

GCSE Medicine in Britain – c1250-c1500 – Medicine in medieval England

Specification content		Key examples	
Ideas about the cause of disease and illness	Supernatural and religious explanations of the cause of disease. Rational explanations: the Theory of the Four Humours and the miasma theory; the continuing influence in England of Hippocrates and Galen	Causes	Supernatural – God, to punish sin, or to test your faith – leprosy especially seen as punishment. Also astrology – movement of the planets Rational – humours being unbalanced. Miasma (plural = miasmata) – bad air – swamps, corpses etc could transmit disease. Bad smell suggested sin
Approaches to prevention and treatment	Approaches to prevention and treatment and their connection with ideas about disease and illness; religious actions, bloodletting and purging, purifying the air, and the use of remedies. New and traditional approaches to hospital care in the 13 th century. The role of the physician, apothecary and barber surgeon in treatment and care provided within the community and in hospitals	Treatment	Always links to ideas about causes Supernatural – prayer, fasting, touching relics, going on pilgrimages, checking horoscope before treatment. Rational – bloodletting (could use leeches or cupping), purging, warm baths, herbal remedies
Case study	Dealing with the Black Death, 1348-49; approaches to treatment and attempts to prevent its spread	Prevention	Prayer. The <i>regimen sanitas</i> (instructions on how to stay health, started with Hippocrates – eg stay clean, clean home etc), diet, herbs to make air smell
Key people		Test yourself:	This knowledge should be in your head all year!
Hippocrates	'Father of Medicine' – 4 humours, clinical observation (watch and record details, use this to help with future cases), importance of exercise, Hippocratic Oath for doctors (to preserve life)	Doctors	Physicians – trained at university by watching dissection and listening to Galen's description. Diagnosed through urine etc sample+astrology.
Galen (129-200)	Built on Hippocrates' ideas – theory of opposites (if cold, give something hot), also dissected animals to find out about anatomy (structure of body). Proved brain, not the heart, controls the body		
Roger Bacon	Put in prison around 1270 for suggesting doctors should do their own research, not just follow Galen		
		Do you know these words?	
Physicians, apothecaries and surgeons	Physicians – diagnosed+recommended treatment, trained at university. Apothecaries – mixed herbal remedies (joined a guild, worked for master to train). Surgeons – least qualified, also cut hair		
Case study		Big question-	Why did so little change in medieval times?
Dealing with the Black Death	Bubonic plague – outbreak in 1348-9 – 1/3 rd to 1 / 2 of the population died. Causes – miasma, Jews, sin, positions of planets. Treatments – confuses sins and pray, bleeding and purging (but seemed to make worse), sweet herbs or fire to clean air. Prevention – pray and fast, leave the area, carry sweet herbs, quarantine (new people stay away for 40 days), clean streets (or don't, maybe bad smell will drive out miasma)		<ol style="list-style-type: none"> 1. Power of Church – if you questioned it, you would go to Hell, and they supported Galen's ideas (as he believed in one god) 2. Church controlled education 3. 4 humours ideas seemed to work 4. Government was more interested in defending the county and keeping it peaceful than improving health

GCSE Medicine in Britain – c1500-c1700 – The Medical Renaissance in England

Specification content		Key examples	
Ideas about the cause of disease and illness	Continuity and change in explanations of the cause of disease and illness. A scientific approach, including the work of Thomas Sydenham in improving diagnosis. The influence of the printing press and the work of the Royal Society on the transmission of ideas.	Causes	Still God, miasmata, 4 humours (but rejected by some, disease seen as separate to body – eg work of Paracelsus), animalcules were a new idea (tiny animals – ie bacteria – seen under microscope)
Approaches to prevention and treatment	Continuity in approaches to prevention, treatment and care in the community and in hospitals. Change in care and treatment: improvements in medical training and the influence in England of the work of Vesalius	Treatment	Not much change – still bloodletting+purging (4 humours), praying, herbal remedies (but new ingredients – eg tobacco from America). But some – eg herbal remedies chosen for colour/shape (eg jaundice treated by yellow things). Also idea of 'transference' – a disease could be transferred by touching (it would leave the first person). Start of looking for chemical cures – known as iatrochemistry – eg using antimony to encourage vomiting
Case studies	1. Key individual: Harvey and the circulation of the blood. 2. Dealing with the Great Plague in London, 1665: approaches to treatment and attempts to prevent its spread	Prevention	Not much changed, though in towns you could be fined for not cleaning the street in front of your house. Barometers+thermometers used to check link between weather and disease
Key people			This knowledge should be in your head all year!
Vesalius	Learnt about anatomy from dissections. 1543 – 'Fabric of the Human Body' – proved Galen wrong in more than 200 ways, eg proved jaw only had 1 bone.		
Copernicus and Galileo	Challenging the authority of the Church in astronomy – suggested the Sun, not the Earth, at universe centre		
Thomas Sydenham	Nicknamed 'the English Hippocrates' – in London in 1660s and 1670s – emphasised careful observation. Said diseases could be organised into different groups (rather than personal to the patient) – saw measles and scarlet fever were different	Hospitals	Early 1600s, more people with illnesses coming in – stayed for short time which suggests cured. 1536 monasteries dissolved – fewer hospitals. New 'pest houses' for those suffering from plague.
Gutenberg+ Leeuwenhoek	Gutenberg (1450s) – first printing press Leeuwenhoek (mid 1600s) – first microscope		
Chamberlen	1620 – invented forceps – fewer female midwives		
Case studies			

Harvey and the discovery of the circulation of the blood	Studied at Padua where he was taught Vesalius' theory that veins contained valves – Harvey tried to pump liquid away from the heart in dissected bodies but it didn't work – contradicted Galen's idea that blood flowed around the body from the liver. Harvey then disproved Galen's idea that blood was burned up – in fact same blood circulated. He dissected humans and did vivisection on animals, proving heart like pump, suggesting capillaries linked arteries and veins. Published 1628, but people slow to accept	Dealing with the Great Plague in London, 1665	Treatment – not many records as people shut up in homes. Wrap patient in thick cloth to sweat out the disease. Transference (chicken on buboes). Prevention – pray, quarantine those who has plague for 28 days in house, plague doctors with special costume, more action from government than 1348 (dogs and cats killed, tar burnt on streets)
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GCSE Medicine in Britain – c1700-c1900 – Medicine in eighteenth- and nineteenth-century Britain

Specification content		Key examples	
Ideas about the cause of disease and illness	Continuity and change in explanations of the cause of disease and illness. The influence in Britain of Pasteur's Germ Theory and Koch's work on microbes.	Public Health Act	Previous laissez-faire attitude, then 1848 Public Health Act made action on clean water and sewage voluntary. 1875 Public Health Act made it compulsory for towns to take action. Change mostly because of (1) Snow (2) working men getting the vote in 1867 (3) Great Stink 1858.
Approaches to prevention and treatment	The extent of change in care and treatment: improvements in hospital care and the influence of Nightingale. The impact of anaesthetics and antiseptics on surgery. New approaches to prevention: the development and use of vaccinations and the Public Health Act 1875	Causes	Miasma until 1861, and afterwards – people slow to change. Spontaneous generation was a popular theory – rotting matter created microbes, which caused the miasmata.
Case studies	1. Key individual: Jenner and the development of vaccination 2. Fighting Cholera in London, 1854; attempts to prevent its spread; the significance of Snow and the Broad Street pump	Pasteur+ Koch's influence	Pasteur – Britain slow to listen, followed Bastian's spontaneous generation ideas. Lister did follow Pasteur. John Tyndall, a physicist, similarly linked dirt and disease, but people found ideas hard to accept. Koch made it easier for other doctors to study microbes+inspired them to
Key people			This knowledge should be in your head all year!
Florence Nightingale	Nursed in the Crimean War in the 1850s, cut death rates from 42% to 2%. Then wrote 200 books about hospitals, including Notes on Nursing and Notes on Hospitals, and set up a training school for nurses in the 1860s at St Thomas'. [still believed in miasma] Made nursing respectable		
Edward Jenner	1796 – used cowpox germs to protect against smallpox – the first vaccination. Tested it on 23 people. Lots of opposition, including from Christians and from people who had done inoculation.		
Louis Pasteur	Published germ theory in 1861 – germs cause disease. Then 1879 chicken cholera vaccine discovered by chance (injected old germs) – first vaccine since Jenner. Developed more, as did Koch		
Robert Koch	1875 – found the germ that caused anthrax – which proved germ theory was true and meant vaccines could be developed. Also stained microbes.		
Simpson+Lister	Key developers of chloroform (1847), the first successful anaesthetic and carbolic acid (1865), the first antiseptic		
Joseph Bazalgette	Responsible for ambitious London sewers, created after Great Stink in 1858, finished 1875		

John Snow	1854 – proved that cholera was spread through water		more deaths. Then antiseptic and aseptic surgery, though doctors didn't like carbolic acid or Lister
Changes in society			
Jenner and vaccination	See above. Smallpox very serious – 11 epidemics in London in 18 th century. Inoculation = deliberately giving someone the disease, to protect them later. Jenner published in 1798 and government then funded vaccine. Hostility because strange idea, and Jenner couldn't explain how it worked. 1852 smallpox vaccination compulsory, enforced from 1872.	Fighting Cholera in London, 1854	First came to Britain 1831 – epidemics every decade to 1860s. Killed people in a week. Tar barrels burnt, but it didn't help. In 1848-9 epidemic Snow suggested cholera was being transmitted by dirty water (not miasmata). He proved this in 1854 epidemic – mapped deaths in Soho and linked them to contaminated Broad Street pump

GCSE Medicine in Britain – c1900 to present – Medicine in modern Britain

Specification content		Case studies	
Ideas about the cause of disease and illness	Advances in understanding the causes of illness and disease: the influence of genetic and lifestyle factors on health. Improvements in diagnosis: the impact of the availability of blood tests, scans and monitors		
Case studies	1. Fleming, Florey and Chain's development of penicillin 2. The fight against lung cancer in the 21 st century: the use of science and technology in diagnosis and treatment; government action		
Key examples			
Causes - genetic	Genetic understanding improved by 1900 through Mendel (genes come in pairs, one from each parent). Then 1953 Crick and Watson identified the structure of DNA, using photography from Franklin. Led to Human Genome Project, finished 2000 – identified complete set on DNA. From that, can identify genes that cause diseases – eg BRCA1 for some breast cancer (Angelina Jolie)	Causes - lifestyle	Smoking – popular from 1920s – biggest cause of preventable disease in world. Diet – too much sugar (leads to diabetes) and fat (heart disease). Also alcohol, tanning and STIs.
Treatment	Huge changes: 1. Magic bullets – specific cure for specific disease, first one 1909 Salvarsan 606 (Paul Ehrlich) for syphilis. 2. Penicillin – first antibiotic, could cure more than one infection. Lots of technology for treatment now (chemotherapy for cancer, kidney dialysis machines to do the work of kidneys if they fail). Better sci+tech includes mass production of pills, insulin pumps and hypodermic needles (which measure precise doses).	Improvements in diagnosis	X-rays from 1890s – can see inside human body without cutting into it. Later (1940s) ultrasound and then (1970s) CT and MRI scans – MRI can see tissue. Blood tests from the 1930s onwards and ECGs from 1900s onwards. Blood pressure monitors from 1880s onwards. Endoscopes from 1900 (camera to see inside body)

Treatment in hospitals and influence of NHS	<ol style="list-style-type: none">1. Previously – some help through 1911 National Insurance Act, but only for workers, not for wives/families2. NHS launched 1948 – government now responsible for GPs and for about 3000 hospitals.3. High-tech surgery now includes transplants (eg hearts from 1967), microsurgery (reattaching tiny blood vessels), keyhole surgery (tiny incisions). More and better prosthetic limbs – for increased soldiers surviving attacks in Iraq and Afghanistan4. Prevention has improved – mass vaccination for babies and young people (eg polio developed 1954, HPV 2008), Clean Air Acts in 1960s. Lifestyle campaigns against binge drinking or unprotected sex, and for healthy eating eg 5 a day
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