

c1250–c1500: Medicine in medieval England

Medicine in Britain Module 1:

In this module you will revise; Medicine in medieval England (c1250-1500)

1. **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)
1. **Approaches to prevention and treatment** (Approaches to prevention and treatment and their connection with ideas about disease and illness; religious actions, bloodletting, purging, purifying the air and the use of remedies. New and traditional approaches to hospital care in the 13th century. The role of the physician, apothecary and barber surgeon in treatment and care provided within the community and hospitals, c1250-1500)
1. **Module 1 case studies** (Dealing with the Black Death, 1348-49; approaches to treatment and attempts to prevent its spread)



KT 1.1 Being ill in Medieval times

Life for many people in medieval times was tough...and short! The rich were more likely to be able to afford treatment by a doctor than the poor and you were more likely to find a doctor in the towns compared to villages. The young were more at risk than adults.

MEDIEVAL DISEASES

Famine and war were perhaps the main killers of this period. A bad harvest also meant **malnourishment** for many. When people were malnourished it was easier to catch a disease.

SAINT ANTHONY'S DISEASE was a disease caused by fungus growing on the grains of rye. Those who ate it died.

DYSENTERY, TYPHOID, SMALLPOX AND MEASLES were widespread. Some historians believe 10% of Britain's population died of these diseases.

CHILDBIRTH was a dangerous time for women, and it is also likely that **30%** of children died before the age of **7**

Leprosy a contagious disease that affects the skin, mucous membranes, and nerves, causing discoloration and lumps on the skin and, in severe cases, disfigurement and deformities. Leprosy is now mainly confined to tropical Africa and Asia.

Smallpox an acute contagious viral disease, with fever and pustules that usually leave permanent scars. It was effectively eradicated through vaccination by **1979**.

Medieval people didn't really understand the causes of most diseases so they focused on trying to cure symptoms instead. The best practitioners tried following **Hippocrates**, to do know harm to their patients. Ironically treatments were brutal and dangerous. For example a treatment for rheumatism was to wear a donkey skin and a treatment for asthma was to eat baby frogs.



KT 1.1 What did medieval people think made them ill?

Miasma

A miasma was bad air that was believed to be filled with harmful fumes. Hippocrates and Galen (see case study) both wrote that swamps, corpses and other rotting matter could transmit disease.

Smells and vapours were also associated with God - a sweet smelling home was a sign of spiritual cleanliness.

Medieval physicians called it 'corruption of the air'.

Astrology and the supernatural

The alignment of the planets and stars was important in **diagnosing** illness. Star charts would be used by **physicians**. This was a supernatural explanation for disease. Witchcraft was also feared and many believed the world was full of demons trying to cause trouble and death. Any sudden diseases that spread quickly were blamed on evil.



Religion

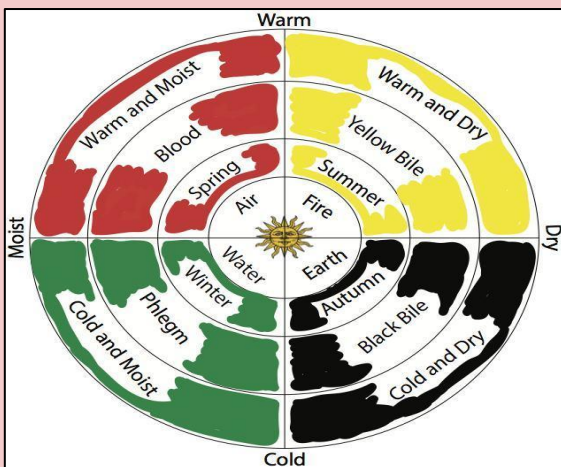
People in medieval England were very religious and followed the Catholic religion. Illness was very common (**malnutrition** was very common) and remained a mystery so the Church used religion to provide the answers (**see case study**). They taught that sins would be punished by God and that the God or the devil could send disease. The church also declared that a miracle had happened when they recovered, thanks to prayer. **Leprosy** was a disease believed to have been sent by God.

The Four Humours Theory

This was an idea from Ancient Greek times. It stated that, as the world was made up of four different elements, the body was made up of four different humours:

- Blood
- Phlegm
- Black bile (clotted blood – could be in excrement or vomit)
- Yellow bile (pus or vomit)

The theory was created by Ancient Greek physician **Hippocrates (see case study)** – he observed patients carefully and recorded his findings. The idea of the humours fitted what he saw. In Ancient Rome, **Galen**, another famous doctor, developed the theory further. He created the **Theory of Opposites**, for example he said that an excess of phlegm could be cured by eating hot peppers, a fever could be cured by cucumbers to cool the patient down. He also said that blood was created in the liver and circulated around the body.



The belief was that the humours needed to be balanced and equal – if they were not then a person became ill. The theory said each humour was linked to certain characteristics e.g. a fever was caused by too much blood. The humours were linked to the seasons e.g. phlegm was linked to winter. Astrology was an important part of this as the humours were connected to star signs as well as personality traits. The theory could be used to explain almost any kind of illness – physical or mental. There was no other scientific explanation for the cause of disease.

KT 1.1 Why was living in towns and cities so unhealthy?

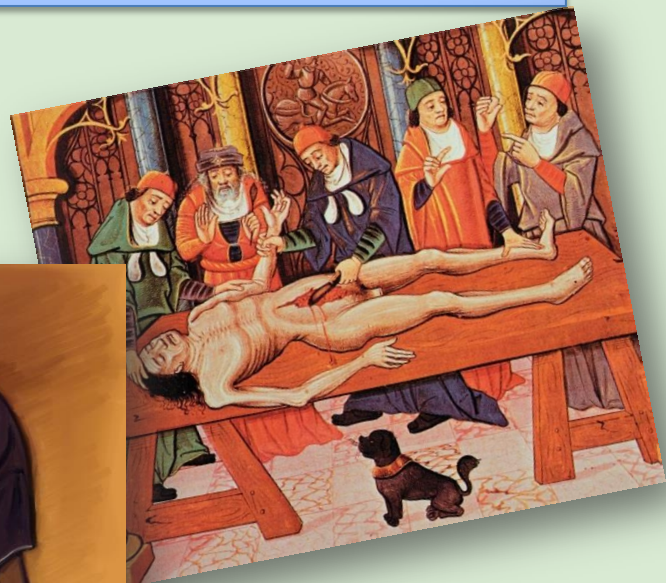
- **Towns were unhealthy:** Clean water was hard to come by. Water was usually taken from rivers and streams that were contaminated with **human waste**. Butchers also brought animals into cities and would slaughter them in the streets. This meant it was difficult to get rid of the animal's body.
- Industries like **tanning** also caused a lot of problems. Leather was usually treated with dog poo. If you were unlucky the **overnight piss-pot** might be chucked out of an upstairs window as you were passing below.
- **Keeping food fresh was difficult**, so you had to shop for food every day. Shopkeepers would try to sell food that was going off rather than throw it away. Water for drinking was also rare, hence most people would drink "**small beer**" rather than risk the water.
- Sewage in the streets in the countryside or small villages were not really a problem, but they became deadly in towns. **Disease spread quickly**. No wonder medical people thought disease was spread by bad smells!
- **How did Monasteries help?**
- **Monasteries knew of the dangers of dirt and filth.** Most monasteries carefully extracted water for drinking, washing, cooking and brewing upstream of the privies, and then used the waste water to flush away the waste and clean the toilets. Monks were probably the only skilled medical personal available to people.
- **Bath houses**
- Archaeological evidence shows that many towns in the Middle Ages had **bath houses** where people could pay to have a bath. People were, despite all the difficulties, not quite as dirty or as smelly as some textbooks suggest.



c1250–c1500: Medicine in medieval England

1.2 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 thirteenth century. The role of the physician, apothecary and barber surgeon in treatment and care provided within the community and in hospitals, c1250–1500.



KT 1.2 Treatment and Prevention Summary

Supernatural

If the cause of illness was God, then logically God could also cure the illness. People could cure illness by:

- Prayers and spells
- Paying for mass to be said
- Fasting (going without food)
- Pilgrimages (journeys to religious places)
- Charms and amulets
- Doing nothing – if God had sent the disease to clean the soul then it was important to let it run its course.



Herbal remedies & Bathing

Common ingredients included mint, camomile, almonds, saffron, absinthe and turpentine. Some of these were expensive and difficult to find.

Another common remedy was **theriaca**. This was a spice based mixture that could contain up to 70 ingredients. Galen (see case study) had written a book on the use of these particularly looking at treating snake bites and poisons.

Different foods were prescribed to balance the humours, e.g. chicken and almonds as the ingredients were warm and moist.

Warm baths were often prescribed to dissolve blockages in the humours. Plants and herbs were added to the bath water. Sometimes they were less pleasant – for paralysis patients were advised to boil a fox in the water and bathe in it – foxes have quick and nimble properties.

Four Humours - Bleeding

Phlebotomy (bloodletting) was the most common treatment, bad humours could be removed by removing some of the blood. It was usually carried out by Barber Surgeons or Wise Women. It could be done in different ways

- **Cutting a vein:** a vein was cut open with a sharp instrument. Phlebotomy charts were used to show points in the body where bleeding was recommended for specific illness
- **Leeches** were collected for those where traditional bleeding was too dangerous
- **Cupping:** the skin was pierced until it bled, a heated cup was then placed over the cut to draw out the blood.

Some patients died from blood loss but physicians were not held responsible.



1.2 Treatment and Prevention Summary (continued)

The Church said to live a life free from sin. Regular prayers and confessions were needed

How could disease be prevented?

Diet
The humours were produced by digestion therefore what you ate was very important. Many medieval kings died of eating too much. People purged themselves regularly

Bathing was important as bad smells indicated a miasma. Public baths were available for a fee and poor people swam in rivers. Everyone washed their hands before every meal.

Purifying the air
Sweet herbs were spread such as Lavender. Some people carried **pomanders** which were large lockets containing bunches of flowers

Local authorities tried to keep towns clean by cleaning particularly smelly areas and public toilets.

Hygiene
A set of instructions known as *regimen sanitatis* told people how to keep the body healthy.

Homes were also kept clean with fresh smelling rushes and regular sweeping. Lavender was used to remove any bad smells

Physicians

New universities were set up across Europe making medicine more professional. A degree took between 7 and ten years to complete.

Medieval doctors were known as physicians and their main role was to diagnose and recommend treatment. They rarely actually treated the patients themselves and often did not examine the patient in person

The physician would take a sample of urine, faeces and blood. He would then consult the astrological charts and humoral charts. Many doctors were also priests so were forbidden to bleed a patient.

They were expensive as there weren't many of them because training took so long

Cost: £££££ (expensive!)

Apothecaries

They mainly mixed herbal remedies and had a good amount of knowledge, usually passed down through family. They were not as skilled or knowledgeable as physicians – they just mixed the prescribed medicines. Lots of people would see an apothecary as they were cheaper than a doctor.

They could also prescribe poisons which went against the Hippocratic Oath that doctors should do no harm. They did not have to have a formal education and could not be trusted to do no harm. Some also provided amulets and charms.

Cost: £££ (reasonable)

Barber Surgeons

The least qualified medical professionals. They had sharp knives and a steady hand so could perform small surgeries such as extracting teeth and bleeding.

They would advertise their services by putting a bowl of blood in the shop window until 1309, after that they displayed a sign of a bandaged, bloody arm.

Some were highly trained, in Europe some doctors were surgically trained alongside medicine. They learned from practical experience instead of books.

Cost: ££ (good)

Women

Most people were treated by women at home; this involved making the patient comfortable, preparing food and mixing herbal remedies.

Women would also grow plants known for their healing properties. There is some evidence that they also carried out minor surgery and bleeding but the records are patchy.

Cost: Free (better!)

1.2 What treatments did medieval practitioners use?

How about a treatment for a medieval headache? Drink warm camomile tea and then lie down on rosemary and lavender-scented pillows for 15 minutes.

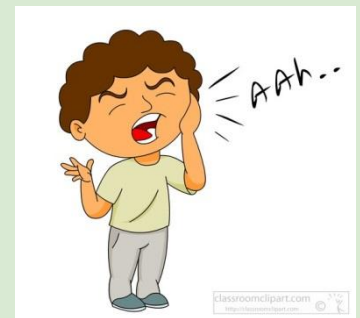


Aching joints: take equal amounts of radish, bishopwort, garlic, wormwood, helenium, cropleek and hollowleek. Pound them up, and boil in butter with celandine and red nettle. Keep the mixture in a brass pot until the colour is dark red. Spread on to aching joints.



Toothache was thought to be caused by teeth worms. Here is a cure for the illness.

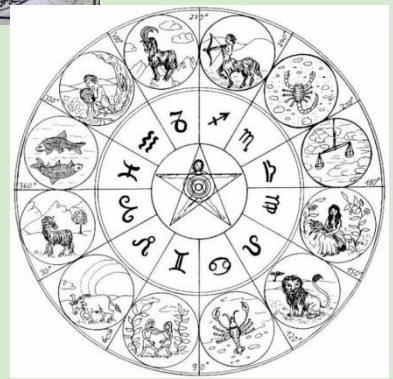
Take a candle of sheep suet, some eringo (sea holly *Eryngium maritimum*) seed being mixed therewith, and burn it as near the tooth as possible, some cold water being held under the candle. The worms (destroying the tooth) will drop into the water, in order to escape from the heat of the candle.



Diagnosing illness

Urine Charts: Doctors had two other indispensable tools for diagnosing sickness and putting it right: urine and the zodiac chart. Urine was a vital diagnostic tool. The physician would look carefully at the colour and compare it to a chart (see the picture). He also might smell it and, in some circumstances, taste it to help him decide what was wrong with the patient. Again, many patients today still submit a urine sample to help doctors diagnose their illness.

Zodiac Charts: Physicians believed that body parts were linked to astrological signs. Something might work for an Aries, but not for a Pisces. Zodiac charts might also tell the Physicians the best time to carry out treatments.



1.2 Who would treat the sick in medieval times?

Most people who had the money would go to a **barber surgeon**, who would carry out minor operations, set broken bones or pull teeth. To become a barber surgeon you had to serve an apprenticeship before becoming qualified.

These practitioners were mostly found in towns and cities, although some made a living travelling around the countryside. They usually travelled with visiting fairs.

Ordinary people would almost certainly depend on an **apothecary** (like a pharmacist that used herbs to cure illnesses). Apothecaries would sell medicines and mixtures from their shops in towns. Apothecaries would sell “singles” which would be a treatment made from a single herb or spice. They might also sell “compounds” which would be a mixture of herbs and spices used to cure various illnesses. One compound was red rose, ground fine and mixed with bamboo juice. This would be used for treating smallpox.

Wise women would also treat illnesses and act as midwives. They would have knowledge passed down to them from family members. They would treat family members in their homes and friends. On large farms you might receive treatment from the “lady of the house” who would look after farm hands and labourers if they were sick or injured.



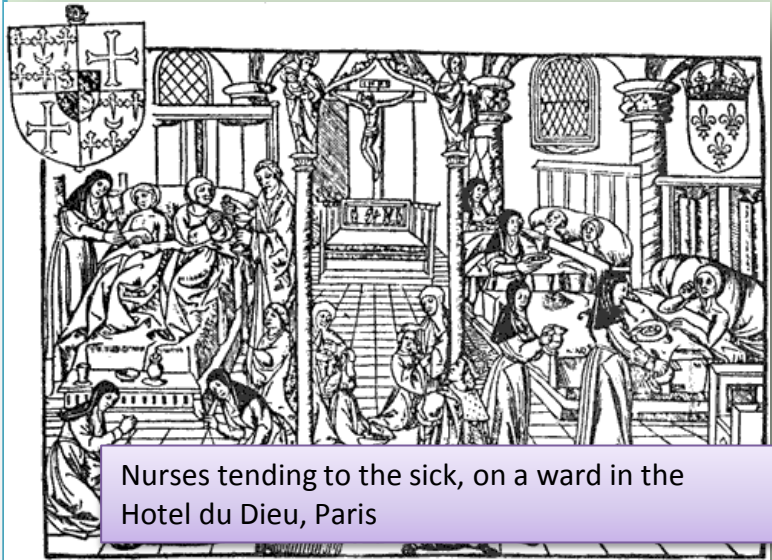
Barber Surgeon



Apothecary Bottles

1.2 How safe were you in a hospital?

St Bartholomew's Hospital in London was set up in **1123**, at first it specialised in the treatment of poor, pregnant women. **St Mary of Bethlehem**, established in **1247**, specialised in the treatment of “**poor and silly**” persons. Many towns had **leper houses** outside their walls, or “**hospitality**” places for travellers. Many small hospitals were **ALMSHOUSES** set up to provide a home for the old and those unable to work, who might otherwise have had to live on streets and beg for a living: not at all like a hospital today..



Nurses tending to the sick, on a ward in the Hotel du Dieu, Paris



Care within a hospital: The first thing that happened to you when you rang the doorbell in medieval hospital was that you went to chapel. The next stop was the bath, and the nuns or sisters took your clothes, boiled them and baked them in the oven. You then went into clean sheets overnight. Very few hospitals employed either **physicians or surgeons**. Most care was carried out by **nuns or elderly women**. The main treatment however was a prayers. Most nuns or monks in the hospitals had an excellent knowledge of **herbal remedies**.

1.2 Who would you visit for treatment?

Medieval Hospitals

The term Hospital comes from the Latin word “**hospes**” meaning stranger or guest. In **medieval Europe** they were originally hostels for travellers. They varied in size but usually catered for small numbers.

- The term **Hospital** comes from the Latin word “**hospes**” meaning stranger or guest. In medieval Europe they were originally hostels for travellers. They varied in size but usually catered for small numbers.
- •Some hospitals specialised. **Lanfranc**, the **Archbishop of Canterbury**, founded a hospital for the sufferers of **leprosy**. Some specialist hospitals e.g. St Mary of Bethlehem in London which looked after “poor or silly persons” (**later called Bedlam**).
- •Most were set up by the church with care provided by monks or nuns after **1100**. Nearly **1200** in **Medieval England** and Wales. However most did not even have a doctor .
- •Patients were given food and a bed although they often had to share; treatments included herbal remedies but prayer was also central. Prayers were also said for souls of people who sponsored hospital. Church services held throughout day with as many as **7** in some places.

Medical schools were opened up as well as hospitals run by monks and nuns

Some hospitals specialised in certain types of patients i.e. maternity

Did Medieval Hospitals help the sick?

Nearly 1200 hospitals existed but only 10% cared for the sick

Doctors only treated the wealthy

Hospitals were new in Britain but much more common in other places, especially the Middle East

c1250–c1500: Medicine in medieval England

1.3 Case Studies

Dealing with the Black Death, 1348–49; approaches to treatment and attempts to prevent its spread.

Other case studies: Influence of Arab Medicine, Hippocrates and Galen, John Arderne – the first English Surgeon? Medical Progress, St Giles Hospital and Public Health in the Middle Ages



What was it?

- The Plague first arrived in England in **1348**; today it is treated by antibiotics but people in the Middle Ages treatments like this did not exist. People were totally unprepared and did not know how to prevent or treat the '**Scourge**'.
- The Black Death was Bubonic Plague that was spread by fleas who lived on the rats travelling in merchant ships. It was probably spread by flea bites although though there is some evidence that some forms were spread through the air. The disease would last about **3-5 days** and we think **1/3** of the population of England died.
- The plague returned every **10-20** years after **1348** although it was never as severe.

What did people think caused it?**Supernatural**

- Black death was a punishment from God for the sins of man
- Mars, Jupiter and Saturn aligned in a strange way

Natural

- Miasma caused corruption to the body's humours
- People believed that impure air came from poisonous fumes released by earthquakes or volcanoes

Common beliefs

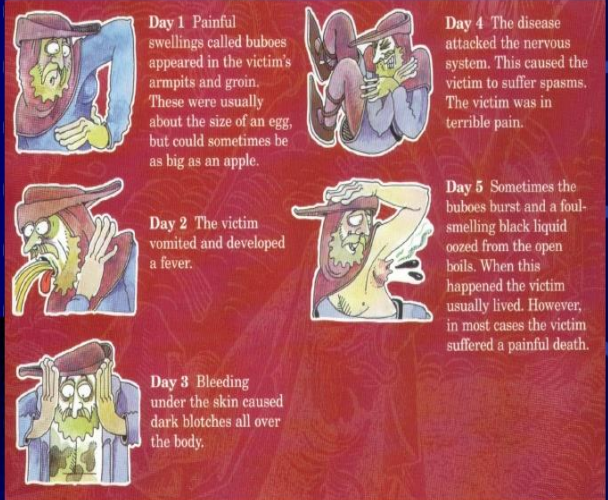
- The Jews had poisoned the wells (only in Europe as the Jews had been expelled from England in the 13th century)

What treatments were available?**Supernatural**

- Confess sins and ask God for forgiveness through prayer

Natural

- Bleeding and purging
- Strong smelling herbs such as aloe and myrrh
- Lighting a fire and boiling vinegar
- Lancing the buboes
- Apothecaries sold remedied and herbs

What were the symptoms of the plague?**How did people try to prevent it?****Supernatural**

- Pray to God and fast
- Go on a pilgrimage and make offerings to God
- Flagellants** who went around whipping themselves to Punish themselves and prove to God that they were sorry

Natural

- Run away
- Carry fragrant flowers and herbs to avoid breathing in miasma
- Avoid bathing (water would open the pores to the infected air)
- Avoid those with the disease

Government Action**Quarantine**

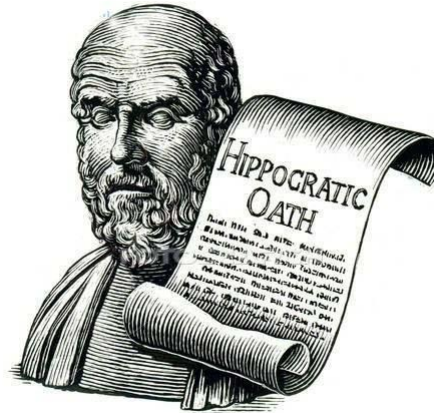
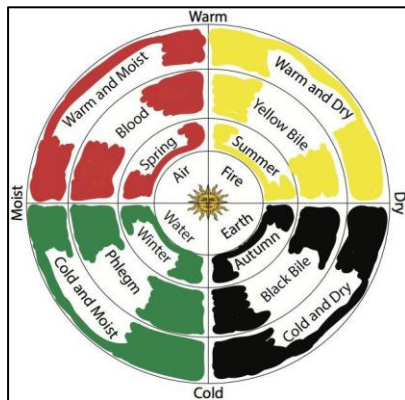
- laws were put in place to stop people moving around
- Houses were also quarantined
- Large crowds of people were discouraged
- But they could not enforce these laws
- They also stopped cleaning the streets as they believed that the foul smell of rubbish and rotting bodies would drive away the Plague

1.1 Hippocrates and Galen

Two men, perhaps more than any others, contributed to the Western view of medicine and health at this time. They were Hippocrates and Galen.

THE THEORY OF THE FOUR HUMOURS

Hippocrates wrote: The human body contains blood, phlegm, yellow bile and black bile. These are the things that make up its constitution and cause its pains and health. Health is primarily that state in which these constituent substances are in the correct proportion to each other, both in strength and quantity, and are well mixed. Pain occurs when one of the substances presents either a deficiency or an excess, or is separated in the body and not mixed with the others.



HIPPOCRATES, 460-370 BC

- Born in Greece 460 BC
- Based his thinking around the Four Humours. These were to be kept in balance if people were to be kept healthy.
- He believed doctors should observe symptoms.
- He believed diet and rest were important to patient's recovery
- Regarded as the father of modern medicine
- Even today doctors take the HIPPOCRATIC OATH

Hippocrates had theorised that illnesses were not a curse from God. They were due to an imbalance in the body. This was important because people now realised that illnesses could be prevented – as opposed to being religious punishments whereby nothing could be done to cure oneself.

Galen's work arrived in Europe via Islamic texts and beliefs. Church leaders looked carefully at Galen's works and decided that they fitted Christian ideas because he had always referred to the "Creator". Doctors believed his ideas were correct and that nothing could prove them wrong. Even dissection (on human bodies) was taught from Galen's book while an assistant would point to the relevant part of the body – remember Galen had only dissected animals!

GALEN AD130 – C210


- Born in what is now Turkey in AD130
- Took Hippocrates' ideas further
- He dissected animals to help him understand the human body
- He worked in a gladiator school treating fighters
- He based his medical ideas around the Four Humours



Public Health in the Middle Ages.

Case Study

 = causes

 = treatments

A certain cure for the pestilence? A holy remedy made from the finest herb and dust from the true Holy Cross on which Christ was crucified. Only one silver penny!

We need more rakers to clean the streets – they are filthy!

Pray to God for forgiveness. God sends Plague as punishment for our sins.

Some houses had toilets overhanging streams providing water for washing, cleaning and drinking.

Wells for drinking water were often close to cesspools for dumping sewage.

There were public toilets but one was over the Thames which supplied some of the city's water.

Your humours are out of balance. Go to a surgeon who'll bleed you and go again in six months.

I treated arrow wounds with the King's army. A blacksmith made me a tool to take the arrow out. Then honey on the wound to help it heal. That'll teach you to walk behind the target at archery practice.

A terrible pestilence is killing everyone in France. I've heard it's caused by the planets. What can we do?

This pestilence is caused by stinking air so I will use an even more terrible smell to ward off the bad air carrying the pestilence. Twice a day I will put my head in a bucket of PRIVY (toilet waste) and breathe in the fumes for half an hour.



c1250–c1500: Medicine in medieval England

Q1 - Which disease/illness was not common in medieval England? a) Dysentery b) Cholera c) Leprosy d) Smallpox	Q2 - What was the miasma theory? a) That bad smells led to disease/illness b) That god was punishing the planet c) That the body needed purging of blood d) That the stars were causing illness	Q3 - Which person was responsible for the "Four Humours" theory? a) Galen b) Barber surgeons c) St Bartholomew d) Hippocrates
Q4 - Which person had worked with Gladiators? a) Galen b) Barber surgeons c) St Bartholomew d) Hippocrates	Q5 - which is the odd one out regarding medieval towns? a) clean water mixed with dirty water b) rotting meat in towns and cities c) disease spread quickly d) excellent sewage systems	Q6 - What words are not linked to super natural practices? a) Prayers and spells b) Paying for mass to be said c) Scientific research d) Charms and amulets
Q7 - What does "phlebotomy" mean? a) Bloodletting b) Praying c) Paying for mass d) Studying Urine	Q8 - what would an apothecary do? a) pray for your sins b) create "singles" and "compounds" c) practice blood letting d) delivered babies	Q9 - what would barber surgeons do? a) remove teeth and extract blood b) mix together remedies to treat illnesses c) pray for forgiveness d) hep labouring women give birth
Q10 - what foods were provided to balance the 4 humours? a) Cake b) Curries c) Chicken and almonds d) Foxes	Q11 - what was cupping? a) Using a leech to draw out infection b) Using a heated cup to draw out blood c) boiling a fox and bathing in the water d) Hiding on to charms and amulets	Q12 - other than Zodiac Charts, what other charts were used for diagnosing illnesses? a) Zodiac Charts b) Face charts c) Star charts d) Religious charts
Q13 - How did "Wise women" gain their knowledge? a) They would have information passed down through family members b) They would serve a 7 year apprenticeship c) They would go to fairs d) They would visit apothecaries	Q14 - Where would the "Lady of the House" usually be situated? a) With a travelling fair b) In an apothecary c) On a farm d) In a hospital?	Q15 - what were hospitals mostly like? a) an excellent place to receive medical treatment b) a place where doctors worked extremely hard c) a place where you would stay for rest d) a place where you would take baths
Q16 - who funded the churches? a) Monks b) Rich people c) Vagrants d) Travelling fairs	Q17 - who ran medical schools? a) Barber surgeons b) monks and nuns c) wise women d) Galen	Q18 - who did doctors treat in hospitals? a) The poor b) People with leprosy c) Monks d) The rich
Q19 - How many hospitals existed between 1250 -1500c a) 2000 b) 4000 c) 1200 d) 13000	Q20 - Where were the majority of Hospitals a) Britain b) Russia c) Middle East d) Australia	Q21 - what year does the case study of the plague occur in this module? a) 1348 b) 1349 c) 1350 d) 1351
Q22 - what did people think was causing the plague? a) rats with fleas b) a bacterial infection c) God and the supernatural d) Aborigines	Q23 - what treatments were there for the plague? a) take a course of antibiotics b) visit the doctor for Calpol c) lancing the buboes d) taking multivitamins	Q24 - what does quarantine mean? a) Run away b) cut open a bubo c) be put in a building and not allowed to meet others d) visiting an apothecary

Exam Questions – Paper 1 Medicine 1250-1500

- **Describe two** features of hospital care during the Medical Renaissance **(4 marks)**
- **Explain one** way in which religious and non-religious medical practices were similar during the medieval era **(4 marks)**
- **Explain one** way in which barber-surgeons treated their patients. **(4 marks)**
- **How could you** follow up source A to find out more about blood letting? **(4 marks)**



- **How useful are sources B and C for an enquiry into developments in surgery in the 19th century.** Explain your answer using source B, source C and your own contextual knowledge. **(8 marks)**



Source B

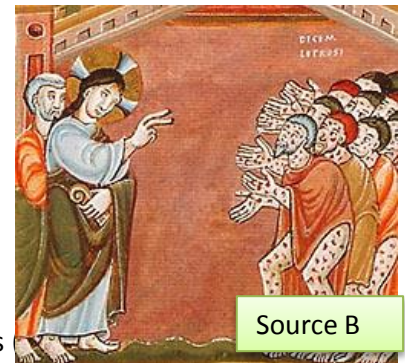


Source C

- **How useful are sources A and B for an enquiry into Medieval beliefs linked to the causes of illness?** **(8 marks)**



Source A



Source B

- **Explain** the impact the Church had on Medieval medical practices
- **Explain** why there was little development in the understanding of human anatomy during the Medieval era **(12 marks)**
- **Explain** why there was continuity in ideas about the cause of diseases during C1250 -1500. You may include: Galen and the Church. You must also use information of your own. **(12 marks)**
- **'The main medicine did not advance during the Medieval era was due to the works of Galen'** How far do you agree? Explain your answer. **(16 marks + 4 SPAG)**