



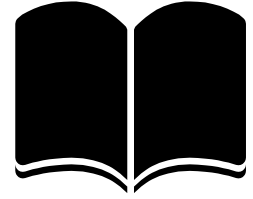
SCHOOL HISTORY

Part One: Medicine Stands Still

Paper 2: Shaping the Nation
Section A: Thematic Studies

[AA Britain: Health and the people: c1000 to the present day](#)





Instructions for use

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Learning Objectives

At the end of the lesson, students should have good understanding of:

- ❑ Medieval approaches to medicine and doctors' training and beliefs about causes of illness.
- ❑ Christianity's contribution to medical progress and treatment; hospitals; the nature and importance of Islamic medicine and surgery; surgery in medieval times.
- ❑ Public health in the Middle Ages: towns and monasteries; the Black Death in Britain, beliefs about its causes, treatment and prevention.



Important Keywords

Four Humours
scholars
Miasma

Islamic

Dissection

Galen & Hippocrates





*A Doctor too emerged as we proceeded.
No one alive could talk as well as he did
On points of medicine and of surgery
For, being grounded in astronomy
He watched his patient's favourable star
And, by his Natural Magic, knew what are
The lucky hours and planetary degrees
For making charms and effigies.
The cause of every malady you'd got
He knew, and whether dry, cold, moist or hot;
He knew their seat, their humour and condition.
He was a perfect practicing physician.*

- Excerpt from Chaucer's *Canterbury Tales* (c.1387)



Understanding Health and Medicine in Medieval Britain

In this module, you will learn about the medieval environment and how this contributed to the spread of diseases and infections.

You'll learn how the theories of Hippocrates were elaborated upon by Galen and why the Church accepted these theories but not others.

You'll learn about and compare the differences in approach to medicine and medical care between Christianity and Islam including the pros and cons that each religion brought to medicine.

You'll see how monasteries played an important role in public health and how hospitals of the medieval era were very different to today's institutions.

Finally, you'll explore the benefits to public health and the study of medicine that came from the Black Death.....



Etching of a medieval doctor examining a patient's urine, c.1491





How the medieval environment influenced diseases and medicine

The medieval and early modern era in Britain faced serious challenges when it came to protecting individuals, communities and populations from disease. These included...

SOCIETY High numbers of peasants meant high rates of poverty. Malnutrition was common increasing the risk of disease - 30% of children died before the age of seven. Peasants couldn't afford to see doctors and relied on monasteries for help.

FOOD SECURITY Famine was a constant threat. The Great Famine of 1315-17, for example, killed 10% of Britain's population. The famine saw a period of extreme levels of crime, disease, mass death, and even cannibalism and infanticide.

WAR In medieval times, war was frequent and close-range combat was brutal often leading to death from injuries. In the Battle of Towton, for example, 50 000 men fought in the battle and as many as 28 000 died, which represented 1% of the English population.

POOR KNOWLEDGE OF DISEASE AND SAFETY There was no knowledge of bacteria, viruses and fungi as the causes of diseases. Living closely with livestock, poor hygiene and sanitation caused outbreaks. Accidents at home and work were also common and infections could easily kill.



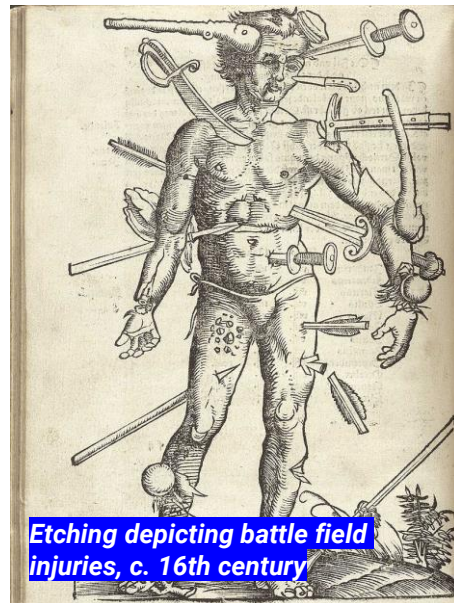
How the medieval environment influenced diseases and medicine

The way people lived also greatly contributed to their vulnerability to infections and diseases...

TOWNS Dark, poorly ventilated streets were common. No plumbing meant chamber pots were thrown onto the street along with kitchen waste. Livestock roamed freely in town and manure was left to rot. An average town of 150- 2000 people produced a lot of

HOUSES in towns and villages were made from wood, clay and brick with tiled or straw roofs. Floors were lined with hay for warmth and to absorb liquids. Houses were damp, dark and poorly ventilated. They attracted rats, mice, lice and fleas, and mould grew easily.

HYGIENE Most people washed very infrequently. Christian beliefs of earthly life being preparation for heaven lead to ideas that bathing was an earthly indulgence to be avoided. Clean water was rare, making it dangerous to drink and to prepare food with.



Etching depicting battle field injuries, c. 16th century



Medieval ideas about the causes of illness

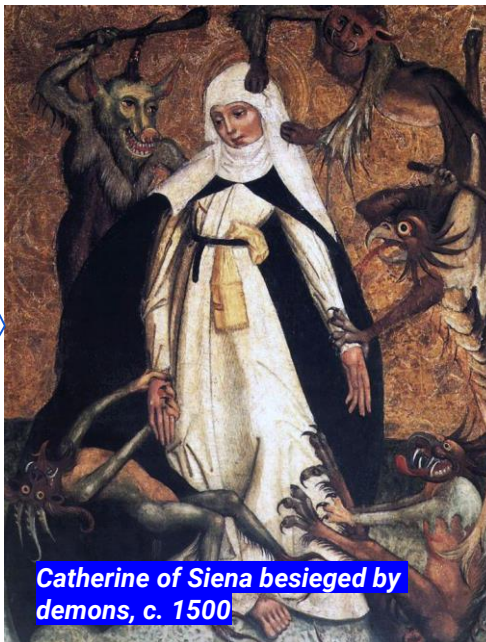
Because there was no real scientific approach to identifying the causes of illness, four primary theories dominated the Middle Ages...

SUPERNATURAL REASONS

Astrology was big in the medieval era. Doctors used almanacs to determine the influence of the stars on organs and illness.

THEORY OF THE FOUR HUMOURS

Four fluids, namely blood, yellow and black bile and phlegm needed to be in balance, otherwise illness would strike. E.g. bloodletting.



Catherine of Siena besieged by demons, c. 1500

RELIGIOUS REASONS Most people were illiterate and relied on the church for info. Powerful and strict, the church linked illness to sin, punishment by God or the work of the devil and demons.

MIASMA THEORY The idea that bad air or bad smells were to blame for illness. They had yet to connect that smells of rot or filth were linked to bacteria and disease-carrying pests.





Medieval ideas for the treatment of illness

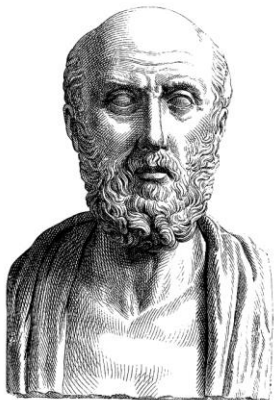
Illness causes the body to go cold and the cold causes phlegm...

INFLUENCES ON MEDICAL THINKING IN THE MEDIEVAL ERA

If being cold causes phlegm, warm the body up with chilli and peppers...

HIPPOCRATES

460-370 BC

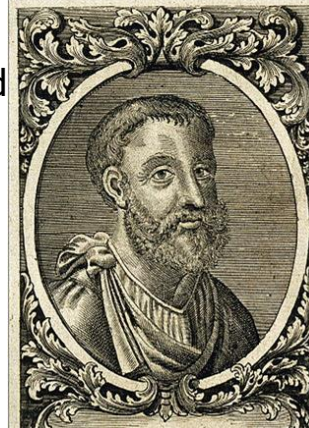


- Physician in Classical Greece
- The Father of Medicine
- Developed the four humours
- Believe diseases were caused by factors like diet and living habits rather than superstitions and gods
- The Hippocratic school focused on patient care and prognosis rather than diagnosis

- Greek physician and surgeon in the Roman Empire
- Helped develop scientific disciplines and logic
- Added dispositions, elements and seasons to the four humours
- Believed in souls and partially in religious explanations
- The Church therefore supported the four humours

GALEN

129-210AD





Medieval ideas for the treatment of illness

THE FOUR HUMOURS: an excess or deficiency of any of the four fluids or humours could directly influence a person's temperament and health

PHLEGM
Season: Winter
Age: Old age
Element: Water
Organ: Brain / lungs
Qualities: Cold and moist
Temperament: Phlegmatic

BLACK BILE
Season: Autumn
Age: Adult
Element: Earth
Organ: Spleen
Qualities: Dry and cold
Temperament: Melancholic



BLOOD
Season: Spring
Age: Infancy
Element: Air
Organ: Liver
Qualities: Moist and warm
Temperament: Sanguine

YELLOW BILE
Season: Summer
Age: Youth
Element: Fire
Organ: Gallbladder
Qualities: Warm and dry
Temperament: Choleric





Medieval ideas about the causes of illness

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Watch the video (0:00 - 02:34 then 32:30 - 58:45) to get a good understanding of medieval beliefs about illness and their solutions...



Hidden Killers of the Tudor Home:

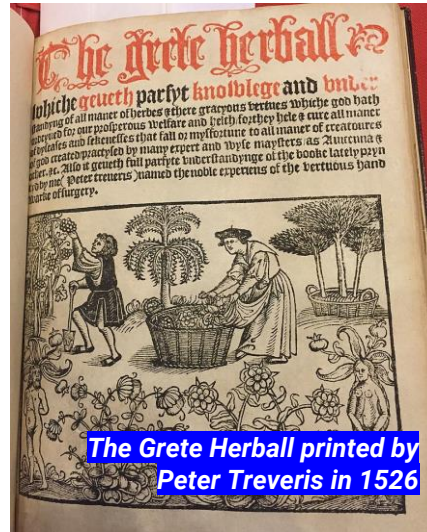
<https://www.youtube.com/watch?v=GgbEVDi8Zdc&t=3157s>



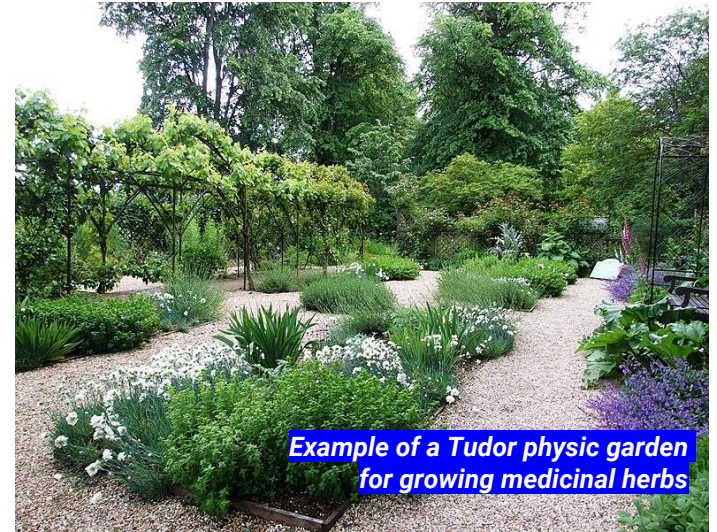


Medieval ideas for the treatment of illness

- As poverty was rife in the Middle Ages, many people treated themselves using herbal remedies made from plants and herbs found in their gardens or local surroundings. They would pass down remedies through the generations.
- With the arrival of the printing press and growing literacy, herbals became best-sellers and could be found in many homes.



The Grete Herball printed by Peter Treveris in 1526



Example of a Tudor physic garden for growing medicinal herbs

WHAT'S AN HERBAL? It was a book containing the names and descriptions of plants, as well as their medicinal, tonic, culinary, toxic, or magical powers, and the legends associated with them.





Medieval ideas for the treatment of illness

WOULD YOU TRY THESE?

For the treatment of palsy (paralysis)...

Take a fox with all the skin and all the body quartered and with the heart and the liver and the lungs and the fatness of the stones, entrails and kidneys, and steepeth it long in running water with calamint balm and caraways and bathe the patient in the water of it, and the smell of the fox is good for the palsy...

- From a 16th-century herbal

Bloodletting cutting a vein and losing blood to restore health by balancing the humours.

Trepanation drilling a hole through the skull to release evil spirits possessing the sick and mentally ill. Used for treating epilepsy, headaches, abscesses and blood clots.

Mercury A favourite in medieval times, Quicksilver was mixed with fat and other balms for treating syphilis.



The Grete Herball printed by Peter Treveris in 1526 depicting a mandrake root



The Medieval doctor: Beliefs and training



- In medieval Europe, medicine operated within the context of the Christian Church.
- Deviating from the Church's doctrine was heresy > **Roger Bacon**
- Dissection of human bodies was illegal.
- Doctors relied on observation to help them learn as well as observation and questioning to diagnose.
- They listened to the lungs, took the pulse and looked at urine to help with diagnosis.
- Doctors carried posies or perfume to counteract miasma, which they thought caused disease.
- Monasteries were important places for ordinary people seeking treatment as hospitals in today's sense didn't exist.
- Where professional medicine could not help, people would turn to saints, prayer and the Church for healing.

**And then the Black Death
changed everything**





The Medieval doctor: Beliefs and training: The Black Death



100 million deaths



1346 1347 1348 1349 1350 1351 1352 1353

culprits



Swellings (buboes)

OOZE BLOOD & PUS
Black spots

vomiting blood, FEVER
diarrhoea, pain

... DEATH



POWERLESS

48% the
number of clergy
that died from
plague





The Medieval doctor: Beliefs and training: The plague

- No one knew exactly how the Black Death was transmitted, nor how to prevent or treat it.
 - Superstition, belief in God's wrath, astrology and crude theories grew.
 - Jews were persecuted as they were more hygienic and less affected by plague. Many believed they poisoned water supplies.
 - Physicians used unsanitary and dangerous procedures such as bloodletting and boil-lancing to try cure victims of plague.
 - Burning aromatic herbs and bathing in rose water or vinegar was also tried with little success.
-
- Slowly, it was realised plague spread from people in contact with each other.
 - In desperation, clothing was burned to try prevent the spread of disease.
 - The theory of miasma was prominent with the King of England ordering filthy streets be cleaned up.
-
- Heavy fines were introduced for littering in the streets.
 - Gutters were built into town streets.
 - Butchers were required to butcher their meat in segregated areas. Throwing offal and blood into the streets was punishable.
 - Cesspools and wells needed to be further apart from each other.





The Medieval doctor: Beliefs and training: The plague

The calamity of the plague brought about many changes to Medieval Europe. Health and medicine were no exception...

OUTCOMES The Black Death ended nearly a century of religion-induced medical ignorance. More scientific thinking emerged highlighting the shortcomings in existing medical science. In 1348, Pope Clement VII unbanned and encouraged medical autopsies and dissections. >>

- More regulations were introduced to the medical field.
- Professionalism and licenced medicine increased.
- Less emphasis fell on religion and more on evidence-based experimentation.
- Sanitation and cleanliness improved. >>

- Because millions of people died, those who survived had less competition for food resources, so were generally healthier. Population density was also reduced meaning less crowded living spaces in homes and towns. Noticing that Jews were less affected by the plague, personal hygiene began improving.





Christianity and medical progress and treatment

ADVANTAGES

Christian priests, nuns and monks often worked as physicians. It was their Christian duty to care for the sick.

Infirmaries were established in some monasteries or convents to act as hospitals. The sick were cared for by chaplains.

Preserved the ancient works of Galen and Hippocrates, even if the ideas were inaccurate.

Some hospitals grew herb gardens and herbalists would create remedies from them.

DISADVANTAGES

The Church overly supported the theories of Galen (body created by God) and challenging his theories was blasphemous.

The Church was against modern thinking - including dissection - even if it had benefits for medical knowledge.

Prayer and contrition for sins were considered the best treatment.

Medical universities in the 13th century were limited with students taught the theories of Galen and Hippocrates, which perpetuated inaccurate medical practice.

IN SHORT. Though the Church allowed for some medical progress in the Middle Ages, overall, it was a hindrance and medicine stood still. The ancient Greek and Roman theories were adhered to and the Church shut down further exploration unless it conformed to its doctrines. Christianity also brought positives to medicine, including: hospitals, plumbing of monasteries, creating medical schools, and funded universities.





Hospitals in England in the Middle Ages



Historical painting of a hospital in the Middle Ages

Hospitals in the 14th century were divided into four main types: for **lepers**; **poor and sick pilgrims**; the **poor and infirm**; and **almshouses**. Almshouses were more like prisons with daily prayer required.

Monks and nuns tended to the sick and **professional medical care** by physicians or doctors was **rare**.

There were only around **850 hospitals and almshouses** in 14th-century England. They were small, between **12 and 20 patients** only. St Leonard's Hospital in York was the exception with 225 beds.

The **hospital patron** could **turn away patients** unless they found a backer to pay for their **entrance fee**.

A common problem was **corrupt hospital officials**, particularly if the patron didn't live close by. Those staying at almshouses were **subjected to discipline** including **corporal punishment, fines or expulsion**.



Islamic influence on medicine and surgery

Like Christians, Muslims believed diseases could be sent by God, but finding remedies was the answer, not prayer.

Muslims realised health and hygiene were connected.

Islamic scholars actively sought out knowledge and explored new theories rather than disregard them as blasphemy.

Hospitals were set up for the sick and they were supported financially until they could work.

Islamic approach to medicine

Islam encouraged caring for the sick and needy.

Avicenna (980-1037 A.D.), a Muslim physician, wrote 450 books including *The Book of Healing* and *The Canon of Medicine*.

While Western Christian medicine stuck to the four humours, the Muslim world began to challenge errors in the theories. But because the Church was against Islam, Muslim ideas spread very slowly in Europe.

IN SHORT. The religion of Islam emerged around 600 A.D. The Caliphs in the Muslim world wanted to spread the teachings of the Quran. The Quran encouraged learning and the gathering of knowledge and so the texts of Galen and Hippocrates among many others from around the world were translated, preserved and developed upon.



Islamic influence on medicine and surgery

Islamic alchemists had developed methods for purification, which helped prevent infection.

As early as 931 AD, doctors were required to pass exams.

Operating on patients without being fully sure of the cause was discouraged and a plan was needed before operating began.

Islamic approach to medicine

Muslim scholars were reluctant to share knowledge with Christians because of religious differences.

Islamic medicine was hindered by lack of dissection as they believed it was not respectful to a body.

While Western Christian medicine stuck to the Four Humours, the Muslim world began to challenge errors in the theories but because the Church was against Islam, Muslim ideas spread very slowly in Europe.

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Surgery in Medieval times

Medieval surgery was dangerous.

Physicians had only **basic understanding of anatomy**, **no understanding of bacteria** and were **unable to treat infections** well. There was **no anaesthetic**...

🔪 Unlike the ancient Greeks and Romans, medieval physicians had learned that **pus was not a good sign** of healing.

🔪 13th-century Italians **Hugh and Theodoric of Lucca** discovered wine was better for cleaning wounds than water.

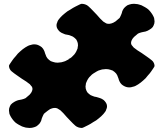
🔪 14th-century **John of Arderne** began using henbane and hemlock as anaesthetics.

🔪 Universities and **medical training improved** giving surgeons a better reputation than that of a medical tradesman similar in status to a barber.

🔪 **Common surgeries** were removal of teeth and exterior tumours, setting broken bones and cauterising wounds with a hot iron.



Historical drawings from Roger of Salerno's *Chirurgia Practica* depicting medieval surgery.



Glossary of Terms

Four humours

The idea developed by Hippocrates and Galen that four bodily fluids needed to be in balance otherwise illness would occur. Supported by the Church.

Miasma

The theory that illness and infections were caused by bad smells.

Pus

Initially thought of as good for wound healing.

Islamic scholars

Encouraged the search for and development of knowledge from other cultures.

Monasteries

Very wealthy, they had plumbing and purified water. Public relied on them for treatment.

Hospitals

Majority were for housing poor and elderly rather. There were also leper hospitals and almshouses where penance was key for treatment.

The Church

The Christian Church was powerful and strict, preventing dissection and developing new medical theories unless in line with Galen.

Black Death

The catastrophic epidemic killed millions of people and forced a change in the approach to medicine. The Church lost power, dissections were unbanned and more emphasis was placed on scientific-based theories.





Task #1

SOURCE A

They brought to me a knight with a sore on his leg; and a woman who was feeble-minded. To the knight I applied a small poultice; and the woman I put on diet to turn her humour wet.

Then a French doctor came and said, "This man knows nothing about treating them." He then said, "Bring me a sharp axe." Then the doctor laid the leg of the knight on a block of wood and told a man to cut off the leg with the axe, upon which the marrow flowed out and the patient died on the spot.

He then examined the woman and said, "There is a devil in her head." He therefore took a razor, made a deep cross-shaped cut on her head, peeled away the skin until the bone of the skull was exposed, and rubbed it with salt. The woman also died instantly.

I asked them if I was needed any more, and when they said not I came home, having learned of their medicine what I knew not before.

- Muslim doctor Usama ibn Munqidh, *Autobiography* (c.1175)



Study the source and, using your knowledge of the historical context, describe how Christian and Islamic approaches to medicine differed. Provide examples to substantiate your argument.



Task #2



Study the image depicting the four humours. Then, write an essay in which you discuss the origins of the theory, why the Church accepted the theory, and how it was put into practice in the prevention and treatment of illnesses





Task #3

**The development of
medical knowledge in
medieval England**



Create a mind map which highlights important shifts in medical knowledge and developments. Be sure to include notable figures (e.g. Roger Bacon and Hugh of Lucca, Pope Clement VII) and their contributions. This will be your study aid for exam revision.





Homework Time!

Be prepared for part two of this module by familiarising yourself with the below...

The impact of the Renaissance on Britain: challenge to medical authority in anatomy, physiology and surgery; the work of Vesalius, Paré, William Harvey; opposition to change.

The works of Vesalius, Paré, William Harvey.

Dealing with disease: traditional and new methods of treatments (including quackery). Methods of treating diseases and the; plague

The growth of hospitals; changes to the training and status of surgeons and physicians; the work of John Hunter.

Prevention of disease: inoculation; Edward Jenner, vaccination and opposition to change.

