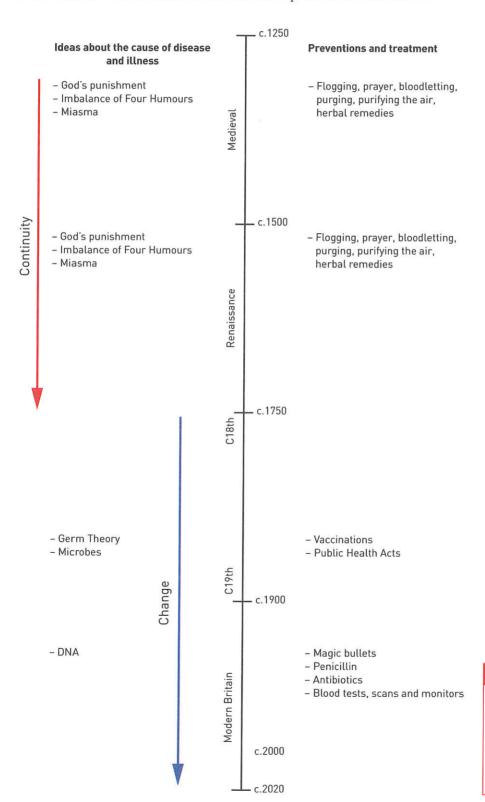
| | | NE. | A POINT | | | | | |
|--|---------------------------------|---|---------|--|--|--|--|--|
| 3 | App 22 22 | naches to prevention and treatment 2 1.1 New approaches to prevention: fighting cholera 1.2 New approaches to prevention: Public Health Acts | | | | | | |
| c.19 | 00- | esent: Medicine in modern Britain | | | | | | |
| 1 | 1 dea 24 24 25 | about the cause of disease and illness 1. The influence of genetic factors on health 2. The influence of lifestyle factors on health 3. Improvements in diagnosis | | | | | | |
| 2 | App 26 26 26 | coaches to prevention and treatment 1 2.1 Advances in medicines 2.2 Fleming, Florey and Chain's development of penicillin 2.3 High-tech medical and surgical treatment | | | | | | |
| 3 | App 28 28 28 | oaches to prevention and treatment 2 3.1 Change in care and treatment 3.2 New approaches to prevention 3.3 The fight against lung cancer in the twenty-first century | | | | | | |
| Part 2: The British sector of the Western Front, 1914–18: injuries, treatment and the trenches | | | | | | | | |
| | 30 32 34 36 38 | The context of the British sector of the Western Front Conditions requiring medical treatment on the Western Front Helping the wounded on the Western Front The impact of the Western Front on medicine and surgery 1 The impact of the Western Front on medicine and surgery 2 | | | | | | |
| Exa | Que Que Que Que Que | tion 1: Key features tion 2: Source analysis tion 2(a): Utility tion 2(b): Framing a historical question tion 3: Similarity or difference tion 4: Causation tion 5 and 6: A judgement about change, continuity and significance | | | | | | |
| | | | | | | | | |

Part 1 Medicine in Britain, c.1250-present

An overview of medicine from c.1250

REVISE

Medicine in Britain is a development study. It is important that you have a secure chronological understanding of the content – what happened, and when. You also need to be able to identify change and continuity in the understanding of the cause of disease and illness, and in the methods of prevention and treatment.



Revision task

Create your own medicine timeline by copying this timeline. Make it bigger. You could use a roll of lining paper. As you work through this book, add key events, individuals and discoveries.

Exam tip

You need to be aware of what changed and continued in medicine from c.1250 to the present day. Look for patterns, trends and turning points.

The role of factors

REVISED

Factors are things that influenced medicine in the following ways:

- They helped to cause change: for example, the factor science and technology led to Pasteur discovering germs after experimenting with milk in 1860.
- They helped to prevent change: for example, the factor of the Church hindered any advance in medical knowledge during the medieval period because the Church protected the ideas of Galen and did not allow them to be challenged.

The main factors that you could be asked about in your exam are shown in the diagram below, with an explanation of what they mean.

Revision task

Create a table of the factors in each time period that led to a change in medical understanding of the cause of disease and illness and new preventions and treatment. Repeat this for the care provided within the community.

Individuals

Individuals changed medicine, mostly scientists and doctors who made significant medical discoveries.

The institution of the Church

The Church and its ideas influenced medicine throughout the period, sometimes preventing new ideas.

Five key factors which encouraged or inhibited change

Science and technology

New discoveries (science) and inventions (technology) usually encouraged change. Some of these were not directly linked to medicine, e.g. the printing press, but they still had an impact.

Attitudes in society

Beliefs among the population that encouraged and inhibited change, particularly those connected to new discoveries.

The institution of the government

The group of people who governed the country and enforced change in prevention and treatment.

Exam tip

You need to be aware of what and how each factor contributed to medical developments during each time period. Look at what factors caused change and continuity. Look for patterns and trends.

c.1250–c.1500: Medicine in medieval England

The Church and religious beliefs had a great influence over medicine during this period, leading to a continuation of ideas about cause, preventions and treatments.

1 Ideas about the cause of disease and illness

REVISED

Medieval England was a religious society. The majority of people followed the teachings of the Catholic Church and attended services regularly. The cause of disease and illness was unknown due to the lack of scientific knowledge. The majority of people in medieval England could not read or write and would learn from what they heard in church about the causes of illness and disease. The Church controlled education and the universities, where physicians were trained.

1.1 Supernatural and religious explanations

Supernatural explanation

Astrology, the alignment of the planets and stars, was used when diagnosing illness

Star charts (map of the night sky) would be consulted by looking at when a patient was born and when they fell ill to help provide a diagnosis of what was wrong with them

Religious explanations

The Church taught that people's sins were to blame for their illnesses and that illness and disease were sent as a punishment from God

When people recovered, the Church declared that this was thanks to the patient's prayers

The Church also taught that disease was sent by God to cleanse the soul of sin or to test your faith

Key terms

Diagnosis Identifying the nature of an illness after considering the different symptoms

Miasma Smells from decomposing material were believed to cause disease

Physician A person qualified to practise medicine

Rational An idea based on logic

Supernatural Ideas unable to be explained by science or the laws of nature

1.2 Rational explanations

Theory of the Four Humours

The Theory of the Four Humours was developed in Ancient Greece by **Hippocrates**

It continued to influence medical ideas in medieval England

This theory suggested that the body was made up of four liquids (humours) – blood, phlegm, black and yellow bile – and an imbalance of these substances caused illness and disease

It was believed that an equal balance of the humours led to good health

Miasma Theory

A miasma was bad air that was believed to be harmful

In medieval England it was believed that bad air and smells contained poisonous fumes that caused disease and illness

Medieval beliefs suggested that any rotting matter could transmit disease

Key individuals

Galen A doctor in Ancient Rome. Galen had his ideas recorded in more than 350 books

Hippocrates A leading physician from Ancient Greece. Hippocrates created the Theory of the Four Humours after carefully observing and recording the symptoms of his patients

The influence of Hippocrates and Galen

Galen, a physician in Ancient Rome, extended the Theory of the Four Humours by suggesting that the humours should be rebalanced by using the Theory of Opposites. He suggested that too much phlegm, for example, was caused by cold and the 'opposite' should be used, such as hot chillies and peppers to rebalance the humour. Galen also believed in the idea of the soul, which fitted with the teachings of the Church. This led to the Church promoting the ideas of Galen, and doctors widely using the Theory of the Four Humours, throughout the period c.1250–c.1500.

Key factors

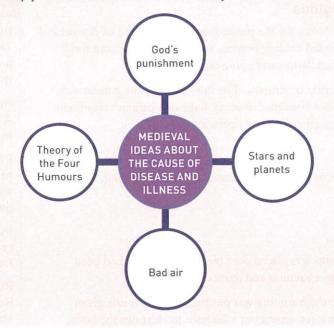
The Church It was very influential during the Middle Ages and religion was used to explain the causes of illness.

Attitudes in society
Religious beliefs in the
Middle Ages dominated
medical thinking. Galen's
ideas continued as the
Church accepted them.



Memory map

Create a memory map to show the different ideas that people in medieval England had about the cause of disease. Add some key words from the information on page 6 and your own knowledge to the diagram below. Use two different colours to show whether they are religious and supernatural explanations or rational explanations. To help you remember the information, you could add small drawings.





Eliminate irrelevance

Here is an exam-style question:

Explain why there was continuity in ideas about the cause of disease during the period c.1250-c.1500. (12 marks)

You may use the following in your answer:

■ The Church

■ Galen

You must also use information of your own.

Below is a paragraph which is part of an answer to the question above. Some parts of the answer are not relevant to the question. Identify these and draw a line through the information that is irrelevant, justifying your deletions in the margin.

In medieval England there were religious and supernatural explanations for the cause of illness. The Church was very powerful and controlled education throughout the period, which led to the continuity of ideas. The Church taught that God was responsible for illness and disease. The Church taught that God sent disease as a punishment for sin or to cleanse the soul. As a result of this, many people would also turn to the Church for treatments and preventions. Religious believers would attend church and pray, pay for a special mass to be said to remove their sin and also fast. Some believers would go on a pilgrimage and during the Black Death in 1348 flagellants across Europe would whip themselves to show God how sorry they were for their sins and to show that they did not need to be punished with the disease. These beliefs continued throughout the period c.1250-c.1500 because the Church remained in control of education and continued to teach these ideas. Due to the power that the Church held in society, there was no challenge of the religious explanations, treatments and preventions for disease and illness.

2 Approaches to prevention and treatment

REVISED

2.1 Approaches to prevention and treatment and their connection with ideas about disease and illness

Supernatural and religious

Many people turned to the Church for the prevention and treatment of disease and illness. Religious actions included healing prayers, fasting (going without food), lighting candles in church, flagellation and going on pilgrimages.

Star charts were used to prescribe treatments. The horoscope of the patient was also considered. Star charts were consulted at every stage of a patient's treatment: herb gathering, **bloodletting**, **purging** and operations.

Rational

The most common treatment to balance the humours was bloodletting. A patient's blood was drained by:

- cutting the vein
- placing leeches on the skin
- cupping, where a heated cup was placed over bleeding skin that had been pierced by a knife to create a vacuum and draw out more blood.

Another treatment to balance the humours was purging. A patient was given something to make them vomit (an emetic) or a laxative to clear out the body. Emetics usually consisted of strong herbs, for example aniseed or parsley. Linseeds were used as a laxative, and this is still used today.

Herbal remedies were also used to treat the sick. Aloe vera, mint and camomile were common.

To prevent illness, medieval people were encouraged to take care of their bodies by exercising, sleeping, keeping clean, breathing clean air and avoiding stress. Guidance was given in the *regimen sanitatis*.

Medieval people also **purified the air** by spreading sweet herbs and carrying flowers (a posy).

Revision task

Summarise the care given by the physician, apothecary, barber surgeon, hospital and the home.

Exam tip

You need to be able to connect the treatments and preventions used in medieval England to the ideas about the cause of illness and disease.

Key terms

Bloodletting

The treatment of opening a vein to draw blood from the patient

Herbal remedy

A medicine made from a mixture of plants

Pilgrimage A journey made to a sacred place as an act of religious devotion

Purging Physically removing the humours from the body

Purifying the air Removing the bad air/ smells thought to cause illness

Regimen sanitatis A set of instructions provided by physicians to help a patient look after their health and avoid illness. It first appeared in the work of Hippocrates and was later picked up by Galen

Key factors

The Church The Church played a large role in the care of the sick and training of physicians during the Middle Ages.

Attitudes in society

Religious beliefs during the Middle Ages dominated medical thinking, which led to many religious ideas about prevention and treatment.

2.2 New and traditional approaches to hospital care in the thirteenth century

| Physician | Attended a university for at least seven years to gain a medical degree Diagnosed illness and suggested a treatment Studied a patient's blood and urine and consulted star charts to diagnose illness Rarely treated patients |
|-------------------|---|
| Apothecary | Mixed herbal remedies Gained their knowledge from experience; either their own or passed down from family members Less expensive than a doctor Some used supernatural treatments by providing charms for patients |
| Barber surgeon | Least qualified medical professional in medieval England Performed simple surgery using a sharp knife, such as bloodletting and pulling teeth |
| Hospitals | Number increased throughout the Middle Ages Owned by the Church and care was given by monks and nuns Some hospitals set up specially to look after lepers Infectious, insane and pregnant patients were rejected Provided rest and prayer rather than treatment |
| Home | Majority of sick people were cared for at home Women would care for their relatives Sometimes the local wise woman or lady of the manor was asked to use her knowledge Treatments included rest, herbal remedies, and keeping the patient clean, warm and well fed Women also acted as midwives Women were not allowed to become physicians |



Identify the view

Read the exam-style question below and identify the view that is offered about medieval prevention and treatment of disease and illness.

'Prevention and treatments for disease and illness in medieval England were based on religious ideas.' How far do you agree? Explain your answer. (16 marks, with a further 4 marks available for spelling, punctuation and grammar.)

- 1 What view is offered by the statement about medicine in medieval England?
- 2 How far do you agree? Use your knowledge to agree and disagree with the statement given in the question. To plan an answer to this question, complete the following table.

Knowledge which agrees with the statement

Knowledge which disagrees with the statement

3 Now write paragraphs that agree and disagree with the statement.

The statement is partially correct ...

The statement is partially incorrect ...

3 Case study: Dealing with the Black Death, 1348-49

REVISED

The Black Death was an outbreak of the **bubonic plague** that first broke out in China and reached England in 1348. It is believed to have killed 40 per cent of the population of England. It was unlikely a victim would survive the disease once they caught it; they would die within three to five days. We know little about the treatments because its victims died so quickly.

Beliefs about the causes

Beliefs about the causes related to medieval views about the world, including:

- God had sent the disease as a punishment for sins.
- An unusual alignment of the planets Mars, Jupiter and Saturn in 1345.
- An imbalance of the four humours (see page 6) or the existence of evil humours within the body.
- Bad air (miasma) which had corrupted the body's humours. This poisonous air was believed to have been released from a volcano or an earthquake.

Approaches to treatment

Treatments for the Black Death related to the ideas about its causes:

- People prayed, confessed sins, donated and asked God for forgiveness.
- Holy charms were worn to show one's religious beliefs.
- Bleeding, purging and treatments based on Galen's Theory of Opposites (see page 6) were used to rebalance the four humours.
- A victim would sniff strong herbs, such as myrrh, in order to replace the bad air in their body.
- Many victims would light fires to remove the bad air and replace it with the smoke and fumes from the fire.
- Because some victims survived once the pus was released, victims would lance the buboes in the hope that this would cure them of the disease.

Attempts to prevent its spread

Ways to prevent the Black Death from spreading centred around religion, keeping the streets clean to prevent bad air and isolating its victims.

- Many would pray to God in the hope of avoiding punishment.
- The king and bishops ordered processions in every church at least once a day.
- People went on pilgrimages and made sacrifices to God, such as fasting.
- Flagellants whipped themselves to ask for God's forgiveness.
- People carried posies of sweet-smelling herbs and flowers.
- Rakers cleared animal dung from the streets to stop creating bad air.
- Fines for throwing litter were increased to keep the streets cleaner.
- To reduce the waste on the streets, butchers had to use segregated areas to butcher animals or face punishment.
- Ringing bells and birds were used to keep the air moving.
- New quarantine laws were issued to prevent the movement of people.
 Those new to an area had to remain isolated for 40 days, to ensure they were not infected.
- The authorities quarantined houses of victims.

Key terms

Bubonic plague
A contagious and fatal
epidemic disease
caused by bacteria and
characterised by chills,
fever, vomiting and
buboes

Flagellants Religious believers who whipped themselves to show God that they repented their sins and to ask for his forgiveness to avoid the plague

Quarantine Separating the sick to stop the spread of disease. Those with the disease were isolated in the guarantined area

Exam tip

You need to be able to explain the link between what people did to treat and prevent the Black Death and the medieval beliefs that existed about the cause of disease.



Organising knowledge

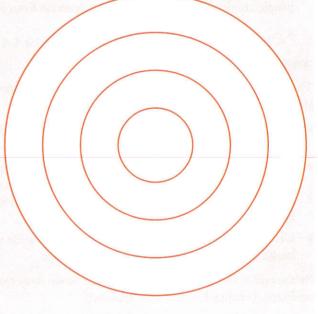
Use the information on page 10 to complete the table below to show the links between cause, treatment and prevention of the Black Death.

| Black Death | Religion | Rational | Supernatural |
|---------------------|----------|----------|--------------|
| Beliefs about cause | | | |
| Treatment | | | |
| Prevention | | | |



Analysing factors

You need to understand the role that factors had on the medieval ideas about the cause of disease and the treatments and preventions that they used. Make a copy of the concentric circles. Rank order the factors in the box that explain the ideas that existed about cause, treatment and prevention, beginning with the most important in the middle to the least important on the outside. Explain your decisions by annotating the diagram.



For example, if you believe that the religious ideas about cause, treatment and prevention were the most influential, write 'The Church' in the centre circle. You can then annotate this with details of the religious ideas, such as it was believed that God sent the Black Death as a punishment for sins.

FACTORS

- government
- individuals
- attitudes in society
- the Church
- science and technology.

For a reminder about each factor see page 5.

c.1500–c.1700: The Medical Renaissance in England

Ideas about the causes of disease and illness were starting to change during the **Renaissance**. However, this led to very little change in methods of prevention and treatment. The Renaissance did see the introduction of science and technology improving medicine.

1 Ideas about the cause of disease and illness

REVISED

During the Medical Renaissance new ideas began to influence medicine and slowly replace old beliefs. As **Protestantism** spread across Europe, the Catholic Church was less able to promote its beliefs and control medicine. As a more **secular** society developed, scientific ideas were discovered both in medicine, and beyond.

1.1 Continuity in explanations of the cause of disease and illness

- Miasma Theory (see page 6): this idea continued and became more widespread during epidemics.
- The influence of the Church: during epidemics, such as the Great Plague, religious causes were still influential.
- Supernatural: from 1500, astrology was less popular, but during epidemics people continued to wear charms as protection from evil spirits.

1.2 Changes in explanations of the cause of disease and illness

The practice of medicine did not change much during this time, but the ideas about cause were starting to change:

- The decline in influence of the Church: most now believed that God did not send disease.
- The Theory of the Four Humours: this had been discredited and was not believed by physicians by the end of the seventeenth century. However, because patients understood it, the theory continued to be used to diagnose illness until this time.
- Urine analysis: physicians now understood that urine was not linked to ill health and no longer used it to diagnose illness.

By the end of the Renaissance, there was a move away from old ideas about medicine, but they had not been replaced.

Animalcules

A new idea that little animals were the cause of illness developed after they could be seen by newly invented, more powerful microscopes. These images were not very clear.

The work of Thomas Sydenham

Thomas Sydenham was important in moving medicine away from the ideas of Hippocrates and Galen. Sydenham believed in closely observing the symptoms of a patient, noting these down in detailed descriptions and then looking for remedies to treat the disease, rather than relying on medical books.

Key terms

Epidemic A widespread occurrence of an infectious disease in a community at a particular time.

Printing press A machine for reproducing text and pictures

Protestantism
The practice of the
Protestant Church

Renaissance A revival of ideas from 1500 to 1700

Secular Not connected with religious or spiritual matters

Key individual

Thomas Sydenham

A well-respected doctor in London during the 1660s and 1670s. He was given the nickname of the 'English Hippocrates' because, like the Greek doctor, he placed great importance on observing a patient. His book *Observationes Medicae* was used for two centuries