



Medieval
1000-1500

Key knowledge

THEORIES

- ✓ Belief in the SUPERNATURAL – punishment from God
- ✓ Power of the CHURCH – Catholic, outlawed dissection
- ✓ ASTROLOGY – planets!
- ✓ The theory of the FOUR HUMOURS and the influence of HIPPOCRATES and GALEN
- ✓ MIASMA theory
- ✓ ISLAMIC Medicine – more evidence based (link to Crusades)

TREATMENT OF DISEASE

- ✓ Prayer
- ✓ Bloodletting
- ✓ Purifying air
- ✓ Early types of medicine
- ✓ Healers – early doctors, wise women, apothecaries
- ✓ Hospitals – run by the church
- ✓ Monasteries
- ✓ Surgery – Barber surgeons
- ✓ Hugh of Lucca – Italian surgeon – importance of observation, bandages soaked in wine, pus not healthy
- ✓ Great demand for surgery because of war

KEY PEOPLE

- ✓ Hippocrates
- ✓ Galen
- ✓ Hugh of Lucca
- ✓ John of Arderne – basic anaesthetics and treatment of knights
- ✓ Avicenna

LIVING CONDITIONS AND LOCAL GOVERNMENT

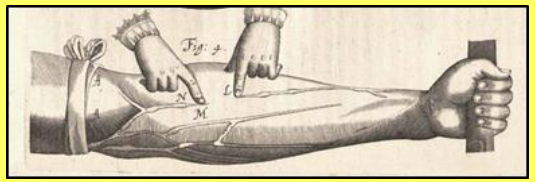
- ✓ Towns pretty poor
- ✓ Monasteries healthier
- ✓ Some attempts by local government to prevent the spread of disease
- ✓ War destroyed a lot of the good Roman inventions

KEY EVENT: 1348 – The Black Death

- ✓ Epidemic
- ✓ Didn't know the cause – treatment ineffective
- ✓ Social change – for those who survived

Renaissance/Early Modern
1500-1800

Key knowledge



KEY PEOPLE
- ✓ Vesalius
- ✓ Harvey
- ✓ Pare
- ✓ Hunter

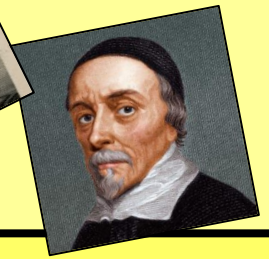
THE RENAISSANCE – "Re-birth"
- ✓ Re-discovery of old theories but also…
- ✓ Fresh thinking – challenge old beliefs
- ✓ Doctors – direct observation of patients
- ✓ Helped by the PRINTING PRESS
- ✓ Reformation – move away from the influence of the Catholic Church
- ✓ ERA DOMINATED BY KEY INDIVIDUALS

PLAGUE OF 1665
- ✓ Similar to Black death – treatments based on magic, religion, prayers, theory of miasma
- ✓ Differences – Town councils tried to stop the spread of disease – e.g. victims quarantined, theatres closed, dead bodies buried away from towns
- ✓ Plague gradually disappeared

A BIT OF OLD AND NEW
- ✓ Doctors reluctant to accept that Galen was wrong
- ✓ Blood-letting and purging continued
- ✓ Doctors still very expensive
- ✓ Most people used apothecaries or barber surgeons
- ✓ Superstition and religion still important
- ✓ Quacks sold medicines that didn't work!

DOCTORS
- ✓ Training and knowledge began to improve
- ✓ College of physicians set up
- ✓ Docs had to train to get a licence
- ✓ New weapons led to the need for new treatments e.g. gunshots
- ✓ New ingredients arrived in Europe
- ✓ The job of a surgeon began to become more respected

Renaissance/Early Modern
1500-1800

Key People


✓ VESALIUS
- ❑ Wrote anatomy books – believed that successful operations would come from understanding of the human body
- ❑ Performed dissections on executed criminals!
- ❑ Accurate diagrams
- ❑ Key book – Fabric of the Human Body
- ❑ Printed and spread round Europe
- ❑ FIRST STEP ON THE WAY TO BETTER TREATMENT

✓ HARVEY
- ❑ British doctor but studied in Padua
- ❑ Studied animals and humans
- ❑ Observed living hearts in action and realised he could apply this on humans
- ❑ Galen's idea was that blood flowed through two separate systems
- ❑ Harvey realised this was wrong and that BLOOD CIRCULATED THE BODY
- ❑ Not everyone believed him and continued to blood let!

✓ PARE
- ❑ IMPROVED SURGICAL TECHNIQUES
- ❑ French barber surgeon
- ❑ Became an army surgeon
- ❑ Gunshot wounds often became infected
- ❑ Used to burn them or pour in boiling oil
- ❑ In one battle Pare ran out of oil so made a cool slave instead – worked better!
- ❑ Also improved amputations – before Pare blood vessels were sealed by heat
- ❑ He tied off the blood vessels – still could get infected
- ❑ Ideas published and over time improved surgical techniques

✓ HUNTER
- ❑ 1700s – well known surgeon and scientist
- ❑ Dissected human bodies at an anatomy school in London
- ❑ 2000 dissections =unrivalled knowledge
- ❑ Became an army surgeon
- ❑ Learnt about venereal disease
- ❑ New approaches to gunshot wounds
- ❑ Best known for encouraging good scientific habits
- ❑ One of his doctors was Jenner

19th Century
1800's

Key knowledge

KEY PEOPLE

- ✓ Nightingale
- ✓ Jenner
- ✓ Pasteur
- ✓ Koch
- ✓ Ehrlich
- ✓ Simpson
- ✓ Lister
- ✓ Snow
- ✓ Chadwick

IMPROVEMENTS IN HOSPITALS

- ✓ Very poor people treated in the work houses
- ✓ Hospitals were founded alongside universities – became training places for docs
- ✓ Also became places for scientific research
- ✓ **Florence Nightingale –** went to the Crimean War and ensured wards were clean and hygienic and that soldiers were fed properly/wrote book on Nursing and set up School of Nursing

GERM THEORY – THE CAUSE OF DISEASE

- ✓ People still thought that germs were caused by spontaneous generation
- ✓ PASTEUR
- ✓ KOCH
- ✓ EHLRICH

Anaesthetics

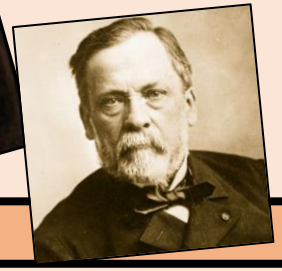
- ✓ Pain the main problem for surgeons an old methods didn't work
- ✓ Nitrous Oxide and Ether – both had problems
- ✓ Chloroform – James Simpson/Queen Victoria
- ✓ Huge benefits – longer, more complex ops
- ✓ However, lots still died of infection

Anti-septics

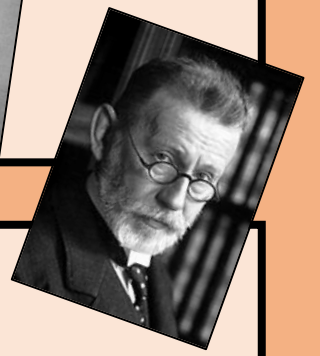
- ✓ Joseph Lister used carbolic acid
- ✓ Heard about germ theory and realised that germs could be on instruments and bandages
- ✓ Not a nice product but effective and death rates massively reduced

PUBLIC HEALTH

19th Century
1800's

Key People

JENNER

- ✓ Smallpox a huge killer
- ✓ Only way to prevent was inoculation but could result in death
- ✓ Found that people who had cow pox didn't get small pox (using SCIENCTIFIC RESEARCH)
- ✓ Tested on James Phipps and published findings in 1798
- ✓ Called vaccination after "vacca" – Latin word for cow
- ✓ Didn't know why his vaccine worked (needed Germ Theory)
- ✓ In the end a huge success

- ✓ OPPOSITION – disease from cows!
- ✓ Threat to livelihood of doctors using the old technique

PASTEUR

- ✓ French chemist
- ✓ Proved there were germs in the air
- ✓ 1861 published his germ theory – argued that microbes in the air caused decay
- ✓ KEY POINT – it inspired Lister, helped Snow's findings on cholera and ultimately in the future linked poor living conditions to disease

KOCH

- ✓ Built on Pasteur's work by linking specific diseases to particular microbes
- ✓ Identified Anthrax bacteria, TB, cholera, TB
- ✓ Used revolutionary scientific techniques – agar jelly to create solid cultures, dyes and stains so that he could see bacteria under the microscope

EHRLICH

- ✓ First magic bullet
- ✓ Salvarsan 606 for syphilis

These 2 didn't like each other and their countries were at war so their rivalry spurred them on…

- ✓ They both inspired discoveries by many other scientists

19th Century
1800's

Key knowledge cont...

PUBLIC HEALTH

- ✓ Problems of the Industrial Revolution – overcrowding, poor sewerage, poor water supply, cess pits
- ✓ Cholera – at epidemic levels by 1832, 21,000 dying a year, caused by drinking infected water, thought it was caused by miasma
- ✓ Chadwick – social reformer, published a report saying that health was better in the countryside, said that government should pass laws to have proper drainage and sewerage systems – pressure on the government = Public Health Act of 1848 – limited effect as it was ignored in most towns
- ✓ Snow – linked cholera to dirty water – based on study of Broad Street in London

CHADWICK AND SNOWS WORK LARGELY IGNORED UNTL…

- ✓ The Great Stink – 1858 Thames water level dropped and bacteria grew in the waste, Bazalgette appointed to build a sewer system (1300 miles built)
- ✓ Change in attitude – end of Laissez Faire – 2nd reform act (partly inspired by the fact that 1 million more people were allowed to vote)
- ✓ 1875 Public Health Act – forced council to appoint health inspectors and sanitary inspectors – much more effective – slums cleared

Modern
1900-today

Key knowledge

KEY PEOPLE

- ✓ Rowntree
- ✓ Booth
- ✓ Fleming
- ✓ Florey and Chain
- ✓ David Lloyd George
- ✓ Beveridge
- ✓ Bevan

ROLE OF GOVERNMENT

- ✓ Liberal Reforms – 1906
- ✓ Inspired by Booth and Rowntree and the causes and effects of poverty
- ✓ Reforms improved health by tackling poverty – free school meals, pensions, insurance act, medical inspections in schools, job finding services
- ✓ Link to World Wars – created pressure on the government to change
- ✓ NHS

KEY DEVELOPMENT – PENECILLIN

- ✓ Fleming – worked in a hospital during WWI
- ✓ Working in 1928 – growing staphylococci on petri dishes – fungal spore on one part – stopped the growth of the bacteria – was penicillin
- ✓ Florey and Chain took on the idea – took idea to USA for mass production – hugely significant in WWII
- ✓ World's first anti-biotic

Led to the growth of the pharmaceutical industry – mass production and funding of research for new drugs (e.g. cancer drugs)

- ✓ **IMPACT OF THE WORLD WARS**

Modern treatments

- ✓ Transplants first in 1905, more successful 1970's onwards
- ✓ Technology – lasers, key hole surgery
- ✓ Alternative treatments – Acupuncture, natural substances

Modern
1900-today

Key knowledge

WORLD WAR ONE

Shell Shock – to begin with victims were treated as cowards, officially recognised by the end of the war, today known as PTSD

Blood Transfusions – only by 1900 had they learnt how to do this effectively after they realised that people had different blood groups, people still died as they couldn't store the blood, in 1914 a way of storing blood was found by mixing with glucose and sodium citrate

X-Rays – discovered in 1895, used during the war on mobile machines to look inside bodies for the position of bullets and shrapnel

Plastic Surgery – Set up a special unit to graft skin, Gillies and his team treated over 5000 men by 1921

Infection – battlefields very dirty, gangrene common, solution was to soak the wounds in salty solutions – short term answer but saved lives

Broken bones – Leg splint developed

WORLD WAR TWO

Heart Surgery – progressed during the war, man called Dwight Harken cut into beating hearts and used bare hands to remove bullets and shrapnel

Blood transfusions – Advancements in the storing of blood allowed it to be stored for longer, led to the National Blood Transfusion Service in 1938

Plastic Surgery – Doctors used new drugs such as penicillin to prevent infection when treating patients, Work of Archibald McIndoe especially recognised

Diet – Food shortages meant people grew their own so ate more healthily

NHS – in 1942 Civil Servant William Beveridge proposed a free National Health Service

Hygiene and disease – Posters put up to warn people of poor hygiene

Drug Development – Penicillin recognised as the "wonder drug" and produced on a large scale

Poverty – Kids evacuated out of poor areas – led to a commitment after the war to do more to improve lives

Modern
1900-today

Key knowledge

FORMATION OF THE NHS

- ✓ William Beveridge published a report in 1942 – called for the state to provide help "from the cradle to the grave"
- ✓ Promoted the idea of a welfare state
- ✓ Labour government elected with the promise to implement his ideas

- ✓ 1948 – NHS formed
- ✓ Bevan - Minister for Health introduced it – free health care for all, nationalised hospitals
- ✓ Some opposed on cost
- ✓ Doctors opposed as worried about loss of income
- ✓ Docs allowed to still treat private patients for pay

- ✓ In the end very popular – increased the number of people with access to health care
- ✓ Today offers a huge range of services – A and E, maternity, surgery, mental health , STIs, GPs

- ✓ Lot of challenges today – increased life expectancy therefore different problems on the increase, peoples lifestyle choices (e.g. smoking), rising costs, 2016 budget was £116 billion

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1000

1250

1500

1750

2018

PRE-1000 Important dates/events:

- 400BC - Hippocrates
- 162AD – Galen
- DARK AGES